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THE JOURNAL

OF

MENTAL SCIENCE.

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VOL. LXIII.



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7/1/14

LONDON:
J. & A. CHURCHILL,
7, GREAT MARLBOROUGH STREET.

MDCCCCXVII.

" In adopting our title of the *Journal of Mental Science, published by authority of the Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the term mental physiology or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid; for although we do not eschew metaphysical discussion, the aim of this JOURNAL is chiefly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our JOURNAL is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—*Sir J. C. Bucknill, M.D., F.R.S.*

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THE
JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.]

No. 260 [NEW SERIES] JANUARY, 1917. VOL. LXIII.
No. 224.

Part I.—Original Articles.

Optimism and Pessimism. By HENRY MAUDSLEY, M.D.

WHEN two persons meet together to discuss some enterprise or future event, or other speculative matter, without coming to an agreement, they may separate by one thinking or calling the other an optimist and the other thinking or calling his opponent a pessimist. Thereby they settle the matter temporarily, although of course they leave it undecided and agree only to differ. What they really settle is that two congenitally different temperaments necessarily view the subject from two different aspects and conclude accordingly. They do not stay to enquire which is the true view, the one being inclined by his temperament to look on the dark side of things and see the evils, hates, strifes, sufferings, failures and follies in the world, the other inclined by his temperament to look on their bright side and accordingly see the good, love, joys, and successes in it. Why, indeed, should they stop to enquire? Every mind in the world necessarily construes it in terms of itself, and therefore feels and thinks its individual world—the mind of the fool a different world from that of the sage, the mind of the sinner from that of the saint, the mind of the Andaman Islander from that of the Anglo-Saxon, the mind of the particular person from that of his neighbour. There must naturally be one common world in the necessarily common

notion of a like-structured species, but there are as many particular worlds as there are persons in it.

The question which is the true view of life on earth is too large and abstruse a question to be profitably discussed here. Truth is a pleasant abstraction, a visionary and ever-receding ideal of beauty to be pursued ; the particular truth changing from day to day in a changing world. No truth can ever be whole and complete ; must always be one face only, partial and incomplete at the best ; absolute truth almost as absurd a fancy as would be the truth of a precocious infant in its mother's womb, were it able there to speculate concerning things in the world. Seldom therefore does one generation fail to criticize and amend, perhaps to condemn, the truth of a previous generation and to count itself superior in depth and height of intellect ; mounted on the shoulders of its predecessor, it necessarily sees farther. Yet its truth-culture is sure to be criticized and modified by a succeeding generation, which will then in turn vaunt its superiority.

Here by the way it is curious to observe how apt some eminent scientific thinkers, having renounced all faith in God, miracles, and immortality, are to glorify their eager pursuit of truth and mightily to magnify their arduous labours ; as if truth were a fixed constant, a sacred entity, which they were destined to seize and hold some day. Having discarded belief in supernatural truth from on high and miraculous interposition on earth below, they suffuse their vision of truth with a sacred halo belonging to the beliefs which they have expressly abandoned. Hallowing it unconsciously with the silent emotion of their Christian birth and upbringing in a religious atmosphere, they forget that it is not a fixed abstract something which they can ever grasp, but a succession of small approximations, which are so many additions to knowledge by the slowly made adaptations they painfully make to surrounding nature and call discoveries of its secrets. Moreover, they easily overlook the fact that it is not the capture but the pursuit which is the joy—the active effort which shares and gladly *feels* life's essential motion—and that they would be desolate after each little capture could they not start afresh on a new and enthusiastic chase. So true is the saying of the French philosopher—*Si je tenais la verité dans la main, j'ouvrais la main afin de poursuivre la verité.*

Is there any century of human existence which mankind would seriously wish to be repeated? Not even probably the present century, the recent unforeseen explosions of which have given such a rude shock to its native optimism. Amazing, confounding, almost appalling, yet strict effects of natural law which ought rightly to have been foreseen by a generation of beings proud of their intelligent superiority over all past beings. That events so momentous were not in the least anticipated but befell suddenly as an entirely unsuspected catastrophe is positive and pathetic proof of a stolid blindness to the forces then silently and steadily working, and of a foolish self-complacent optimism. An optimism which after recovery from the collapse of its first rude shock happily springs up instantly afresh to see in the present cataclysm the hope and promise of a forthcoming moral regeneration and righteous elevation of humanity, if not on a great part of the earth, at any rate in happy England. In the piously optimistic mind faith, being "the evidence of things unseen," is sustained and fortified by the disappointments and disasters of things seen.

That exultant optimism springs up afresh in the human breast is evidence of an alert and active vitality in a people as well as in a single person. In both it is the effect of life instant and insistent to assert and increase itself; consciously expressed in hope, which, though it springs eternal in the human breast and is never satisfied, being unlimited, serves at least to lead by a pleasant path to the end of life; many times, too, persists in the last stage of actual dying.

The pessimistic temperament, on the other hand, is notably prone to melancholy, and sometimes to fits of deep melancholic dejection. Its lower lust of a slower life is shown by its less vivacity and promptness to respond instantly to impressions in its relation with the external world, its duller inclination to try new adaptations to its physical and social environment. The truth is that many of these adaptations, being really transient and futile, are wisely disregarded; and for that reason it gains a deeper insight into and truer hold of the substance beneath the superficial show. It feels and thinks less vividly, but in the end more deeply, less superficially but more solidly.

The optimist, it is true, ceases not theoretically to proclaim the vanity of mortal life, the sorrow, care, and toil of the brief life which is here his portion, the joy of the morning when life

springs up green and flourishes like the grass, and in the evening is cut down and withers, but utterly ignores the theory in practice, and lives on as if he would live for ever, though he knows he may not live for a day. By his immanent vital lust repugning the thought of its discontinuance he is compelled to cherish the hope and nurse the theory of an immortal and tearless life elsewhere. He can then, as he does, give "heartly thanks" to Almighty God "that it hath pleased Thee to deliver this our brother (or sister) from the miseries of this sinful world," to beseech Him soon to complete the number of His Elect and end a sinful world's sufferings. Such the blissful compensation which he fondly expects for the prolonged martyrdom of his abortive life on earth.

The pessimist, on the other hand, who feels no such vivid assurance of immortal life, and is perhaps subject to dejected fits of melancholy, may be wholly void of any expectation or wish to live for ever anywhere; nay, sometimes thinks his life of such little worth that he voluntarily ends it. His experience of what life is and his knowledge of what it always has been from its beginning up to its present height convert joy of life into mere stoical endurance of it. He is perhaps called a hypochondriac, which in a literal sense he is, for the several organs of his manifold visceral system, the multiplex underlying functions of which are the base and supply of his emotions, are comparatively sluggish and inert, except when temporarily animated by some physical agent or the stimulus of lively social intercourse.

The plain truth is that he observes sincerely, thinks fully, and feels deeply, unlike in that respect the optimist who, exultant in the immediate joy of living, cares not to learn or think on the dismal history of human life through the ages. Giving no heed to the story of what man has been (which is the use and value of history) the optimist necessarily lacks in consequence the profitable instruction which, by adequate knowledge of the past, he might obtain concerning what man ought to strive to be in the future. Would any person, rightly instructed and intelligent enough to reflect sincerely and fully on the course of nature and human nature, past and present, be content to be responsible for it, the pessimist gloomily asks himself? Were the choice and power miraculously given him to determine and direct a future which should be anything like

the past, would he not be pessimistic enough to commit suicide rather than accept the awful responsibility and exercise the awful power? To the unreflecting optimist pessimistic reflections of that kind seem to mark an inferior quality of being; he regards the person who makes them as something of a "pathological phenomenon," and himself as the embodiment of sound and superior life, lusting to live and joying to live in whatever situation its lot is cast. However squalid his circumstances and mean his occupation, he is not merely content but pleased to live, and seldom voluntarily ends his life. Plainly he is a practical optimist; for he is sure his life is worth living, and his deeds worth doing to keep it alive, though these be only to sweep a crossing or to clean out a sewer.

How entirely dependent a bright outlook on life is on the state of individual vitality is clearly demonstrated by the depressing effect of vital injury or sickness on the estimate of its value. In that case the optimist becomes for a time a pessimist, desiring little, hoping less; sees the world and its events in a quite different aspect, not because it is changed in the least but because the grievous change is in him. The bodily hurt to life repaired, his optimism revives afresh; once more he looks on the bright side of things, and pursues his aspiring aims with jubilant hope and assiduous effort. The life which he felt to be little worth when he was sick and dispirited he feels to be well worth living now that he is convalescent and himself again; the desire to live the first sign of convalescence. That is the natural and normal effect on the individual nature of a vitality inspired by the infused life of nature, and enthused by the vision of immortal value, whether that vision be fact or fancy. A sane outlook on things has superseded the morbid outlook of unsound vitality, and is accordingly concluded to be the right view, whatever doubt a deep-reaching and too curiously inquiring reason may insinuate. Yet when his vital feeling sinks low and gradually approaches extinction in the darkening change and decay of old age he may think differently.¹

¹ Here may be given a true story told to the writer by a friend of John Bright from whom he had it. On a certain occasion, after a rather contemptuous comment by Palmerston on a speech by Bright in the House of Commons, Disraeli, meeting Bright in the lobby, said to him: "Why not, Mr. Bright, join our party; *they* will never do anything for you?" "Ah," replied Bright, "you come into the House, Mr. Disraeli, for one purpose, I for quite another." "Yes," answered Disraeli, "I regard it as the finest arena in Europe." Yet Disraeli, when triumphs were over and he was near his end, recognized and owned what phantoms his exploits had been.—(*Life of Lord Beaconsfield.*)

Life in fact realizes its nothingness only when it has no time left to tell it.

“ Life is a landing on a silent shore
Where billows never roll nor tempests roar,
Ere well we feel the friendly stroke, 'tis o'er.”

Notably, furthermore, does some momentous event in individual life, pleasing or painful, in like manner change the whole aspect of things for the time, raising or lowering vital interest in them.

The progress of human life to maturity and its subsequent decline is a succession of individual changes by insensible gradations; in reality therefore a chain of different selves. At twenty-five or thirty-five years of age the person is visibly more intensely and largely optimistic than he is at threescore or, should he live so long, at fourscore years when, so far from being joyous, “his strength then is but labour and sorrow, so soon passeth it away”: an addition every day to life when he ascends, a subtraction from it every day when he descends. Too plain it is then that “Verily, every man living is altogether vanity.”

That such changed view of life's worth is owing to lowered vitality of the organism is obvious enough. What that vital reduction signifies physically is not yet known; must remain obscure until scientific enquiry has discovered what are the intimate physical conditions of the structure of living tissue and of nerve-tissue in particular: why, for instance, a poison and a despair should similarly disorder and reduce life. All that can be said at present is that one person is so constituted as to react quickly and superficially to impressions, another person more slowly and deeply; not otherwise in fact than as coal of one kind of structure flames quickly and brightly when lighted, giving out less heat, and coal of a different structure, less easily lighted, burns deeply with a dull red glow, giving out more heat but less cheerful light. The temporary elation of spirit, again, which alcoholic stimulation in one form or another physico-chemically produces is after all the effect and explanation of the universal craving by stimulated life for an ideal gratification which real life denies it. Natural or artificial, the ideal ever pursued is never attained.

Life consists essentially in motion; is a physical pheno-

menon, and its manifestations in mind simply physical phenomena which take effect in the nervous system. As Claude Bernard emphatically said, there is no more a "vital principle" than there is "mineral principle"—that is to say, "an entity distinct from the phenomena themselves." In the restless child, even in the infant fumbling with its toes, life's nature is most clearly shown by the perpetual need of activity. In manhood, again, idleness becomes a burden; relief then to be found only in active work. As the Chinese proverb puts it: "The dog confined to its kennel, which cannot spend itself in the chase, barks at its own fleas." To every sound organism effort is a pure and simple joy; it is fundamentally to *feel* life's motion. By the sweat of his face to gain his bread, until man returns to the earth whence he was taken, was the happy edict of the lost Eden. Great intellects have often been compelled, or have wisely willed, to apply themselves to some practical, even mechanical, work which has been a wholesome diversion and benefit. Thereby they kept themselves in contact with realities and dissipated the mists and defects of a too exclusive thinking on their own thoughts: Milton to the instruction of pupils and Latin Secretary's work, Shakespeare to the active management of the theatre and occasional acting in it; Spinoza to the grinding and polishing of telescope glasses, Montesquieu to gardening. No quiet joy equals that of soft repose after labour, no physical ease probably that of the last stage of actual dying. Life being thus essentially motion, the infinite number and multiplex motional complexities of the various organs and tissues coordinated and unified in the whole human organism, naturally and necessarily express themselves consciously in eager mental activity and an optimistic feeling of life.

Of the two opposite views of life on earth pessimism is alike the stern conclusion of thinking reason and the pious confession of reverent religion. "Man that is born of a woman hath but a short time to live, and is full of misery. He cometh up and is cut down, like a flower; he fleeth as it were a shadow, and never continueth in one stay." Optimism, on the other hand, is the practical expression of unthinking feeling, minding not its theoretical depreciation of mortal life, exulting on its direct joy of life. Nor can the pessimist who has neither hope nor wish for an immortal life somewhere in an undefined

and undefinable Heaven—even though he be then so completely transformed as to be quite a new self gloriously infused with heavenly thoughts, and blessedly oblivious of or indifferent to what he was and did on earth—always gratify himself with the substituted thought, so heartening to some persons and enthusiastically uttered by them in sentimental prose or poetry, that he shall live for ever in the life and worship of an ever progressive humanity. He cannot bring himself really to feel and believe that its future progress is indisputably certain and stable, or shall ever be worth the labour, pains and sufferings which it has cost through the myriads of years required to make man the being that he is ; or, furthermore, that it is in the Universal Plan to bestow on him the perfect happiness which it is apparently assumed shall then go along with the increasing perfection and might not really be a blessing. He counts such vision of a new and perfect human future the illusion of an unwarranted optimism, eager and instant to have the Paradise of a Golden Age to come in lieu of a Golden Age past. Exultant life has notably always needed and at the opportune season created the fit fictions to inspire and spur its efforts to increase mentally by new and useful adaptations, abandoning them one after another in the everlasting flux of things when they were effete and no longer useful ; such fictions manifestly the natural and necessary means of the successive steps of its progression. Had it not seasonably made them, it must have lost its instinctive impulse to live and increase. What reasonable ground then is there to believe that an unlimited future progress, with a proportionately increasing happiness, may not likewise be only a useful fiction to animate human effort, and encourage patient endurance in its sorrowful pilgrimage through a “vale of tears” ? Hope has ever been the animating pulse of conscious life, that pulse fundamentally vital—sun-derived naturally or infused supernaturally.

The really important question is whether the optimistic view of unlimited human perfectibility, which inspires the emotional outpours of those who picture it in imagination, is justified by the history of the human past, in which the archæologist now discovers conclusive evidence that many civilizations have in turn sprung up, each flourished for its season and then vanished in oblivion. In his interesting Presidential Address to the British Association at Newcastle (1916) Sir Arthur Evan~

informs us that "the polychrome masterpieces" on the ceilings of the inner vaults of the Altamira Cave supply evidence not only of a high level of artistic attainment in South Western Europe some ten thousand years earlier than the most ancient monuments of Egypt or Chaldæa, but conclusively indicated the use of artificial illumination of a high order. Cretan architecture, again, by its combination of usefulness, beauty, and sanitation, far excelled the similar works of Egyptian and Babylonian builders. Much the same, too, as now were the robes, the gloves, the mannerisms and gestures of the ladies, as seen in the frescoes. Justly, then, may the pessimist, thus confronted with the plain and positive evidence of the successive rises and falls of civilizations through the ages, ask for something more definite and certain than a vague hope or optimistic vision of human perfectibility.

Confident reliance on feeling is the optimist's support and comfort; he feels sure that what he wishes to be shall be, however long and tedious the process in the destined procession of events. A keen vital vivacity expressing itself instantly in consciousness, not caring to reach deeply below it, naturally repugns the notion of life's discontinuance or serious reduction while the sun continues to be the source and life of nature. Yet it is seldom satisfied with the promise of an eternal life in ever progressive life of humanity on earth. Life in being, ever craving the continuance and increase of its being, mostly needs and uses the theory of an immortal life of sinless felicity to supplement its mortal life of misery in a sinful world. Thereupon, converting the theory into a creed, it defies and despises, as the way of a creed is, all assaults of reason.

The momentous question, when all is said, between optimist and pessimist is a deeper question than it is generally thought right to raise and consider. It is whether a Divine Creator and infinitely loving Ruler of the Universe, who hath made and loveth all his creatures, great and small, purposes with Providential benevolence to establish an ultimate and universal reign of righteousness on earth—a Kingdom of Heaven here some day when, as Isaiah optimistically prophesied, the lion shall lie down with the lamb, men beat their swords into ploughshares, the little child thrust its hand unharmed into the cockatrice's den. Is that a true theory rightly to be cherished as a creed? Or is it just the ever-springing illusion of human optimism,

only that and nothing more? Sincere, adequate, and unbiassed contemplation of the procession of events on earth from their first known beginnings to their present far from satisfactory state forces the brooding pessimist at least to suspect, sometimes openly to declare, that it is not true, but just a theory of egotistic human wish, actually and visibly contradicted by experience of what has hitherto been and still is in the procession of events. Nevertheless, a fiction useful and necessary now and hereafter to lure, incite, and sustain progress, as past fictions have been in their season. True experience undeniably is of an unlimited and incomprehensible Universe which proceeds on its fated way, without haste and without rest, by course of fixed law to an end utterly beyond the very limited compass of human comprehension; a rigorously inexorable course in which human life is the smallest fraction and nowise the end, but it necessarily construes in terms of its minutely fractional self. "The universe," says Hume, "so far from demonstrating the existence of an omnipotent, wise, and loving father, rather suggests a blind nature impregnated by a great vivifying principle and pouring forth from her lap, without discernment or parental care, her maimed and abortive children." Immenities, eternities, omnipotences, absolutenesses, and like sounding phrases are vague, substanceless words which, uttering the emotional outpourings of the awestruck creature, have that value; at bottom the particular value and valuation of the self-valuing person. Be this personal value what it may, they are at any rate the collective expression of an awful emotion which, being a fundamental fact of human psychology, the very basis of religion in the procession of events, have their significance, whether eternal and supernatural, or not.

That they are supernaturally derived is the solemn conviction of feeling which is aptly and devoutly expressed in the well-known lines of Pope—

"Father of all in every age,
 In every clime adored,
 By saint, by savage, and by sage,
 Jehovah, Jove, or Lord.

Thou great First Cause, least understood,
 Who all my sense confined
 To know but this, that Thou art good,
 And that myself am blind."

Yet in matter of fact man's confined *sense* cannot possibly make him *know* a Great First Cause, and that it is good. To pure *knowledge* the positive facts of experience plainly demonstrate that many things on earth are not what he thinks good. Personal ecstasy of emotion straightway translates itself into knowledge, and the preconceived idea of a good God inevitably then finds all things good—even validates the consoling belief that God has sent the present war to punish a perverse and unbelieving generation for its sins, and to bring it to repentance and a righteous resolution to know and do His ways, which is the express teaching of theology. That God sent the war may be deemed undeniable, but that an all-wise, all-loving Omnipotence, "whose eye views all things at one view," deliberately chose and decreed such horrors of slaughterous devastation, rapes, rapines, and murders as the proper means to create a humbler spirit, and enforce a more servile adulation and adoration is nowise so evident and universally indisputable as it is to the specially trained theological mind.

Persons of that habit of mind, without minding closely what they say, complacently ascribe to God's sending the abominable deeds for which mankind are solely responsible, as they once used to ascribe to the Devil the instigation of man's evil thoughts and deeds, satisfied thus to thrust the actual responsibility off themselves, and justify by faith a final pious optimism. The nation at war then goes on to flatter and praise itself that in its ravages and slaughters it is fighting bravely and gloriously for the right and justice—always in each case of its specially projected God. "Il est parfaitement vrai que les hommes se pillent et s'égorgent, mais c'est toujours en faisant l'éloge de l'équité et de la douceur" (Voltaire). All which at bottom proceeds from the inveterate anthropomorphic habit of making Omniscience think in their ways of thinking, and Omnipotence act in their ways of doing.

Sacred Scripture is nowise consistent in its optimism, most consistent indeed in its pessimism; for it contains often reiterated utterances of mournful pessimistic feeling, and agreeably postulates immortal life as compensation for the miseries of this mortal life. But can it possibly be that man hath no profit of his labour which he taketh under the sun? Yes, is the sorrowful answer; "I have seen all the work that is done under the sun; and behold all is vanity and vexation

of spirit. For that which befalleth the sons of men befalleth beasts, as the one dieth so dieth the other ; yea they have all one breath."

The truth is that optimistic and pessimistic feelings have been expressed in all ages and in all climes—notably by writers of eminent intellect in ancient Greece and Rome, superlatively by that supreme optimist Plato, more soberly by Aristotle, piously by Augustine, Aquinas, and other schoolmen (whose ingenious and elaborate attempts to affect a reconciliation of the painful facts of actual life with ideal fancies and Christian dogmas exhibit such marvellously subtle sleight of thought and subtle argumentative skill) ; most pessimistically by Brahminism and Buddhism, which last is unqualified pessimism. Jansenism *versus* Jesuitism, again,—especially in the person of Pascal—was virtually pessimism *versus* optimism. Yet the conclusion of the whole matter is that no conclusion has been reached. Arguments and attempted reconciliations have gone on vainly as before, not a step forward has been made, and writers now pass and re-pass the same barren ground in futile and endless reiterations to solve the same insoluble problem. Doomed, moreover, to remain insoluble so long as mankind, cherishing the monstrous belief that the Universe was created and works for their benefit, endeavour to construe it in terms of their very *partial* feelings and thoughts, which can have no intelligible relation with a *whole* Universe. To think otherwise is nothing else than to make the human relative into the absolute.

Optimistic feeling is loth to admit, nay stubborn to reject, such limitation. It infuses into its wants and wishes, even believes to achieve in its apocalyptic ecstasies, an actual communion with a Divine Reality, which needs no argument to prove it. The really important question therefore is what is the value of that sublime and self-proving intuition with which the particular person is gifted; whatever his quality of mind and whatever his expressed character in life ; an intuition which no one else can test, and is thought to need no other proof than his inspired personal conviction. Is the ecstatic feeling of mental transport by him undeniable certainty of its value, as he in prodigal admiration of his transported self confidently declares? Or is it not, when soberly viewed by impartial observation, and weighed by cool reason, perchance

something of the nature of a distracted tract of thought in his mental organization, which is then severed for the occasion and exercise from all life of relation and, thus severed, pleased to count the joy of its spasmodic utterance a communion or union with the Divine? Is it truly the ineffable yet absolutely indisputable relation which it is fondly or fatuously assumed to be? As the history of a person is the express revelation of his character, the dispassionate observer may justly insist on his right and duty to consider and weigh strictly the particular life-value, as disclosed in deeds, up to the blissful moment of the impassioned transport. That value may not probably prove to have been great; commonly indeed prove to have been quite the reverse.

Furthermore, it ought to be remembered that the transcendental rapture notably sometimes rises to such a pitch as to produce actual "voices" of communication, as in Theresa's case, sensible and practical a person as she was in her—strictly kept apart—worldly affairs, and sternly contemptuous of the hysterical outbursts of her neurotic nuns. Such audible communications are not generally thought to have real value; they are regarded as incidental hallucinations of the mental exaltation; much like the vision which Luther had of the Devil when he impetuously flung his inkstand at the spectre, and pretty certainly would not have done had it been the real Devil in person.

Moreover, in weighing justly the abstract value of these transcendental raptures it is proper to take strict account of certain concrete and rightly relevant physical facts which are apt to be overlooked. It is well known that a dose of opium will in a fitly sensitive brain, like that of De Quincey, produce a similar subtilized feeling of absorption into the infinite, lengthening time into eternity, expanding space into infinity, melting individuality into universality. The person, too, who is being put under an anæsthetic, before actual loss of consciousness, sometimes feels himself or herself to be wonderfully transported into a realm of spirit, as he or she imagines, and mysteriously absorbed for the moment into the infinite reality, or otherwise volatilized into an unspeakable intuition of it. Mind, entirely severed for the time from its normal life of relation which is its substantial life, then struggles in vain to formulate its mysterious experience in thought; the physical stimulated and disordered federal organization with its answering feeling of special exal-

tation then rendered incapable of orderly sequence of thought and feeling ; full rational life temporarily suspended, an exclusive spiritual life sublimed. It is the custom to speak as if such suspension of one tract of thought by another in that case were actively inhibited, which no doubt it proximately is ; but the more correct statement might be that the motion of one train of thought is diverted on to another line of thought, thereby automatically inhibiting by physically transferring the first motion.

What is the real value of the transcendental rapture which the ecstatic person experiences remains yet undetermined and no-wise indisputable. Has it in fact the value which he or she, however meanly endowed, imagines it to have ? If that were so, it would follow that the right aim to pursue and the duty to do might be for everybody to take a fit dose of opium or like-acting drug, or to put himself under an anæsthetic from time to time in order to achieve the beatific vision of a spiritual intuition. Not too frequently, be it understood, for such imprudent repetition might undoubtedly issue in a fixed and lasting mental alienation—in positive insanity instead of sanity of sense and thought.

Of the two lights available for human guidance in the gloomy vale of tears, toils and fears is the faith the greater and reason the lesser light ? That is the still disputed and unresolved question, which the optimist will continue to answer confidently by the inspiration of feeling, the pessimist less confidently and more soberly, after his doubting fashion, by the dry light of reason.

Meanwhile, what is certain is that no greater waste of ingenuity can well be conceived than the laboured and futile attempts which have been made (especially in Germany) to compute arithmetically whether the sum of happiness or of misery is the greater on earth. That they are pretty evenly balanced is proved by the continuance of the dispute, and that mankind has continued to go on living may be accepted as evidence that they have felt life to be worth living. “*La question du bien et du mal demeure un chaos indébrouillable pour ceux qui cherchent de bonne foi ; c'est un jeu d'esprit pour ceux qui disputent ; ils sont des forçats qui jouent avec leurs chaînes*” (Voltaire). For the present, at any rate, life likes to live, and for a long time to come, propelled by the outside

forces immanent in its nature, will continue to live ; not otherwise in fact than as lighted coal burns until the sunbeams consolidated in its structure are resolved, released, and spent.

The truth is that the literature of all countries in all climes is full of lamentations that the miseries of life are as numerous as, or more numerous than, its happinesses ; that pleasure always brings pains in its train ; that one joy is counterbalanced by many griefs ; that pleasures are superficial and pains deep ; that happiness and unhappiness are naturally and inevitably connected ; and the like utterances of woe. All which pessimisms, though sorrowfully admitted to be true, moral and philosophical reflection has now sedulously set itself, with utmost and unceasing effort, to counteract by demonstrating that the rightly-disciplined and well-governed mind can deal with and subdue to its use and benefit whatever ill befalls ; the strong will then be well fortified not to suffer long, nor in any case to suffer wrong.

The right-thinking mind is thus taught that fortune neither does it good nor ill, itself ever the sole cause of its own happy or unhappy condition ; the benefits of fortune to one who knows how to make good use of them, the evils to him who misuses them. As the Oriental proverb says, every grief contains some instruction ; tears are the dew of the soul. Happiness thus lies in the individual, not in the things themselves ; each person in the same circumstances visibly making his own good or ill. If good fortune makes men joyful, bad fortune should make them wise ; for it is wisdom alone which in the end can procure the quiet and stable happiness which abides. All sensual pleasure is vivid but brief, that tranquil harmony of being sure and lasting.

Such and such like are the thousand moral and philosophical reflections which have over and over again been reiterated to prove to man that he never has been, nor is now, the unhappy being which he has superficially thought and proclaimed himself to be, nor need now, if properly instructed, think himself to be. A true reflective optimism will surely demonstrate that life, rightly considered and rationally governed, is not only well worth living but capable of incalculable improvement, when its moral and intellectual faculties are duly developed. It may be so in the long long time to come, but the pity is that for the present, and probably for a long time to

come, the millions of men who cannot realize the sublime truth are likely vastly to exceed in number the few wise men who have preached and still preach the consoling doctrine. Fine principles and precepts have never been wanting; the difficulty has always been, still is, and probably ever shall be, to apply them effectively in practice.

But why gloomily doubt, or, worse still, despair, says optimism, seeing that a right use of reason cannot fail to demonstrate that man is not the unhappy creature of a pessimistic morbid fancy, nor the miserable sinner which he has professed himself to be. Pessimism the while looks on in brooding inarticulate silence, admiring the optimistic aspiration but unapt to join heartily in the reasoning. Nay, in its extremest outcome it may dimly feel an unconscious sympathy with the pessimistic Indian utterance (bitter fruit of several vanished civilizations) that it is better to be sitting down than to be standing up, better to be lying down than to be sitting up, better than all to be lying dead. Which is, after all, the conclusion of religion when it gives hearty thanks for deliverance of a brother (or sister) from "the miseries of this sinful world." Optimism, having definitely abolished the fiction of Hell, still clings by vital impulse of nature to its indefinite and indefinable vision of Heaven, or, failing that, to an indefinite perfectibility of humanity on earth. Being withal the fundamental expression of insistent and exultant life, it is the essential condition of human progress on earth.

Notes on Mental Defect in Criminals. By Sir BRYAN DONKIN, M.D. Oxon., F.R.C.P.

I. IN pursuance of the intention, signified in my "Notes on the Mental Deficiency Act" in the Journal for July, 1916, to consider, as practically as may be, the subject of mental defect as a factor in the production of crime, I find it desirable to make some introductory remarks concerning the recently increasing literature of what is known as "Criminology." This term may be properly applied to investigations undertaken with a view to giving such an account of criminal conduct and criminal men as may assist in the formation of practical measures towards the prevention of the one and the appropriate

treatment of the other. Most of the more modern discussions on crime and criminals have either directly or indirectly been occasioned by the efforts of persons concerned in some way with prison administration, or otherwise specially conversant with convicted criminals, who strive to discover just principles on which to base their practice. But the growing bulk of doctrine and debate on the causation of crime, the genesis and treatment of the criminal, the meaning of "responsibility," and even the State's "right" to "punish" offenders at all, consists to a great extent of definitely formulated theories largely based on preconceived assumptions regardless of fact, and often mutually contradictory. This occasions much difficulty to those who aim at any clear understanding of the subject; and the difficulty is increased by the frequently indefinite and equivocal use of the words "crime," "criminal," and "punishment," which denote the very subjects of discussion. Thus the handling of the whole matter becomes widely diffused, leaving no firm ground on which to rest any useful conclusion. Sundry kinds of topics, sociological, ethical, psychological, and biological, become involved in the dispute, and the student may even be landed and left in the midst of such perennial controversies as those about the "freedom of the will," and the nature, and even existence, of the relation between mind and matter.

Among the disputed questions which contribute to the above-mentioned difficulties of attaining a clear grasp of our subject, that of whether the criminal, convicted or unconvicted, is mainly "born" *or* mainly "made" as such, is probably the most important at the present time, and most relevant to the topic of this article. I have been long convinced from my experience that this question is a vain one as regards criminals, as it is, indeed, in many other matters appertaining to human qualities and conduct. There is, however, much discussion as to whether, or how far, criminals are the product of "Nature" *or* "Nurture"; "Heredity" *or* "Acquirement"; "Constitution" *or* "Environment": all these oft-quoted, and, as commonly used, virtually synonymous pairs of terms being generally employed with no less indefiniteness than indifference, and the term "Inheritance" being constantly confused with "Reproduction." I hold the view, and have been greatly influenced in arriving at it by the writings of Dr. Archdall Reid, that, especially with regard to human qualities, the very posing of this question, current and

popular though it is among biologists and others who are interested in such subjects, leads to irrelevant and unnecessary disputes in many and varied fields; and that it lies at the root of great confusion in much that is written under the name of criminological science on the causes of criminality. I shall refer specially to this subject in a later section, and give here but a few illustrations of what I have just said.

It is remarkable that the conclusions of practical penologists are often closely similar while their assumed premisses are widely diverse; and it is probable that many grounds of literary dispute would vanish on the attainment of greater precision in the meaning of the chief terms employed. Much of the motley productions treating of crime and criminals which appear in books, magazines, lectures, plays, novels, and newspapers, is borrowed, without criticism or care, and with no knowledge of the subject, from what are believed to be "scientific" authorities, and this has its effects on the general public, and even on some criminals. Some writers preach that crime is caused wholly by circumstances and independently of the natural qualities of the man who commits it, or that it is the result of a vicious social system which necessitates and explains it and renders punishment unjust. Others regard criminality as a malady of the criminal, transmitted almost inevitably from generation to generation. And many, from both of these extreme groups, either imply or state definitely that the actual criminal is not responsible for his crime. It is also argued and not seldom, that when punishment does not prevent the habitual repetition of crime, the criminal is, therefore, not responsible.

Not long ago a prisoner, pronounced after examination not to be insane, pleaded in a law-court that all men were irresponsible, because they were unable to help doing what they did. He thus voiced accurately and carried to its logical extent the doctrine of the born criminal. The complement of this doctrine of the criminal's destiny to crime is that of the equally natural and effortless production of law-abiding and non-criminal men; but those who hold this doctrine, as well as others who give little or no place to the force of circumstances in the process of criminal production, do not appear to recognise this evident corollary to their argument.

In an interview with a fairly intelligent convict, clearly well

versed in the modern literature of so-called criminology, he informed me with the assurance of a Hyde Park lecturer that his long course of misconduct was due to the "inheritance of his constitution from a drunken father"; and, on another occasion, an habitual offender said that as society manufactured criminals it ought not to blame him, but to answer for him. As one more instance of the prevalent and superficial talk and writing about crime and criminals that greatly impresses a wide public—this kind of literature having a good sale—I note that a popular writer of fiction, in a book about prisons, argues that "imprisonment as a punishment has failed," but that when he is contending that the judicial punishment by flogging failed to put down the crime of "garrotting," he backs his argument by the statement that crime was stayed "by the ordinary law with its ordinary punishments"!

So we see that authors of crime as well as of books on crime may hold discordant opinions about the origin of crime, but yet may make truce in jointly decrying the illogicality and injustice of punishing the criminal.

It must not be forgotten that many writers on crime make definite claims that their special teaching is "scientific," and that some deny that any method of inquiry other than their own is scientific at all. This attitude is calculated to have a considerable influence on serious inquirers, social workers, and legislators, who make no pretence to first-hand study of the subject, but are naturally eager, especially when a measure of legislation is in the air, to find some expert authority on which they may found their opinions and actions. At the present day writers on crime, however materially they may differ in principle, and whether they write with knowledge or without it, are usually acclaimed in the daily press and elsewhere as scientific authorities. The over-ready absorption of new and abundant literature on this subject is very observable in the United States of America. Take, for instance, the frequently indefinite and equivocal use of the term "heredity," and also the widespread application to the study of crime and human characters generally of the special doctrines taught by the Mendelian or Mutationist school of biologists. But these faults are by no means confined to American literature. The following magisterial utterance of Prof. Bateson, the acknowledged leader of the above-named school, is in itself a striking instance

of positive and plausible statements likely to make a deep impression on unwary readers and students. "Genetic knowledge" (by which term is clearly meant the special *knowledge* claimed by this school) "must certainly lead to new conceptions of justice, and it is by no means impossible that in the light of such knowledge public opinion will welcome measures likely to do more for the extinction of the criminal and degenerate than has been accomplished by ages of penal enactment."

Most members of the fairly intelligent public hold very strong views about "heredity": but few can formulate their views or explain them to others. Hence much loose and meaningless talk about "inherited criminality," and the constant use and abuse of the term "degeneracy," so useful to those who are content to substitute undefined words for definite things. Not many years ago an Act was passed by the Legislature of the State of Indiana, with a view to "prevent the procreation of confirmed criminals, imbeciles, idiots, and rapists." The Bill had been previously referred to the "Committee of State Medicine, Health, and Vital Statistics," as well as to the "Committee of Benevolent and Scientific Institutions." The preamble of this Act began: "Whereas heredity plays an important part in the transmission of crime. . . ."; and its object was to legalise serious and drastic action, based on these crude, ill-worded, and ill-considered statements, vitiated by undefined and nebulous terms, and further confused by "cross-divisions." On the other hand, in all countries views of an extremely opposite kind are held by many; the question of the existence of inborn capacities or defects being neglected or negatived, the causes of crime referred wholly to external influences, and the doctrine of reforming the criminal by religious or moral means persistently and well-nigh exclusively upheld. These mutually antagonistic, as well as many intermediate, doctrines are to be found everywhere. It is, however, the so-called modern or, as it is often called, the "scientific" theory of criminality that specially concerns our subject—the relation of "mental defect" to crime. This theory first became generally popularised by the teaching of the Lombrosian or anthropological school that criminals are *racial* degenerates, or biological reversions to the childish or to the savage state; that criminality is "hereditary," "innate," or "constitutional"; and that criminals must, as a class, be regarded as generally irresponsible and

incapable of reform. Out of the interest aroused by this now greatly discredited teaching there have sprung, as we have seen, many different attempts to establish the study of crime and punishment as far as possible on a foundation of observed and accredited fact.

In closing these introductory remarks, I must revert for a moment to the frankly "deterministic" doctrine, held by some, of the actual irresponsibility of law-breakers generally. It seems surely sufficient for all practical people and thinkers, whatever their ulterior philosophies may be, to cast this doctrine aside without compunction, and to regard lawbreakers, speaking generally, as "responsible," or rightly liable to punishment or coercion of some legal kind and degree. Even if the view that no ill-doer or antisocial member of a community can help ill-doing—a view which entails, as we have seen, the inference that well-doing is similarly conditional—should be held by some in moments of bemused study, human social existence will still proceed on the assumption of the old notion of responsibility. The dispute about free-will concerns the matter in hand no more than the actual conduct of some men depends on any opinions they may have on the nature and relation of mind and matter, or on Realism and Idealism, or even on Causation. In practical life men assume a general ability to choose their lines of action; and also the reality of themselves and other men, and of the external world at large; and most people when they think about causation regard it as meaning something more than a simple sequence of sense impressions. They still act on these assumptions or beliefs as if they were true, however tenaciously they may adhere, when in their studies, to doctrines that conflict with most that they say and do every day. The postulates of the practical freedom of human action and of the reality of the external world underlie all the words and ways of men, all their activities and projects, and all their notions of praise and blame. The thinking "determinist" will not quarrel with this statement, nor need the most thoughtful student of crime and criminals trouble himself about the question which occasions it. Practically the strictest idealist, in his ordinary actions, is at one with Samuel Johnson who "refuted" Berkeley by kicking at a stone, and so is the "mechanistic" psychologist who, in his daily life says in effect: "I know my will is free, and there's an end on't."

II. In considering the relation of mental defect to crime and

criminals, it is necessary to be as clear as possible on the meaning we give to the terms crime, criminal, and mental defect. All these terms are frequently used in different senses, and not seldom in more than one sense indifferently. In this article, "crime" means an offence against law; and "criminal" means one who is known to have committed such an offence, whether or no he has been sentenced or convicted. In the more popular sense, the name "criminal," which seems to denote generally those who commit *wilfully* such "wrong," or "evil," or "wicked" acts as are generally condemned by the community, would exclude sundry convicted lawbreakers, and include many known offenders against society who are not legally chargeable.

As regards the term *mental defect* as employed here in relation to crime, it must be premised that I attribute to it the technical sense as explained in my "Notes" on this subject in the Journal of July, 1916, *i.e.*, the sense which has been adopted by the Mental Deficiency Act; not the wider and correct sense which should include also what is usually known as "acquired insanity," or "unsoundness of mind," *i.e.* such disorder of the mind and brain as occurs frequently in persons whose conduct and history previous to the attack negatives any likelihood of congenital incapacity. Recognised "insanity" in relation to crime is a topic which, although important and closely germane to our subject, will not be discussed here. "Mental defect," for our purpose, will mean such a degree of defect, not usually counted as insanity, but nevertheless clearly recognisable by observation and inquiry, whatever its origin may be. Cases of this kind may be grouped under one of the practical designations of "feeble-minded" or of "moral imbeciles" that now find place in the Mental Deficiency Act. It is not necessary for the purpose of practical recognition to enter into an inquiry concerning the nature and origin of this kind of defect, but, for certain reasons, some further reference to this question must necessarily be made later. Here it may be said that most practical observers and students in the field of mental pathology, however they may differ on this matter, do undoubtedly recognise the frequent occurrence, in many kinds of convicted prisoners, of this defect. It is marked by aberrant conduct which points to plainly inferior function not only in the intellectual sphere, but also in the other so-called "faculties" of the mind; and the defects indicated may be manifested in different

proportions. These cases are certainly more common among convicts than in the general population ; and, whatever their nature be deemed to be, there is a general consensus of opinion that the characters manifested point to imperfect cerebral development as the predominant element in their causation. It is this prominent manifestation of defect which demands notice as carrying with it a claim for its subject to be credited with at least attenuated responsibility, or a modified liability to punishment, and, therefore, to be specially treated. I am very far from saying or implying that anything like the majority of convicted prisoners belong to the class of which I have just sketched the main characteristics ; but I hold that the class is an important one and is rightly differentiated and recognised, even if only for practical objects, quite apart from the question of any essential difference in origin there may be between the criminal cases it includes and those recognised, on the one hand, as "insane," or regarded, on the other hand, as merely the subjects of an inferior degree of normal intelligence.

This mentally defective class which I have described includes criminals of many kinds. Their defect is manifest apart from their criminal acts. They are apparently unable to acquire the complex characters that are essential to social life, and are actually possessed by the large majority of men. These, according to their individual surroundings and the multiform influences acting on them, as on all men, tend to follow the path of least resistance, which is, more often than not, the path of anti-social action. While saying this, as I have elsewhere said it some six years ago in opposing the popular doctrine of a naturally hereditary criminal character or quality, I would repeat the gist of my statements then made that lawbreaking or "criminality" is no unity ; that there are no special qualities, physical or mental, common to all criminals ; and that the only important link between the study of crime and that of biological heredity is the fact that a considerably larger minority of persons with clearly appreciable mental defect, apparently of congenital nature, is found among convicted criminals than in the population at large.

The study of criminals has, indeed, long convinced me that all men are potential lawbreakers, and that without the *traditional* (not *biological*) heritage of moral or social experience, human society would be dissolved. Some of the statements

that I refer to, and others which occurred in the Harveian Oration delivered by me in 1910 at the College of Physicians, were quoted by Prof. Karl Pearson from a daily newspaper extract and promptly attacked by him in that newspaper, partly, if not mainly, from the point of view of the exclusively biometrical method of dealing with biological subjects. The phrase I used that "criminality is no unity" was specially condemned from this standpoint; for the biometrical method of studying criminals necessitates the assumption that criminality, or the tendency to commit crime, *is* a unity for statistical purposes. This is made evident in a remarkable and elaborate report by Dr. Charles Goring, entitled *The English Convict—a Statistical Study*, which appeared as an official publication in 1913. In this work, to which I shall presently refer again, the existence of a "criminal diathesis," common to all men, and of a composite nature consisting of several independent items or qualities, seems to have been assumed as a unity in handling the problem of crime statistically; this "diathesis" being held to be specially prominent in persons who tend to be convicted of crime and to come into prison. One important element of this "diathesis" is said to be inferior intelligence, and another to be "wilful anti-social proclivities"; and the conclusion is ultimately drawn that in the make-up of the convicted criminal or lawbreaker there is little, if anything, of importance to be found in accounting for the genesis of criminals other than naturally inherited or constitutional qualities; or in other words, that crime is due to inherited tendency: that criminality is to be explained by the fact of its "heredity" alone.

These considerations, involving the question of the relative extent of the parts played by "heredity" and "environment" in the production of criminals, necessitate some further reference to that other question already mentioned in the first part of this article: *i. e.* whether biological characters generally, and especially human mental characters, can properly be divided, in respect of their origin, into the two classes which it is usual to describe severally as "inborn" and "acquired": whether, indeed, this question can be justly put at all in regard to most of the especially human characters which we study as such. In connection with this question it is commonly assumed that all characters are referrible *either* to a natural, inborn, origin, *or* to agencies acting from without, such as use and

experience, or "education" in the widest sense, *i. e.*, all the influences exerted on each individual human being by the impressions he receives from intercourse with his fellows and from everything that happens to him in his various surroundings. It is also now implied generally, though often not stated explicitly, that inborn characters are not only transmissible, but are more or less inevitably produced, while those called "acquired" are referrible to influences incident on the individual organism subsequent to the fertilisation of the ovum from whence it springs, and are not transmissible. Seeing that man is mainly differentiated from the lower animals by his remarkable educability, his immensely greater capacity for learning, or making acquirements, it is clear that the question under consideration is of peculiarly great importance. It is, of course, far outside the scope of this article to dwell at any length on this subject, and I touch on it only on account of its bearing on the special matter in hand. The confusion that has resulted from the failure to recognise that most of the human concrete characters that we choose to study, or that can be studied, are referrible for their origin both to an inborn capacity for developing them, and to some external stimulus appropriate for their development, and that many inborn capacities may never be developed for want of such stimulus, has been fully and clearly set forth in the writings of Dr. Archdall Reid, especially in his book on the *Laws of Heredity*, and in a more recent paper on "Biological Terms." Inheritance, as Dr. Reid insists, is not synonymous with Reproduction. There is inheritance without reproduction: inheritance of potentialities which never become actual. But there cannot be reproduction without inheritance. The individual inherits the parental nature. He may, or may not, according to circumstances, reproduce the parental characters, but he will reproduce them in conditions similar to those in which his parents produced them. The more closely similar the conditions the more certain will be the reproduction; so certain, indeed, in many cases, as to seem inevitable. Characters thus reproduced are commonly called "inherited" or transmitted; and are frequently opposed to "acquired" characters that are held to be not transmitted or inherited: and sameness of reproduction is taken to mean sameness of inheritance, no account being taken of the conditions or stimuli to which such reproduction may have been a response.

In connection with this question of the part played by heredity in the production of human characters, and also with that of the relation of mental defect to criminality, it is to be noted that the two diverse schools to which we have already made brief reference as treating biological problems by means of exclusively experimental and biometrical methods respectively, appear to be at one in placing a sharp dividing line between "inborn" and "acquired" characters, and also in employing the terms "inheritance" and "reproduction" as synonymous. Moreover the characters, or qualities, that these schools investigate are thus found by them to be "inherited" or "inborn." A reproduced quality means, in fact, for them a purely inborn and transmitted quality. It is not necessary to comment further on the views of certain adherents of the "Mendelian" or "Mutational" School; for I am not aware that a serious study of criminals has ever been made by any member of this group of biologists, which, as is well-known, teaches a definite doctrine on the mode of heredity. The Biometrical School has, on the contrary, made several elaborate investigations into various biological and social questions, and, as regards heredity, draws its conclusions from large numbers of observations gathered and statistically studied, without necessitating any further assumption than that sameness of reproduction in the case of a given quality implies sameness of inheritance. Little or no account is made of the fact that the human being is very specially and to a very large extent a bundle of acquirements, produced by the action of innumerable influences or stimuli on an organism endowed with infinite capacities for making acquirements. It is thus ignored that man's characters or qualities are both inborn and acquired, and are largely the product of the action of use and experience, or "education," on the various capacities for development inherent in his organism.

The Statistical Study of the English Convict,¹ by Dr. Charles Goring, to which I have already referred, is the most extensive treatise on the subject of crime and criminals in the English or, probably, any language, containing much valuable information and detailed demonstration of the errors of the so-called anthropological school of criminology in promulgating the doctrine of the "born criminal" recognisable by definite traits

¹ *The English Convict: A Statistical Study*, by Dr. Charles Goring, M.D., B.Sc.Lond., Deputy Medical Officer, H.M. Prison, Parkhurst. London: published by H.M. Stationery Office.

that differentiate him from the mass of humanity. It is, however, the author's further positive conclusions, arrived at by means of the biometrical method of handling his vast material, that are really relevant to the matter before us, and cannot be overlooked in any discussion of the relation of crime to "mental defect." For Dr. Goring's final conclusions involve, or largely rest upon, the conception that qualities or characters generally are either "inherited" or "acquired"—either of a constitutional, natural origin, or produced by the force of circumstances; and that in studying such a character, for instance, as criminality, or the "criminal diathesis," it is possible to "disentangle the influences of heredity from a complication of environmental influences." This, as well as his account of the items or ingredients which constitute his conception of the "criminal diathesis," tend to illustrate the unfitness of applying solely biometrical methods to all branches of biological research.

The purpose of Dr. Goring's work, as stated by him, is "to clear from the ground all that remains of the old criminology . . . and to found a new knowledge of the criminal upon facts scientifically acquired, and upon inferences scientifically verified." After an extensive and minute biometrical investigation, occupying a large section of the work, he concludes that there is no such thing as a physical or "anthropological" type of criminal men. In this important section, which may be termed the destructive part of his work, and is based largely on an immense number of accurate measurements, Dr. Goring has ably achieved the final demolition of a doctrine which, owing to its novelty and superficial plausibility, was much in vogue among criminologists for several years.

With regard to what may be termed the constructive part of his work, the author, still using the biometrical method in a multiform series of investigations regarding the physique, age, vital statistics, health, mentality, fertility, etc., etc., of criminals, arrives at the following conclusions among others: *First*, "that there is a physical, mental, and moral type of normal person who tends to be convicted of crime, *i.e.*, that, on the average, the criminal of English prisons is markedly differentiated by defective physique, as measured by stature and body weight; by defective mental capacity, as measured by general intelligence; and by increased possession of wilful anti-social proclivities,¹ as

¹ The *italics* here and elsewhere are mine.

measured, apart from intelligence, by length of sentence to imprisonment." *Second*, "that relatively to the origin in the constitution of the malefactor, and especially in his mentally defective constitution, crime is only to a trifling extent (if to any) the product of social inequalities, of adverse environment, or of any other manifestation of what may be comprehensively termed the force of circumstances."

In respect of Dr. Goring's conclusion, based on the numerous and detailed observations that he has tabulated and summarised, that those convicted of crime are differentiated by inferior stature and by defective intelligence from the non-criminal population, it is clear that he has drawn a just inference from the facts before him. It is moreover an inference to which, I think, no one of much experience who had made no such special investigation would be disinclined to give endorsement. It must, however, be remembered that in another place it is stated by Dr. Goring that convicts "are selected by a physical and a mental constitution which are independent of each other—the one significant physical association with criminality is a generally defective physique; and the one vital mental constitutional factor in the ætiology of crime is defective intelligence." Even if this comprehensive conclusion about convicts undifferentiated by grouping them according to the kinds of crime committed is taken as established, it is clear from Dr. Goring's statements that the above-mentioned inferiorities are more observable in some groups than in others. The most defective convicts as regards *intelligence* are those who commit murder, arson, theft, or burglary, and these form the large majority of offenders; less defective are those who commit crimes of violence other than murder; receivers of stolen goods and coiners are more intelligent than thieves; and forgers, embezzlers, and fraudulent persons generally are practically absent from the records of "mental defect." I would remark here that among the predominantly large numbers of convicted offenders who commit theft of various kinds the signs of mental defect are not prominent enough in the great majority of them to justify or suggest their classification and treatment as "mental defectives"; and that Dr. Goring, in attributing marked mental inferiority to the "type of normal person who tends to be convicted of crime" uses the term "mental defect" in a far wider sense than is usual, including within it the lower

grades of a normal scale of intelligence reaching from the highest to the lowest. Again, in describing the type of persons who tend to commit crime, Dr. Goring, while stating with emphasis that the factors constituting this type are independent of one another, adds to the factors of physical and mental inferiority a third factor which he terms "wilful anti-social proclivity," and thus composes and completes the "criminal diathesis" which, though present, as he assumes, in all normal persons, exists in the greatest degree in such persons as commit crime. This is, according to Dr. Goring, "the physical, mental, and moral type of normal persons who come into prison." All these differentiæ which mark off the criminal from the non-criminal come within the normal scale of human characters, and Dr. Goring attributes not so much the criminals' crime, as their detection and conviction for crime, to the defects of which they are the subjects. "The thief," he says, speaking of course generally, "who is caught thieving has a smaller head and narrower forehead than the man who arrests him, but this is the case not because he is more criminal, but because, of the two, he is more manifestly inferior in stature."

The stress laid on the third and equally independent factor of "wilful anti-social proclivity" is not, as it seems to me, intelligible unless it be admitted that without its introduction as a factor in the criminal diathesis the intellectually and physically superior convict who, though in a small minority among criminals generally, is by no means numerically rare, would fail to find a place under that generalised type of men with high potentiality for crime which has been arrived at by Dr. Goring. In speaking of the constitution of this type he states that there is "*another bond of association, though less close, between conviction for crime and wilful anti-social proclivities or moral defectiveness.*" This statement, he says, is demonstrated by the fact that it is the most intelligent recidivists who are guilty of the most serious offences. The marks of the type of men prone to crime, be it noted, are "physical," "mental"—(this term being used by Dr. Goring in reference to the factor of intelligence)—and "moral"; and, as we shall see presently, all these marks are held to be *constitutional* in origin. Even assuming, for the sake of argument, that no question need arise regarding the exclusively constitutional nature of the factor of mental defect, as employed in this

context by Dr. Goring, it seems that the special and independent entity of "moral" defect is introduced into the picture of the triple constitution of the criminal without justification. It seems, indeed, in considering from a practical point of view this conception of a "criminal diathesis" which is common to all men, but bulks largely among criminals, that although the great majority of criminals may be of less intellectual ability or even capacity, and of inferior physical development as compared with the average of non-criminals, we shall not gain any further light on the genesis of the criminal by stating that he is specially prone to commit anti-social acts wilfully. We see plenty of short criminals who are intelligent, and tall ones who are stupid; and plenty of intelligent and habitual criminals with good physique; and so far even a demonstration of the large majority of criminals being of both inferior physique and intelligence would not help us much in the study and treatment of individual criminals. But when the conception of the "criminal diathesis" includes further such a "constitutional" factor as an inborn criminal propensity—for this is what "anti-social proclivity" comes to—it seems so artificially strained as to become tautological, and of no practical or even speculative value to the student of the criminal's genesis, especially when we remember that all its component elements are stated to be *independent* of one another.

What really matters most here is the question whether Dr. Goring has established his contention that the characters which he attributes to the make-up of the criminal are so predominantly, if not entirely, inborn or produced by heredity, as he represents them to be; and, incidentally, whether any conclusion of value bearing on the genesis of the criminal is likely to be attained by the statistical method he has employed.

One of Dr. Goring's important conclusions regarding the genesis of the criminal is that the "criminal diathesis," revealed by the tendency to be convicted and imprisoned for crime, is *inherited* at much the same rate as are other physical and mental qualities and pathological conditions in man. A further conclusion, based on a statistical inquiry which failed to find any "significant relationship" between certain conditions, such as illiteracy, parental neglect, lack of employment, etc., is, as we have seen, that "crime is only to a trifling extent, if to any, the product of the environment or the force of circumstances."

This second conclusion serves to establish the former provisional conclusion that hereditary influence is the only important factor in the genesis of the criminal. By these steps it is sought to prove that every factor which contributes to the "criminal diathesis" is a "heritable quality"; and that the production of the "diathesis" is uninfluenced in any considerable degree by the action of any other force than that of heredity.

I have already said nearly enough to show why I think that the final conclusions we have been considering are erroneous. There can be no doubt whatever that the commission of criminal or anti-social acts, like any other quality exhibited by human beings, must necessarily involve dependence on heredity. The existence of any quality or character implies this: and all arguments adduced to prove this statement are really superfluous. From a study of Dr. Goring's work it might well be inferred by readers that no inquirer into the subject of crime and criminal had ever recognised the patent and necessary factor of inborn capacities of all grades in the production of everything that can be called a "character" in every living being. This is accepted knowledge: no longer an hypothesis in want of verification. But that the human being, criminal or non-criminal, is the creature of his inborn capacities alone has not been proved. Even if, for the sake of argument, the complete validity of the methods employed and of some of the subordinate conclusions arrived at in this study of the English convict be assumed, including even that of the denial of any "significant correlation" between crime and the particular environmental conditions investigated by Dr. Goring, it cannot possibly be held that any significant proportion of the innumerable influences that act on all men from infancy to age, for good or for ill, and contribute so largely to the make-up of each of us, have been eliminated, or could be eliminated by such an inquiry as we have been considering. The totality of the complex environment which moulds the characters of men—"physical," "mental," "moral," or "intellectual"—and either encourages or stunts the development of their natural or inborn capacities, cannot be analysed or reduced to such items as can be established or eliminated or reasonably dealt with by statistical handling. It is not possible to "disentangle" the various factors that contribute to the production of a criminal

except in cases that may be marked by patent *incapacities* to acquire such characters as are possessed by the average man and are fundamentally necessary to social life. Nor is it possible to assess in any case with precision the proportionate influence of the two undeniably necessary factors of "heredity" and "environment" in the development of a criminal man.

It is far from my intention to use any argument from "consequences" against the chief position maintained in Dr. Goring's work; such an argument is only too common in controversy on this subject. It may, however, be fairly noted that one apparent consequence of this position seems to be largely irreconcilable with some admissions made towards the end of this work. If it be true, as Dr. Goring has proved, that lawbreakers in the mass are notably less intelligent than law-abiders, and further, if it were true that their inferior intelligence is due solely to inborn incapacity, it must follow that there would be little, if any, reason for making efforts to reform lawbreakers. Being, *ex hypothesi*, incapable by nature, and not in any recognisable degree by the force of circumstances, of duly acquiring elementary social qualities, they will in all probability continue their misconduct if not permanently coerced by force. Their "criminal diathesis" is predominant. Yet Dr. Goring says at the conclusion of his work: "We know that to make a law-abiding citizen two things are needed, capacity and training."

I venture to think that most of us, including Dr. Goring, would agree, even in default of a demonstrative experiment, that most children and young persons, from whatever stock, untainted by any noticeable degree of congenital or "inherited" inferiority of body, "mind," or "morals" they might have sprung, could have their normal criminal diathesis so influenced by neglect or positive training as to be actually and easily produced as even habitual "criminals" of various kinds. A law-abiding man, merely as such, is surely a complex of many characters or qualities, and needs accounting for as much as the lawbreakers. It is certain that most of the qualities that make him what he is require much aid from the action of his "environment" on his inborn capacities before these qualities can be produced or developed. It is equally certain that a man who lacks due capabilities to respond to his social environment will be a social offender or a lawbreaker. And doubtless there

are many grades between those who possess such capacities in a high degree and those who greatly lack them. Human beings generally, whether actual criminals, average persons, geniuses, or saints, are, to a very special degree, as compared with other animals, the products of their environment as well as of heredity, *i.e.*, of inborn capacities ; but not of the one without the other.

To revert now, shortly, to the practical aspect of "mental defect" in its relation to crime, and to the treatment of the criminal, I hold that, true as it may be that the *intelligence* as tested by observation of the majority of criminals is inferior to that of the non-criminal population, yet the majority of criminals, guilty of many kinds of offence, manifest no such defect on the score of intelligence as would suggest to an experienced observer that they should be regarded or treated as practically irresponsible. I believe that the large majority of criminals convicted of most kinds of crime could not with any plausibility be dealt with either as being the subjects of defective intellectual capacity, or even of "mental deficiency" in the full and proper sense of that term. But I hold, on the other hand, as I have explicitly stated above, that there is a very notable minority of criminals of many kinds whose degree of mental defect, not only, or always, of generally defective intelligence, is so great and manifest, that for practical purposes they should be regarded and treated more or less similarly to the insane. They exhibit by their conduct, apart from the crime for which they have been convicted, highly probable evidence of their being the subjects of such defect of mind and brain as to render it fairly certain that the defect is congenital, and has but a very subordinate dependence on the "force of circumstances." Many of these cases bear a close resemblance to others occurring among non-criminals, and in all social grades. It is in cases of this latter kind where inquiry into family histories is more readily made ; and this not infrequently results in the discovery of further similar cases in near relatives. These cases should in my judgment be regarded as the subjects of inborn organic defect in a very predominant degree. I do not, of course, intend to make any implication that the far less salient cases of mental defect, which characterise so many other criminals, are not similarly referrible to organic defect, although of a less degree. It is certainly widely admitted now that in

order to study most fruitfully both psychology and mental pathology, we must think, as far as our knowledge permits, in terms of the organic functions on which mental activities depend. I am thus unable to separate, so sharply as Dr. Goring seems to do, the subjects of the greater degrees of mental defect that we have been considering from the subjects of "insanity." He, apparently, regards the subjects of mental defect as "normal," but the insane as abnormal, or the subjects of disease.

III. In conclusion, I append, in view of its relevancy to much that has been said above, a brief account of a criminal case which I mentioned at the end of my "Notes on the Mental Deficiency Act" in the July number of this Journal for 1916.

A young man, not many years over twenty, was convicted of wilful murder. The plea of insanity failed, and the evidence as to fact was unquestionably conclusive. He was sentenced to death, but the sentence was afterwards commuted to penal servitude for life. He had been seen by two experts, and was pronounced as insane by the one, but not so by the other. I had a long interview with him several weeks after he came into prison, having then no knowledge of his case other than what I had gathered from a brief newspaper report. I spoke to him on other subjects as well as on his crime and conviction, and he talked very freely and quite consecutively on all. He appeared content and cheerful, and told me, in reply to a question, that he was not shocked by his sentence, or in any way disturbed, except by the annoyance and disgrace that would be felt by his relatives, who were well-known people. He denied that he was guilty of the charge of murder, attributing the crime to another; but said that he consented to the plea of mental disorder which his legal advisers set up because he thought that this would be the best course. I formed the opinion that the grade of his general *intelligence* was by no means very low: certainly not lower than that of many thoughtless and flighty persons who exist in all ranks of life, and are able to look after their own interests fairly well as far as mere *intelligence* goes; and I deemed him, at the time of my interview with him, uncertifiable as a "lunatic" from the legal standpoint. I observed nothing special about him, during this interview, but his attitude of indifference to his condition.

He had received at least a fair superficial education, as I inferred mainly from his speech and manner.

His conduct in prison was reported to be good, and I may add here that it continues to be so. From further information I learned that his parents were very wealthy, and that he had apparently been indulged from his childhood in all his desires. He had early shown but little regard for the feelings of others, was cruel to animals, and was reckless of causing danger to himself or any one else. There was, indeed, evidence of many other aberrations of conduct pointing to notable mental defect that I cannot now specify.

My general inference was, in accordance with that of Dr. Murray, the Medical Officer, that this case fitted in with precision to that practically useful group of "mentally defective" persons which finds a place in the Mental Deficiency Act under the well-known but by no means faultless title of "moral imbeciles"; and that this criminal is no more and no less rightly considered as irresponsible, wholly or partly, than many "lunatics" or persons of unsound mind who are more or less readily certified as such by alienists. I believe, however, that if he were sent to a lunatic asylum under the ordinary certificate he would in all likelihood be soon discharged as "sane" or "recovered," for he would perhaps show no aberration of conduct or any other indications of insanity while under the restrictions of an institution for detaining insane persons, any more than he does in prison. It seems also improbable that he would be accepted by the Board of Control as a proper subject for treatment in a State Institution for "Mental Defectives" not certifiable either as "persons of unsound mind" or as "idiots"; although in the untechnical senses of these words, he is as certainly the one as he is not the other, and is, I think, with equal certainty a person highly "dangerous" to the community. But he could not be called "violent," in spite of his having committed a premeditated murder. My view that such a case as this is properly certifiable under the Mental Deficiency Act as a "Moral Imbecile" is based on the grounds not only of the circumstances of his crime but also of his attitude towards his own case, and of the history of his general conduct before he committed the crime. I regard him as not fully responsible for the murder he committed, and permanently unfit for free life.

Epilepsy: A Metabolic Disease. By GUY P. U. PRIOR, M.R.C.S., L.R.C.P., Medical Superintendent; and S. EVAN JONES, M.B., Medical Officer, The Mental Hospital, Rydalmere, N.S.W.

GOWERS states that the morbid state causing epilepsy "consists in some trifling alteration in the chemical constitution of the grey matter of the brain on which the instability spoken of depends." (1)

Munson says: "I believe that the epileptogenous change affects the chemical structure of the cell. Function is the result of change in the chemical structure of the cell, brought about by the laws governing chemical action. Disease being a change or failure of normal function, it follows that disease is the result of interference with the normal chemical processes of the cell" (2).

We have for twelve months been making observations upon the more easily detected chemical changes in the blood and urine, to throw if possible some light upon the changes of which Gowers, Munson, and other authorities speak.

We first made records upon the calcium contents of the blood and urine, in a number of epileptic patients. This we did by the methods taught by Dr. Blair Bell, (3), and it is due to a chance reference to his work that we have been able to undertake and develop these investigations. We found marked changes from the normal, and had some successes in treating patients with salts of calcium. We published these earlier observations in the *Australian Medical Journal* of March 4th, 1916. Since then we have extended our investigations and made observations upon the alkalinity, coagulability, and leucocytes of the blood; upon the changes in the amount of phosphates and chlorides excreted in the urine, and also upon the blood-pressure of epileptics. We have treated a number of patients with calcium and with the extracts of various ductless glands.

It is upon the records of the last six months of our work that we now write. At first we took weekly observations upon a number of patients, but have found since then that to be of any value the observations must be made daily, as such changes as are shown before or after a fit can only with certainty be obtained this way.

First, with regard to the calcium excreted in the urine. In our paper before referred to, we pointed out that epileptics, as compared with others, excreted in the urine less calcium (7).

Since then we have made 730 records of the calcium excretion of nineteen patients, and of these 395 showed less than half the normal amount, 165 were from half of to below normal; fifty-one were normal; eighty were between normal and twice normal; and on twenty-nine occasions the excretion was more than twice the normal amount. The amount excreted varies greatly with the individual patient, some patients seldom excreting more than a trace, others excreting as a rule a normal amount or more. We have found changes in the excretion both before and after a fit or series of fits. In the case of eight patients daily observations were made extending from thirty to 112 days.

Average Daily Excretion in Grams Per Cent.

Case.	Grams per cent.	Period in days.	Fits.
34	. '0014	30	5
33	. '004	38	5
11	. '009	80	29
29	. '01	30	6
3	. '011	112	197
8	. '018	80	22
6	. '016	112	40
26	. '026	30	22

Taking the normal average percentage excretion of calcium as 0.2 grm., the above table shows that with the exception of one case the excretion was low, and in the Cases 33 and 34, markedly so. The amount of calcium excreted does not appear to bear any relationship to the number of fits.

During the period under review the patients had thirty serial attacks, besides occasional isolated convulsions.

In twenty-six instances there was an increased calcium excretion preceding the onset of the convulsions.

In twenty-seven instances there was a diminution following the increase. In twenty-six cases the diminution was followed by a secondary rise. The preliminary rise occurred from the fifth day to the day immediately preceding the series. The rise varied considerably, averaging 1.6 of the normal. In cases which had been showing a continued low excretion the rise did not always exceed the normal, but was nevertheless high for the particular case.

A rise is often seen in the calcium excretion without a fit occurring; associated with those observations changes in the calcium blood index and coagulability that we have noticed to precede a fit have not taken place. After a series there is a fall in the excretion, which during a series lasting several days usually remains high.

Table showing Relationship of Preliminary Rise to Commencement of Series.

No. of days before series	5	4	3	2	1
No. of instances in which rise was noted	3	6	10	6	1 (total 26).

The preliminary fall was observed as shown by the following table:

No. of days before series	3	2	1	1st day of series.
No of cases	2	12	9	4

The average excretion during this phase was 0.23 of normal, *i.e.* 0.0046 gm. *per cent.*

The secondary rise occurred thus:

Days before series	2	1	1st	2nd	3rd day of series.
No. of instances	2	10	8	6	1

The average secondary rise was 1.1 of normal, *i.e.* 0.022 gm. *per cent.*

The Phosphorus Excretion.

It was thought that changes which occurred in the calcium excretion might influence the output of phosphorus in the urine. Accordingly daily examinations were made on several patients over periods from one to three months.

The results of our observations showed a distinct contrast between the male and female patients.

In four women, whose urine was examined in each case daily for one month, the excretion of phosphorus was found to be remarkably uniform, being in all of them below normal, and with very little variation, and showing no relationship to epileptic attacks.

The males, however, all showed an irregular excretion with a wide range. One of these had numerous fits daily, so we were unable to draw any conclusions, but three patients were

subject to serial outbreaks, and they all presented similar variations in the phosphorus excretion.

During the period under consideration these three men had twenty-one serial attacks. On fifteen occasions the phosphorus excretion fell to a minimum on the second and first day before the commencement of a series, and in a similar number of instances there was a rise succeeding the series.

We observed also that an injection of calcium iodide was followed by, in many cases, a great output of phosphorus. There appears then to be ground for thinking that coincident with the increased excretion of calcium before a series, there is a retention of phosphorus.

Chlorine.

The excretion of chlorine was found to be irregular in the men, but less variable in the women. Beyond an occasional fall preceding a series we were unable to detect any special relationship to the epileptic attacks.

Calcium Blood Index.

We have examined the calcium blood index also, according to the directions given by Dr. Blair Bell (3 and 4). By his method blood is prepared, and the calcium crystals counted on a hæmocytometer; he impresses the fact that there are diurnal variations, and advises that the blood be taken at the same time every day. He gives the normal as being from 0·8 to 1·0 crystal per square. During the time under review we have had estimations of the calcium blood index of eighteen patients, whose urine was also examined. We have grouped the results as follows:

Calcium blood	·4 and lower	·4 to ·6	·6 to 8	·8 and higher.
	40	178	119	70

It will be seen that the index in most cases is subnormal, *viz.* 337 times out of 407.

Whereas in the matter of calcium excretion each patient tends to have his individual peculiarity as to high or low amount daily excreted, this is not to the same extent noticeable in the blood index, but the variations of each patient are greater. There is apparently no constant change in the calcium blood index before a fit. The amount sometimes is

high, but usually there is more variation in the count at the time a fit is going to take place than at other times, and more often than not there is from a few hours to two or three days before a fit a high blood-index together with a high excretion, accompanied with changes in the alkalinity and coagulability of which we will speak later. Towards the end of, and immediately subsequent to a series, there is always a high though variable calcium blood-index, which falls a day or two after its termination. In conditions of status epilepticus a high blood-index is found reaching from 1 to 1.5. We have not found the blood-index to have any constant relationship to the urinary excretion, to the alkalinity, or the coagulability, though often the index has been found to be highest when the coagulation-time was shortest, but to this there are many exceptions, though often before a series, and always during status, both are high together.

Coagulation.

We have examined the coagulation-time of the blood by means of drawing some into a capillary tube, transferring it to a glass slide and noting the time it takes to draw out fibrin threads, and using our own blood as a control.

Turner says that in epilepsy there is an increased tendency for the blood to clot, that this is more marked before and during a fit, and that after a fit the time may be lengthened (5). Besta found diminished coagulation-time in 37 cases out of 45, and that the diminution was in proportion to the number of fits. Perugia found in 36 cases all to be of lowered coagulability, which could be rendered normal by giving calcium salts (5). We have made 464 examinations as to the coagulability of the blood; 416 of these were made upon 18 of the patients on whom we were making daily or weekly observations; 48 were made upon other epileptics. These and all our examinations have been made about the same time each day; the relationship of an examination to a fit or a series of fits is by chance. Of the casual 48, the coagulation of 35 was shortened, of 7 normal, and of 6 lengthened. We find that as a rule before a fit, and more markedly so before a series, there is a shortening in the coagulation-time; if the patient's coagulation is usually short this becomes shorter. During a series the coagulation-time is short, but after a series approaches

the normal, and often becomes lengthened. We have also noticed, in some cases, that during those months when the fits have been fewest, the coagulation-time has been longest.

In Case 29, upon whom observations were made for 5 months, only in 1 month did she show any lengthening of the coagulation time. This she did in 3 examinations out of 4; the fourth was approaching the normal. In this month she only had one fit, whilst in the other 4 months the fits were from 5 to 13. During these months 33 examinations were made, 6 times the coagulation-time was normal, and 28 times shortened.

Case 34, on whom 23 observations were made in 1 month, showed only twice a lengthening of the coagulation-time; one of these occasions was about 2 hours after having a fit. In the same patient an observation was obtained about 2 hours before a fit, when the coagulation-time was only $\frac{1}{3}$ of normal.

Case 18, upon whom 54 examinations were made in 2½ months, shows less tendency to shortening of coagulation-time than most epileptics, it having been short or normal 24 times out of the 54 examinations. Two days before the commencement of a series his coagulation time shortens, remains short until the end of a series, then rises, and remains normal for 16 days, during which time he is free from fits, when again the diminution of the coagulation-time, with an increase in the calcium urinary excretion and a fall in the alkalinity of the blood, indicate the probability of another series occurring. After this next series of 6 fits in 4 days the coagulation-time remains subnormal for 4 days, when he has 3 more fits, and the coagulation-time again becomes plus.

In case 36, 17 observations were made in 4 months. In the 4 months when she was receiving pituitary gland, her coagulation-time was decidedly lengthened in 3 examinations out of 4; during the month in which this happened she had but 1 fit. During the other 3 months she received no treatment, and had 10, 6, and 4 fits respectively. In these months the coagulation-time was shortened in 10 examinations out of 13. In the month in which the 10 fits occurred the coagulation-time was decidedly shortened in all four examinations.

In all cases of status epilepticus we have found the coagulation-time more markedly shortened than at other times.

Alkalinity.

We have examined the alkalinity of the blood by Boycott and Chisolm's method. To do this a series of small tubes are prepared containing quantities of N/1,000 sulphuric acid, rising by 0.1 c.c. from 0.0 to 1.2 c.c.; the volume in each being made up to 2 c.c. with distilled water. About 0.02 c.c. of blood is then added to each tube, the contents well mixed, and the tubes placed in a water bath for one hour. With normal human blood, a coarse flocculent precipitate makes its appearance, when the tubes containing 0.7 to 0.9 of acid are reached. The appearance of this precipitate is considered to indicate the neutralisation point (8).

Charon and Brich have studied the relationship of epileptic convulsions to the normal variations in the alkalinity of the blood. They found the seizures to stand in inverse relation to the degree, and that the minimum frequency of the attacks corresponded with the maximum blood alkalinity (5). Pugh reports interparoxysmal alkalinity lower than the average, a sudden fall immediately before a fit, and a further fall after. He ascribes this as being due to acid toxins; absorbed from the intestinal tract (5).

We have made 290 examinations as to the alkalinity of the blood, and all but 32 of these have been on the same 18 patients as the other observations. Of these 290 examinations made on 50 patients, only 15 times have we met with a degree equal to what Boycott and Chisolm give as normal; and of these 15, 13 were made on different occasions with the blood of the same patient, making only 3 patients that gave a normal degree of alkalinity. The rest were subnormal, many giving a very low degree of alkalinity. With slight variations, many patients seem to run their own degree of alkalinity, which makes larger variations at the time of epileptic attacks. We have found that, as a rule, there is a fall of blood alkalinity before a fit, and after an attack, a rise, to what might be called the patient's own normal, or above. This rise we have observed a few hours after a fit; the pre-fit fall may take place a few hours before, or there may be an irregular and falling alkalinity some days before the fit occurs. During a series the alkalinity continues to fall or remains low.

In case 32 nine observations on the alkalinity were made-

in two months, the neutralising point varying from 0·4 to 0·6 ; being, on two occasions, 0·6, shortly after a fit had occurred.

Case 6 had 10 fits in two series. Before the first series alkalinity fell from 4·5 to 4, remained low, and at the end of the series reached 3, then rose, and fell again before the next series.

Leucocytes.

In the case of the same patients as those on whom we have made the other observations we have made 395 leucocyte counts, and in 183 of these we have made differential counts.

Turner states that the leucocytes in epileptics are 20 *per cent.* below, and under bromides they approach the normal. Lewis Bruce has observed a hyperleucocytosis after a serial outburst or attacks of status (5).

We have found that Blair Bell's (3) method of preparing blood for calcium crystals is also an excellent way of showing leucocytes, and that we could easily make a differential count on the same slide as we counted the blood crystals. We have divided the results into four classes, those

Below 7,000.	Between 7,000 and 10,000.	Between 10,000 and 16,000.	Over 16,000.
88	108	132	42

We have found that patients have their own peculiarities as to leucocytes, some seldom giving counts above 5,000 or 6,000, others seldom below 12,000 or 14,000, and one patient has shown an individual peculiarity in his differential count, having small lymphocytes increased out of proportion to the polymorphonuclear leucocytes.

We have found that as a rule before a series, and at times before an isolated fit, there is a fall in the number of leucocytes often to as low as 4,000 or 5,000, and that during a series the number will gradually rise, and that after a series the count will often be 19,000, or 20,000 or more.

In one case of status, on a day in which the patient had 77 fits, two days before her death the leucocyte count totalled over 70,000. During an hysterical attack which in one of our patients often replaces a fit, we have noted a leucocytosis of over 20,000. In several cases in which the leucocytes have for one month been consistently higher than during another, we have observed that during the month of high count

there have been fewer fits, also that during a free interval the leucocyte count is higher than at the time of taking fits. As to the differential count we have found, with the exception already mentioned, the relationship between the large, small, and polymorphonuclear to be about normal, and that in the post-epileptic rise, the increase in number is almost entirely in the polymorphonuclear leucocytes, when of necessity they become increased out of proportion to the others.

Blood-Pressure.

We have made 258 examinations on the systolic blood-pressure by means of Tycos' sphygmomanometer. Of these examinations 134 have been made on 64 male patients and 124 on 51 female patients. The pressure has been taken both in the recumbent and standing positions on each examination. The patients are of all ages from 20 to 70 years, the majority being between 30 and 50 years of age.

The results are as follows :

Male patients :

Standing :

Below 100 mm. Hg.	100-120	120-130	130-150	150-170	Over 170 mm. Hg.
7	56	35	24	11	1
Recumbent :					
7	45	37	32	8	4
Female patients :					
Standing :					
32	51	18	9	10	4
Recumbent :					
23	59	15	18	7	2

Of the male patients, on 62 occasions the pressure in the lying position exceeded that in the standing position. On 22 examinations the pressure when standing and lying was equal. Of the female patients on 56 occasions the recumbent pressure exceeded that of the standing, and on 17 examinations the pressure in the two positions was equal.

The significance of the fact that more than half the blood-pressures taken by us were equal or higher in the recumbent position than when standing we do not understand. Ludlum and Carson White in an instructive article mention this variation of blood-pressure as occurring in some cases of dementia

præcox, giving certain Abderhalden reactions, and the results they obtained by giving the underactive gland (16).

Calcium.

Calcium salts have for some time been considered of use in the treatment of epilepsy, and many cases have from time to time been reported that have greatly improved on calcium; others have reported that no good but harm results from its use. As far as we are aware no concise account of the use of this drug in epilepsy has been written, nor any clear reasons for or against it advanced. The best summary of its employment we have seen is contained in an Editorial Review of Epilepsia. Here it states: "Sabbatani concluded that calcium in the cortex exercises inhibitory influence, and that its diminution may bring about convulsive phenomena" (6). The same review quotes Donath's conclusions: "That calcium plays no important part in epilepsy or tetany." These conclusions he bases on 9 cases treated for 124 days. Sir J. Barr says that in epilepsy all soluble calcium salts do good, and advises that decalcifying agents such as acids and fruits be avoided (9). Blair Bell states that hystero-epilepsy is due to depletion of lime salts from the tissues, and that calcium lactate may cure this condition (10).

We have for the last twelve months treated 20 male and 10 female cases with calcium, either alone or combined with bromides, and during the last six months have added one or more extracts of the ductless glands. All except two of our patients are insane epileptics of many years standing; the class of case of which Turner says—"that in confirmed epileptics, with frequently recurring fits, little if any benefit is to be derived from treatment, whether medical or dietetic" (5).

Of these 30 cases none were any the worse for receiving calcium. Donath records that he had to stop treatment in one of his cases on account of increasing fits (6). Five of our cases, all male, are neither better nor worse. Thirteen have had their average number of fits reduced by half or more than half, the other twelve have shown a lesser reduction. In several in whom the fits are not much reduced in number they are less severe, and the after-effects are much less; many are mentally brighter and are capable of more work. Two who had not

worked for years have taken to doing so since being treated with calcium. Their outlook is brighter, and they have more interest in life.

Glands.

Having had some success with treating these patients with calcium we then added to the treatment the extracts of various ductless glands, doing so in the first instance because of their influence upon calcium metabolism. We have used extracts from the thymus, thyroid, parathyroid, suprarenal, and pituitary glands. All these have appeared to be of use in some cases ; all with the exception of thymus have apparently done harm in other cases. The indications for any special gland extract in any given case are at present vague and indefinite. The influence which the secretion of these glands have upon calcium metabolism is said to be as follows :

Thymus—removal of this gland increases the calcium excretion (11). It is said to be engaged in hindering the formation and neutralising the excess of acids in the organism ; its enucleation leads to acid excess. A puppy without a thymus lacks intelligence (12).

Suprarenals—removal leads to retention of lime in blood and tissues and prevents excretion of calcium (9).

Pituitary extract causes increase of calcium in the blood (13). Thyroid and ovarian diminish the free and fixed lime in the blood and tissues and thus lessen viscosity. If the thyroid is removed the calcium index rises.

Parathyroids control the distribution of calcium ; if the secretion is deficient the tissues lose calcium (14).

If the thyroid and parathyroid are removed in cats the animals have convulsions (11).

Of these glands we have found the thymus to be of most use and the only one from which harm may not occasionally result. We used thymus as it is the gland that undergoes definite change at the time that the commencement of epilepsy is commonest. We looked upon the hypertrophy and persistence of this gland, which is often found in epileptics, as a compensatory one, and thought that its secretion might be needed more in these patients than in normal people. The blood of epileptics is less alkaline than that of others, and the thymus is credited with neutralising acid excess (12). Myers

states that in acid intoxication the calcium content of the blood is increased, probably at the cost of the tissues. He also says that oxalic acid poisoning is relieved by calcium, owing to its replacing the calcium withdrawn by the oxalic acid (15).

We have been partly guided by the blood-pressure as to which gland to give (16).

Turner says that epilepsy commences most commonly during the time of the greatest activity of the thymus, and that thymus given to epileptics aggravates the disease (5).

The female patients have on the whole made more improvement on the calcium treatment than the men. Some have been more regular in their menstrual periods while on this drug than they were formerly. Blair Bell says that menstruation is dependent upon a certain supply of calcium, and if this is deficient the function will not take place. He also says that if a patient suffering from amenorrhea due to debility be given calcium the function will become reestablished (11). We have treated two cases of primary dementia, both of whom had amenorrhea for over three years, as he advises. The first case menstruated within a month of the commencement of the treatment, and has now done so regularly for over twelve months. The physical improvement in this patient was beyond expectations, she having put on two stones in weight and maintained it. The other case did not respond so readily, but after taking calcium for three months, and when also taking pituitary gland, the menses reappeared. We suggest, therefore, that the irregularity of the katamenia which occurs in epileptics, may be another expression of the same disturbance of the calcium metabolism which is responsible for the epileptic phenomena.

Injections of Calcium Iodide.

We have used intramuscular injections in cases of serial epilepsy. It has been pointed out that calcium is a nervine sedative, and that it lowers the excitability of the cortex to faradic stimulation. It has also been shown by Ringer that calcium salts control the excitability of muscle, which points to the fact that muscle and nerve are less irritable when plentifully supplied with calcium. Although at the time of a serial attack the coagulation time is shortened, and the calcium blood index

is generally raised, we have thought that this may have resulted from depriving the nerve tissue of calcium, rendering it more irritable, and that by adding calcium to the system this irritability might be lessened. We have treated 60 serial attacks in 13 different patients with the following results :

One injection :

No. of fits after injection	0	1	2	3
Times	21	14	2	4

Twice a second injection was given, the patient not having responded to the first ; each time there were two fits after this second injection. Twelve times there was apparently no improvement, the series being as long or longer than the patient's usual average. These injections were given to patients who habitually have their fits in series. Of course it is impossible to say that some of these patients might have had no more fits, without receiving an injection ; it is certain from their former habits that the majority would have had. One patient who becomes extremely dull and is only semi-conscious after a few fits, becomes quite conscious and almost bright within half an hour of receiving calcium in this way. The calcium iodide is prepared according to the directions given by Sir J. Barr, *i. e.* it is made up in a solution of glucose in salt solution (17).

We inject as much as 10 gr. ; no harmful effect has resulted, except that in two cases abscesses have occurred. We were then using solutions of 4 gr. to the c.c., which is probably too strong. Before and since we have used solutions of half this strength.

Cases Illustrating the Treatment.

A lad, æt. 21, had convulsions at the first dentition ; from the age of 2 to 11 years he had about one fit yearly. From the age of 15 he had been getting worse. For six months before admission he averaged 77 fits a month. Most of these attacks were not ordinary convulsive attacks, but he would lose consciousness, run round in a circle from right to left, micturate, and then lie down. He was given a mixture of bromide and calcium every four hours. For the next nine months he averaged less than one fit a month, these being all of the ordinary major type. He then left the Hospital, and is

now, three years after admission, reported to have about one fit in three months.

CASE 3.—Before coming under our care, he had for many months averaged 120 fits a month, although being treated with bromides. He is a man, *æt.* 26, and has been an epileptic since the age of 20. Most of his attacks were what his friends aptly describe as "squealing fits." He would lose consciousness for a few seconds, would scream loudly, and if not held would fall. We have treated this patient for six months. For the first month he was given calcium chloride four-hourly, and thymus gland 5 gr. every morning, and the number of attacks dropped to 90. For the second month he was given in addition potassium bromide, 30 gr., every four hours; in this month the fits increased to 118. For the last four months suprarenal gland has replaced the thymus and 10 gr. of bromide been added to each dose. The number of fits during these four months has been 21, 4, 2, and 0 respectively. In spite of the large dose of bromide that he has been taking, he has put on weight, is lively and good-natured, and works daily on the farm. Before treatment his coagulation-time was on most examinations lengthened.

CASE 4.—A lad, *æt.* 20, has been treated by us for eight months. Before admission he is stated by his father to have averaged one fit every night. This we did not verify, but commenced treating him shortly after admission. He was given thymus gland, 10 gr., and a mixture of bromide and calcium. During the next seven months he had no fit; during the eighth he had 9, which followed upon the reduction of his bromide from 15 gr. to 10 gr. per dose.

Thymus in this case seems to have undoubtedly done good. It was given as the fits commenced about puberty.

CASE 2.—A man of little intelligence and an eater of all sorts of rubbish, with an especial liking for grass. For six months before treatment he averaged 41 fits a month, with a maximum of 64 and a minimum of 25. All this time he was receiving bromides. For eight months he was given calcium and bromide; the fits during these months ranged from 18 to 6, giving an average of 13. For one month he had in addition suprarenal gland, 5 gr., every morning; this month he had 10 attacks. For another two months thymus replaced the suprarenal; during these two months he averaged 19 fits a

month. In the course of twelve months treatment he has not in any month reached half his former average.

CASE 25.—A dull imbecile, an epileptic since infancy, for six months previous to treatment averaged 10 fits a month. For ten months she received calcium lactate, 10 gr., and potass. bromide, 15 gr., every four hours. In three of these ten months she had no fits (which had never been recorded of her previously) the monthly average for the whole period being 3.8. Having a low blood-pressure, she was for three months given pituitary gland, $2\frac{1}{2}$ gr. daily, in addition to the calcium and bromide. For these months she averaged 6 fits a month, the pituitary gland seemingly having increased the number of fits. This patient has made considerable mental improvement. She formerly was too dull to converse or to have any interests; she is now a working patient and fairly bright.

CASE 28, æt. 35, an epileptic since 12 years of age. She was dull and lethargic, and her fits are associated with a periodic cyanotic condition of her fingers and toes. For the six months previous to treatment her attacks averaged 18 monthly, ranging from 16 to 21. For two months she was given calcium lactate alone, for which months her fits averaged 12. For two months bromide, 15 gr., was added to each dose of calcium, for which time the monthly average of fits rose to 15. As she on all examinations had a moderately high blood-pressure, she was for three months given thymus gland daily, as well as the calcium and bromide, the resulting average of fits being seven a month. For four months she received thyroid gland three days alternately with the thymus, the monthly average of fits rising to 10. Since taking thymus and calcium the attacks of cyanosis, which formerly were very frequent, have almost disappeared. This patient improved with calcium alone, but made a more decided improvement when taking thymus in addition. There was a slight increase in the number of fits with thyroid gland, but when taking this gland she becomes mentally much brighter.

CASE 23.—A woman, æt. 66, an epileptic since the age of 54 years. This is a case of alcoholic origin, and arose at the time she ceased to menstruate. For six months previous to treatment she had averaged 21 fits a month, with a range of from 13 to 29. For four months she received calcium and suprarenal gland, with a resulting average of 13 fits a month;

showing a maximum of 17 and a minimum of 5. For one month 5 gr. thyroid replaced the suprarenal, with the result that this month she had 34 fits, the most ever credited to her in any one month. This patient improved with calcium and suprarenal gland and without bromide. Thyroid gland with her increased the number of fits.

CASE 31.—A boy, æt. 19, an epileptic since infancy. For the twelve months previous to treatment he averaged 6 fits a month, ranging from 1 to 8. His epileptic attacks are associated with sexual instability, as before a fit he practises onanism freely. For three months he has taken thymus, 5 gr. daily. During the first month of treatment he had no fit, in the second 4, and in the third 1. The patient states that since taking thymus his genital organs have caused him less temptation, and to this he attributes the diminution in the number of fits.

Pathogenesis of Epilepsy.

Various writers have assigned numerous causes for the recurrent explosive attacks which characterise epilepsy. These may be classified as

- (1) Toxic.
- (2) Vascular.
- (3) Infective.

The supporters of the toxic theory do not agree as to the nature of the toxin. Krainsky says ammonium carbammate, Haig uric acid, whilst others support a non-specific intoxication due to some failure of the digestive functions.

Experiment in our hands failed to justify the supposition that there is a specific toxin in epilepsy. Krainsky by subcutaneous injections into rabbits of blood taken from epileptic patients in conditions of status produced convulsions and death of the animal in 4 or 5 days. His results are quoted by many authors, but as far as we have been able to ascertain have not been repeated. We have injected 3 guinea-pigs with 2 c.c. of blood, and 3 with 2 c.c. of cerebro-spinal fluid, taken from three patients suffering from status epilepticus, and beyond a slight malaise the animals showed no ill-effects.

That the agent responsible for the convulsions is a non-specific toxin hardly needs refuting. There are too many

cases of intestinal toxæmia which do not exhibit symptoms of epilepsy. Russell's vasomotor explanation (18) has not been supported by pressure records made by Munson (22).

J. Turner (5) has observed intravascular coagula in the central nervous system, and offers them as the cause of the attack, postulating, however, as do many supporters of the toxic theory, a brain hereditarily and structurally predisposed to irritability and convulsions, which seems to be begging the question.

Bra, and more recently an American writer, have claimed to have isolated specific organisms from the blood of epileptics. The trend of modern opinion, however, is in favour of the biochemical theory, as expressed in the quotations at the head of the article.

The analogy of reflex action may usefully be applied to reactions of the organism of a higher order. It may be stated that motor actions occur in response to conditions which arise in the environment, using the term to include endogenous as well as exogenous states. It follows then that every motor action is preceded by an afferent impulse, which in the case of voluntary action may enter consciousness, whilst in the case of the vascular and intestinal musculature the reaction is outside the field of consciousness. The environmental condition may not be immediate in point of time but may remain, or rather the conception of it, as a motive to action. Ordinarily, then, a motor action is elicited by the excitation of appropriate cortical motor cells by some higher centre, and the action is adequate to the purpose. This adequacy depends on inhibitory and possibly facilitatory mechanisms in the cortex which confine the impulse to its proper channel. The complex and intimate nature of the interrelations of the cortical cells by association paths explains the importance of the inhibitory functions, which have been attributed to cells of the second and third layers.

In epilepsy degenerative changes have been described in these layers, and Southard has advanced an explanation of the epileptogenous discharges, suggesting that removal of inhibitory control permits an uninterrupted excitation of the motor cells (19). Whether or not inhibitory functions are localised in these cells, it seems certain that their activities are manifested at the synapses.

The Epileptogenous Discharge.

The outstanding features of the epileptic crises, the disturbance of consciousness and convulsive attacks, indicate that we must look to the central nervous system for the rationale of their causation.

The convulsions mean simultaneous activity of the cortical motor cells, and necessarily an abeyance of inhibition. We suggest that the fundamental pathological change is an alteration of the chemical or physical state of the synapses depriving them of selective or inhibitory activities. In this connection it is instructive to consider certain diseases in which there are specific nerve toxins, *e. g.*, rabies, tetanus, and strychnine poisoning. In these a sensory stimulus precipitates a convulsive attack.

"Reflex epilepsy," and cases exhibiting epileptogenous zones, are analogous to these, and the relation between a sensory stimulus and the occurrence of an epileptic seizure is well known. In one of our cases the first convulsive attack followed a fright from an alarm clock; in another, a patient *æt.* 33, the first fit occurred while having a cold shower. A third patient, to whom we were giving injections of calcium iodide, always became extremely suspicious and irritable after a fit, and resisted strongly when an injection was being given, with the result that he invariably had another fit. In the first two cases there was a sensory impression, in the last an emotional state, which normally produce physiological reactions, *i. e.*, movement expressing fear or surprise, shivering and movement of resistance respectively, by excitation of appropriate cortical motor cells. The exciting stimulus in these patients was, however, distributed widely through the motor areas, with the result that convulsions occurred.

The disturbance of consciousness is explicable on the same supposition that the originating stimulus is uncontrolled by the inhibitory mechanism. Lugaro states, "the fundamental character of the phenomenon of consciousness is distinction" (20), *i. e.*, clearness of consciousness is proportional to the restriction of its field.

The "Law of Avalanche" of Ramon y Cajal is an expression of the complexity of neuronie associations in afferent paths (20). We suggest, therefore, that consciousness is

swamped by an overflow of the ascending impulse to numerous cortical areas, the process being comparable to the loss of consciousness that may occur with the reception of a severe sensory impression.

Evidence of Metabolic Disturbance in Epilepsy.

Munson (2) has reviewed the evidence of disturbance of metabolism in epilepsy, and finds the results of different authors somewhat discordant. Much work has been done on the urinary constituents, particularly after convulsive seizures, when one might expect the results to be invalidated by the presence of katabolic products. A reduced alkalinity of the blood has been established, as also a shortened coagulation-time.

We carried our observations over long periods, and were enabled to follow the daily changes.

Our conclusions may be summarised thus :

Calcium : The calcium index of the blood is low in epileptics, with tendency to rise after a serial attack.

The excretion of calcium in the urine is low, but shows a rise some days before a series.

The coagulation-time is shortened, with a further shortening before a series, and a lengthening after.

The alkalinity of the blood is low in epileptics, and there is a fall before a fit.

Phosphorus excretion we have observed in some cases to be low before a series.

The Importance of Calcium in Metabolism.

In recent years the importance of calcium in the economy of the body has been fully recognised. Its presence is necessary for the coagulation of the blood and muscle, for the action of rennin, and Ringer demonstrated its influence on the contractility of cardiac muscle.

Sabbatani showed that calcium salts lowered, while sodium oxalate enhanced, the excitability of the cortex (6), and Roncorini demonstrated the inhibitory influence of calcium salts, and opposite influence of neutral sodium phosphate (6).

The association of the menstrual period and the puerperium with increase in the number and severity of epileptic seizures is well known. In this connection it is interesting to note that

Blair Bell found the menstrual fluid to contain a considerable amount of calcium. The onset of lactation involves a drain by way of the milk. Good results have been obtained in the treatment of epileptics with calcium. We have been able to cut short serial attacks by subcutaneous injections of calcium iodide and by intravenous injections of calcium chloride. Ballantyne has treated cases of eclampsia with intravenous and rectal injections of calcium chloride with good results (23). There is reason to suppose, as indicated by experiments referred to above, that between calcium and sodium salts there is a physiological antagonism; if this is so, the beneficial results of salt-free diet and calcium treatment in epileptics are explicable by a substitution of calcium for sodium, with the effect of reducing cortical irritability.

The organs responsible for the disturbance of calcium metabolism may possibly be found in the ductless glands. Marked changes do occur in these tissues, the most frequent being persistence and enlargement of the thymus, the significance of which we think has been underestimated.

Sir W. Gowers says that more than 25 per cent. of epileptics have their fits between the ages of 12 and 16 years (21), the period of puberty, when retrograde changes occur in the thymus.

We think that the periodic crises of epilepsy represent an exaggerated psychomotor reaction, there being an afferent impulse which excites a wide area of the cortex and causes unconsciousness and an uninhibited motor excitation, the abeyance of inhibition being the consequence of deficient resistance or refractivity at the synapses, and due probably to disordered calcium metabolism.

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The Origin of Mental Power. By CASPER L. REDFIELD,
Chicago.

THE ordinary biological teaching is to the effect that the inheritance of the child is not affected by the education of the parent. That dictum is not based upon a direct investigation of the matter itself, nor is it based upon an investigation of anything which is related to human intelligence. The dictum is nothing but an unwarranted deduction from observations on the colours of animals, and some experiments on amputating the tails of mice.

Men have been educated more or less regularly in our schools for several generations; horses have been educated on the race track; and hunting dogs have been educated in the field. The education in these cases has been both mental and physical, and an investigation of the thing itself tells a very different story from that told by the biologists. That story

says very plainly that improvement in mental and physical powers from generation to generation comes directly as the result of educating each generation in succession. It also says that whenever education in any generation falls below a certain minimum amount, then the next generation will decline in its inherited powers of that particular characteristic which lacked education.

To understand this matter it is necessary to consider what education is, and the fact that there is no royal road to learning. An education is obtained by hard work continued a long time, and the effect produced upon the organs of intelligence does not precede that work. A young man has not done hard work for a long time. Only an older man has done that, and to investigate the effect upon offspring of educating the parent it is necessary to consider the differences between the children of young parents and the children of old parents.

What a person inherits he may transmit to his children. That is a matter which is not disputed by anyone. If a child may inherit improved mental powers by reason of the father's education, then the father may profit by the education of the grandfather, and may pass along his inheritance to the son. By the same process of reasoning we may carry this matter to the great-grandparents and other ancestors. An investigation which did not extend beyond the immediate father would be superficial. What is needed is investigation extending over from two to four generations of progenitors for the purpose of getting some accurate conception of what has occurred in the production of men of different mental qualities.

Setting aside those men who have become prominent in the world because of some official position, it may be said that a great man is one who inherited great mental power. We have had many such great men, and to produce them the circumstances of their production must have been advantageous. If it is advantageous to educate the parents, the grandparents, and the great-grandparents, then these great men must have come from such educated ancestors. Remembering that only older persons have acquired much effects from long continued education, we have, in the age of parents at the time of reproducing, a very definite test of this matter. If the effects of education are transmitted from father to son, then great men must come from parents, grandparents, and great-grandparents who were

above the average age of parents when the average child is born. If we can find cases of great men who were sons of young parents, and those parents were themselves the offspring of young parents, then great intellectual power can be produced in some other way than by educating the parents first and having them reproduce afterwards.

In the northern part of the United States, the British Isles, and the northern part of Europe generally, the average father is about 32 years of age when the average child is born. He is somewhat younger in other parts of the world, but we may take that 32-year old father as being the standard father. In individual cases these 32-year-old fathers will differ widely in their mental development which comes from different degrees of education, still we can conceive an average for those different fathers. We cannot put down in figures an indication of those different degrees of mental activity, but we can put down in figures the ages of fathers at the births of their children, and those ages are themselves indexes of mental development.

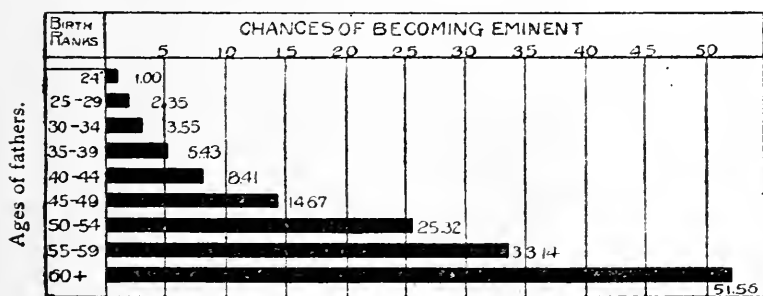
A list was made of several hundred eminent men—men whose names are recorded in our encyclopedias because of their intellectual achievements. Their ancestries were then investigated, and it was learned how old their fathers were when they were born, and how old the grandparents were when the parents were born. In some cases the facts were learned for great-grandparents and even earlier progenitors. The age of the father is called the "birthrank" of the child, and in the pedigrees of these intellectually eminent men were found 860 birthranks. The average age of these 860 persons was not 32 years. It was more than 40 years. The eminent men of the world were not produced by standard parentage. They were produced by abnormally old parentage, and that old parentage means educated parents, grandparents, and great-grandparents.

In a pedigree extended three generations there are fourteen progenitors, and among so many it is always possible to find one or more persons who were young when their children were produced. Consequently, there were some young fathers in these pedigrees, and such young father might be at any point in a pedigree. But nothing was found to indicate that mental greatness can be produced by a succession of young parents.

Having got these 860 birthranks, a table was made showing how they were distributed, that is, how many cases there were

of fathers under 25, how many of fathers from 25 to 29, how many of fathers from 30 to 34, and so on. Also, a similar table was made showing the normal or ordinary distribution of births as they occur in an average community. A comparison between these two tables gave some very definite information as to the effect of age in parents on the mental ability of offspring.

From this comparison we learn that if the son of a man less than 25 has one chance in a million, or any other number, of reaching a certain grade of eminence, then the son of a man between 25 and 29 would have 2.35 chances of reaching the same grade of eminence. The son of a man between 30 and 34 would have 3.55 chances; the son of a man between 35 and 39 would have 5.42 chances; and so on. Each increase in the age of the father at birth of the son increases the son's chances of becoming eminent. When the fathers are 60 years of age and over the chances of eminence become more than fifty times as great as they are when the fathers are less than 25.



Relative chances of becoming eminent, as measured by age of father at birth of son. From "Great Men," by Redfield.

Eminent men are not all equally eminent. Some are merely famous for some exploit, while others, less famous, are much greater when measured by their intellectual achievements. In an alphabetical arrangement men of all kinds will be distributed indiscriminately through the list, but when we group our eminent men by the ages of their fathers, that indiscriminate arrangement no longer exists. Those men who became eminent because of inherited opportunities, or because of some spectacular achievement, gravitate toward that end of the scale represented by the younger fathers; while those who became

eminent by reason of pure intellectual power gravitate toward the end of the scale represented by the older fathers. The years which the father lives before his son is conceived have an important bearing upon that son's mental powers. The older the father the better the son.

Those *years* constitute a definite and precise fact which anyone can verify for himself from encyclopedias and biographies to be found in ordinary libraries. They are not explainable on the germ-plasm theory, the mutation theory, the selection theory, or on any other theory advanced by biologists to explain the processes of evolution. They are explainable on the inheritance of the effects of education in previous generations, and they are not explainable on anything else.

Our eminent men form one end of the human scale. Ignoring idiots and the insane, our subnormal and feeble-minded men form the other end. The same test may be applied at this other end, and from that test we can get further information which is just as definite and precise. There are many family groups noted for subnormal and feeble-minded members, and some of these groups have been traced back to their origin in some one person or some single couple. When we put these cases to the test we find that they originate in children produced by uneducated parents who were usually several years less than twenty when those children were born. We see further that these subnormal families are maintained in their subnormality by continuous generations of young and uneducated parents. When some branch of a subnormal family has education forced upon it, and that education is accompanied by reproduction in the later lives of the educated persons, then that branch rises from subnormality to normality.

It is not necessary to sterilise, segregate, or transport the subnormal in any effort to improve the race. Such efforts are futile. All that is necessary to do is to force education upon individuals to whatever extent such forcing is possible, and then prevent them from marrying until after they have reached their majority. Two generations of that proceeding will raise the subnormal stock to normality.

It is not possible to improve the human race by simply selecting superior individuals for reproducing purposes, and then leaving them to reproduce in the ordinary way. That idea is based on a misconception, and a superficial consideration

of what has occurred in the breeding of domestic animals. We select cattle for their beef, and sheep for their wool, but the superior human being is not principally beef and hair. Human intelligence is a matter of power, and power stands on a very different footing from those exterior characteristics of form and colour which breeders consider in making selections for improvement.

An athlete and a race-horse gain in strength by training and a man gains in mental power by study. Both of these men work. It is by work that we develop the mental and physical power of the individual, and it is by the amount of work per generation before reproducing that we can develop the powers of the race. When that work increases the race advances, and when it decreases the race decays.

Psychoanalysis, a New Psychosis. Une Psychose Nouvelle : La Psychoanalyse. Mercure de France, September 1st, 1916. By YVES DELAGE, Directeur de la Station Biologique de Roscoff. Translated by T. DRAPES. By kind permission of the Author.

[THE following article from the pen of the eminent biologist, M. Yves Delage, was brought under the Editors' notice through the kindness of Sir Bryan Donkin. The vein of irony and caustic humour, more or less scathing, which runs through it will, no doubt, be distasteful to those who have accepted in their totality the theories of the Freudian school, but it is as well that the teaching of that school should be presented for the nonce from a different standpoint from that adopted by its whole-souled adherents. And while it may perhaps offer some rather "strong meat" for our readers' consumption, and while, in particular, the interviews so graphically described may seem too out-spoken and realistic for some ultra-sensitive British minds, it can hardly be questioned that they are, unfortunately, true to fact; and it might be a blunder on the part of psychiatrists who cannot bring themselves to admit the soundness of the principles of Freudism to content themselves with the adoption of a merely passive attitude towards them, and, ostrich-like, to shut their eyes to an aspect of a movement which is spreading with more or less rapidity in our own and other

countries outside Germany, and which in the view of many sober thinkers is, in much of its theory, scientifically unsound, and at least capable of becoming demoralizing in practice; and if, through a no doubt pardonable repugnance to anything savouring of prurience or salacity, they were to allow themselves to drift into the opposite extreme of a too meticulous and hardly justifiable prudery.

An able criticism of Psychoanalysis, by Dr. Mercier, has appeared in a recent number of the *British Medical Journal*, to which the present article, though as regards the original antecedent in publication, may be considered a not inappropriate supplement.

It may be mentioned that M. Yves Delage has lately been made the recipient of a very high honour in this country, having been presented with the Darwin Medal by the Royal Society.—EDRS.]

IN the event of a contagious malady making its appearance in any country it is the duty of the medical man who first has cognisance of the evil to raise a cry of alarm, so as to ensure the adoption without delay of the necessary prophylactic measures.

To sound this note of alarm is the object of this article.

This new affection, which threatens to invade France, had its birth in Austria, at Vienna, some twenty years ago. Its progress, at first very slow, soon became rapid, and the spread of the evil generally now knows no pause. The Germanic nationalities were actually the first to be reached; then German Switzerland was invaded, and Holland; from these it passed with a bound to America, where it found a soil favourable to its cultivation. Outside these countries Europe has been slightly contaminated only amongst the Scandinavian peoples; the Slavs have been barely touched; the Latin nations have up to this proved almost refractory, but some sporadic cases warrant the belief that it would be imprudent to allow ourselves to be lulled to sleep under a delusive sense of security.

No less remarkable than its geographical distribution is the incidence of the malady as regards age, sex, classes of society, and the professions. Children and individuals who are subject to other forms of mental alienation enjoy a complete immunity; the ignorant or badly educated classes, who live by manual

labour, and those who follow commercial and industrial pursuits do not furnish a single example. It is a malady rigorously limited to intellectuals. Among these artists, savants devoted to the exact sciences or to physico-chemical studies are generally exempt; literary people are not wholly impervious to attack; but it is above all among psychologists and medical men, and more especially among psychiatrists, that the evil perpetrates its ravages to a really disquieting extent. The members of the clerical profession are suspect, particularly when they are seated at the Tribunal of Penitence. Women are frequently victims, but in their case the disease assumes a special form, not always benign, in which the crises coincide with such happenings as when the husband returns from his club, the daughter from her lectures, or the servant from her marketing.

The ailment with which we are here dealing has certain characteristics peculiar to infectious disorders: contagiousness, incubation, and intensification by passing successively from one subject to another. It is not, however, a germ disease, or its microbe is of a most subtle nature, for it is capable of transmission without contact of any kind, by word of mouth, and by reading works emanating from the pens of affected subjects.

It is a malady without any apparent lesion of the central nervous system, a purely psychical affection; in a word, a psychosis. Its name, coined by the very persons who are its victims, is *Psychoanalysis*.

Psychoanalysis, defined in the most general terms, is an affection in consequence of which the unfortunates who are attacked by it become incapable of accepting just for what they are the most insignificant gestures, the very simplest acts, the most banal words of persons with whom they have intercourse; in everything there must be discovered some profoundly hidden meaning. The detection of this pretended hidden meaning becomes for the patient a veritable obsession.

If this were all, it would be difficult to understand the wide diffusion and the contagiousness of such a disorder, which would seem to have no other basis than the satisfaction of an inordinate desire. Now, to fathom a mystery when the object of the mystery is commonplace would not be a very attractive pursuit. But the matter is explained by means of a complication which is introduced, and, after the manner of microbic associations, sets itself to steer the malady in a particular

direction ; this complication consists in a psychological blindness with respect to every factor which is not of a sexual nature, whence ensues an irresistible tendency to seek in the sexual factor the sole, universal, and omnipotent cause of all human actions. We have spoken of microbic associations ; the comparison is justified ; psychoanalysis, such as it reveals itself to-day, results from the association of the psychosis above defined with erotomania. The psychoanalyst is a police-magistrate, a compound of an inquisitor and an erotomaniac ; and it is because he finds in psychoanalysis the satisfaction of his erotic mania that he loves his complaint, as the dipsomaniac, the cocain- and morphino-maniacs love their poison. Failure to note this feature would leave the diffusion of the malady an inexplicable phenomenon.

Psychoanalysts do not attempt to conceal this side of their intellectual equipment ; but they succeed, or think they succeed, in giving it an almost decent aspect by clothing it in a scientific disguise.

Like all madmen, the psychoanalyst lives in an imaginary world, which it is necessary for us to recognise in order to understand what goes on within him ; and this leads us to present a very summary account of the theory in general, such as it has been elaborated by its originator, Dr. Freud, and by his disciples.

This theory is characterised by certain significant terms which form, as it were, the labels of its content. These terms are : *Pansexualism* and *Libido*, the *Unconscious* and the *Censure*, and, above all, *Complexes*, omnipotent factors equally as regards the manifestations of normal activity and in the somatic and psychic symptoms of psychopaths. We shall explain all this as if we accepted it as current coin.

The infant at birth has in him only the accumulated instincts of the race, acquired during the course of its phylogenetic evolution. Now, these instincts are almost exclusively of a sexual nature, and the child frankly abandons himself to them, in his unconsciousness of what is good and what is evil. All the sensory perceptions which little by little go to form his individual psychological organisation come under the dominating influence of this mental orientation. Thus it is that he is, first and foremost, under the sway of impulses from within, an unrestrained onanist and, by reaction on his *entourage*, an

incestuous hetero- or homo-sexualist, a prey to the incessant excitations of the Libido. But all this is ill-shaped, of the nature of a deformity, in consequence of his ignorance of the real essence and end of sexuality. So it is that his onanistic tendencies, after a fashion which seems impossible of interpretation to unsophisticated observers, translate themselves into apparently innocent acts, such as rubbing his nose or ears, sucking his thumb, kicking his feet about, handling his excrement, or expelling with a sanctimonious air the contents of his rectum and bladder. All this is merely onanism diverting to its own ends accessory or illegitimate erogenous zones.

Similarly, he obeys his incestuous impulses when he kneads with his little hands his mother's breast, and flings himself greedily on the nipple. His rage against his father, who wishes to handle it, is that of a jealous person towards a detested rival.

Moreover, he takes no account of sex or of the nature of individuals, and his incestuous tendencies may, according to circumstances, select for their object father or mother, brother or sister, regardless of homosexuality. He translates his impulses into acts of violence, which his weakness alone renders devoid of danger.

Thus onanism diverted into devious paths, incestuous impulses ignoring the difference between the sexes: here is the material out of which is moulded the little being which our blind eyes invest with an angelic innocence.

Pari passu with the development of intelligence, under the influence of parental teaching, the distinction between good and evil dawns in consciousness, and little by little a new factor comes into existence: the moral censor, which instals itself at the gate of man's psychic being, with a view to prevent the entrance of any idea or feeling save such as does not arouse its reprobation.

In order to pass the Censor it must show him clean hands, and everything which he condemns is, not totally expelled from the mind, but suppressed into the Unconscious. However, although outside the purview of clear consciousness, things reprobated by the Censor are none the less present in some part and very active. There, in the depths of the Unconscious, are seething a crowd of impulses, tendencies, tastes, desires, and hatreds, all of a sexual nature, one only more abominable than

another, which strive without ceasing to externalise themselves, to give direction to our thoughts, to guide our judgments, to determine our conduct, and, unknown to ourselves, to govern our most trivial actions.

Of all these factors there are some, such as heredity, personal acquirements the result of sensory impressions, of chance incidents of the affective life, of education, of instigations from outside, which guard, with reference to the others which are mixed up in diverse nameless resultants, an individuality, a personality, and become predominant; it is these to which Freud and his disciples apply the term Complexes.

As the result of the frequency of incestuous impulses the *Oedipus complex* occupies a prominent place.

These complexes (Onanism, Narcissism, Sadism, Masochism, incest, homosexuality, etc.) are incessantly attempting to externalise themselves, but the Censor is on the watch, and repels them into the Unconscious.

In the case of some degenerates they prove more than a match for the Censor, they pass in spite of him and reveal themselves in their true form; this is *sexual perversion*. But; as regards all the others, which are incapable of mastering the Censor, they strive to outwit his vigilance by assuming a cloak of disguise. In a normal individual the disguise is sufficiently clever to permit of the Complexes exteriorising themselves under a form agreeable to social conventions. It is in this way that the most odious Complexes reveal themselves outwardly under quite respectable forms: literary and artistic productions, works of charity, filial piety, sport, religion with its attendant crowd of prayers and mortifications, and systems of philosophy.

A normal man is he in whom these, as it were, decent manifestations are sufficient to diminish the internal pressure of the Complexes.

Another outcome is the dream where, under a less disguised form, the Complexes can disclose themselves without any great detriment.

Between these two extremes, sexual perversion and the normal state, is an intermediate condition, where the violent struggle of the Complexes against the Censor reveals itself by somatic or psychical symptoms of a morbid nature. This is what occurs in the case of psycho-neuropaths. All those subjects who are affected with phobias or hysteria or dementia

præcox, all the paranoiacs, and many others are only the unhappy victims of the internal fermentation produced by sexual Complexes; all their symptoms, not only mental but somatic (the contractures, vomiting, amaurosis of hysterics, etc.) are only the effects of infantile complexes, ill-disguised and imperfectly suppressed. To bring these into the light of day in all their nakedness and ugliness is sufficient to deprive them of their noxious virtue, and to restore to the patient mental and physical health.

But to effect this we must ferret them out; that is the difficult rôle of the psychoanalyst. He succeeds by two methods—the exegesis of the dream, and a scrutiny of ideational associations.

How is this achieved? As far as regards the dream it is necessary in the first place to recognise that every dream is the realisation of some infantile sexual desire. If one dreams of commonplace things, the thousand little nothings of everyday life, as happens nine times out of ten, or of impressive events of whatever nature: travels in distant parts, delightful flights above the clouds, or, on the contrary, falls down precipices, shipwrecks, conflagrations, frantic flights from brigands in pursuit, death of very dear friends, etc., all these may have as occasional cause some incident of recent experience, but invariably as efficient cause an infantile desire of sexual nature, condemned and suppressed.

All the very various differences between the simplest desires and these dream manifestations must be laid to the account of disguised Complexes; and since in this connection such disguises are of a less cunning character, a penetrating examination by a practised psychoanalyst serves to lay bare the Complexes.

As to associations of ideas, that is a still more simple matter. The Complexes are ever on the alert, ready to seize every opportunity to surmount the barrier of the Censor. Now, what better occasion can be met with than that of a compromising word pirouetting about in consciousness and fixing itself on a perch offered it by an innocent word to which it is united by a natural association?

Reader, what is your opinion?

I am of opinion, you will answer, that there is no outrage on the most elementary common sense which psychoanalysts are

not prepared to perpetrate in their efforts to square the very simplest and clearest facts with their preposterous notions.

You have not hit it off. These men are the sincere and unhappy victims of a lamentable misapprehension; they have applied to the human individual the psychology of inhabitants of the moon, such as some shrewd Cyrano on returning from a pretended voyage to our satellite might have imagined, in order to make it as different as possible from terrestrial realities.

The avowed object of psychoanalysts is, on the one hand, to unravel the profound causes of the infinitely varied forms which the activity of the normal man assumes; on the other, to unearth the Complexes, which are the causes of the symptoms from which psycho-neuropaths suffer. But the secret, often, I have no doubt, unconscious end, which they could unravel by a relatively easy process of psychoanalysis, if they were to apply in their own case the same methods of investigation, is, to use a vulgar expression, to scratch themselves where they feel the itching—in other words, to give satisfaction to their secret erotomania. For, since they welter to the full in Pansexualism, psychoanalysts know beforehand what they will find at the end of their interrogations, namely, some sexual impulse more or less unavowable. Moreover, their constant preoccupation is to thrust into the intimate life of everyone an indiscreet look, like that of an observer who, from the depths of a dark passage, with his eye glued to a hole in the wall, regales himself on the scenes enacted in a brothel.

All these features do not fail to give a colouring to the bodily and mental constitution of subjects affected with psychoanalysis. We recognise them at the first glance; they assume an air of profundity, observe the most minute details, their eye follows the slightest gestures, the lines in their brow testify to incessant activity of thought. They are indiscreet, and put ridiculous questions, *apropos* of nothing, which set men's backs up, cause honest women to blush, and the frivolous ones to laugh.

In order to give some precision to our statements let us observe the psychoanalyst in his consulting room. A lackey in livery ushers in a client. It is a young woman whose pretty face is in contrast with a look of suffering, and her cool summer costume with a fur collar in which her neck is muffled up. In a very husky voice she describes her case.

"Ah! doctor! I don't know what is the matter with my throat. It is just like a handful of sand at times, at others like a bunch of needles. I find it impossible to swallow my saliva, and you notice my voice, a real calamity for me, who am an actress. Along with that, my head is heavy, so heavy; and I haven't the least appetite."

"Only that!" says the doctor, with an absent air.

"And what more do you want; is that not enough? However, I may add that at times I suffer anguish from the feeling of a ball which rises from the pit of my stomach."

"Ah! a feeling of anguish, a ball; this is getting interesting. Anything else?"

"Besides this I have gloomy thoughts. If I did not control myself I should cry all day long."

"Now we have it. These are neuropathic symptoms which enlighten me, madam, as to the real nature of the malady from which you are suffering. And these dark thoughts. I must be insistent on this point. What is the nature of them?"

"Oh! nothing, nothing particular. I let myself be worried about the little common annoyances of daily life which, under ordinary circumstances, would leave me quite indifferent."

"And these little worries do not point in any particular direction?"

"Oh! not at all, sir. Merely domestic matters; visits to be made, precedence at the theatre, everything of the most commonplace description."

"Not quite that, perhaps. We will come back to it by and by. Do you suffer from nightmare?"

"Oh! yes, doctor, certainly, for I always awake in a state of agitation. I dream absurd things. Fortunately after a few minutes all that goes out of my memory, and vanishes in smoke."

"See now, make an effort; it would be of the greatest interest."

"Impossible," she says; "after collecting my thoughts for a few minutes I recall nothing."

"Look here, I insist, what did you dream about last night?" And with an instinctive movement he readjusts his necktie, which had got disarranged.

"Ah! the movement you have just made recalls it at once. But it is something so absurd and stupid it would not be of the slightest interest to relate it."

"I see that causes you some embarrassment; it is all the more necessary for you to tell it without any reticence."

"Oh! if you wish; it does not embarrass me in the least. It's idiotic, that's all."

"You dreamt, then"

"I dreamt that my brother made an attempt to thrust his cravat down my throat, and that hurt me greatly, tore my throat, and impeded my breathing so much that I awoke. I had slept with my mouth open, and my throat was so dry and painful that I could not swallow my saliva, nor recover my breath."

"Cravat? . . . Cravat? . . . That's a symbol, but of what? I must consult my precious note-book in which I have jotted down the precepts of the Master."

He takes off the table a little book, and turns over the leaves.

"Let me consult the table. Corpse. . . . Crater. . . . Ah! there is cravat, page 18. I must refer to page 18."

He turns over the leaves again, and reads in a low voice: "Symbolic expression for the male organ. Stems, canes, trunks of trees, umbrellas, files, boughs, serpents, cravats, hats, etc."¹

"Ah! cravat counts, then, among the symbols of the male organ. I was sure I would be able to recall it. So all is now quite clear, for the pharynx, a canal-shaped cavity, lined with mucous membrane, has more claims than are really needed to represent the female organ. This woman is, without her knowing it, obsessed by a desire for incestuous relations with her brother. To bring into her consciousness the knowledge of this desire is, in accordance with the method of the Master, the only means of combating it, and of driving away with it the neuropathic manifestations from which this patient is suffering. Let us pursue our examination. And this brother of yours, madam, do you experience any peculiar feelings with regard to him?"

"Oh, doctor! we adore each other, and the greatest grief of my whole life was our having to separate two years ago, when he left for the front. Only think, we were reared together, we passed our earliest infancy in the same cradle, for—did I tell you?—we are twins, and we were both so small that it was only when we were four years old that we each had our own little bed."

¹ Word for word from text-book.

"Ah! really! (*aside*) every dream being, according to the Master, the fulfilment of an infantile wish, it is to this period of life that I must direct my inquiries, in order to find out, if possible, traces of the *complex* which is at present tormenting this lady."

(*Aloud.*) "And, madam, do you remember if from this period of early infancy you felt yourself drawn towards him by a particularly ardent attraction? Does this dream, in which he made you swallow his cravat, correspond to any manœuvre, any game of your early childhood?"

"I don't understand you, sir."

"In other words, what part did this necktie play in your thoughts, in your mutual relations?"

"But, doctor," cried the lady, with a great outburst of laughter, "what are you talking to me about? He had no necktie."

"No necktie! No necktie! Are you quite sure of that? Such an anomaly is not without example in the annals of science; it is, however, a highly exceptional occurrence."

"What *do* you mean?"

"See, now, give me your confidence, and tell me the whole truth without any reservation. Under what conditions . . . by what . . . indiscreet . . . exploration, or by what chance circumstance did you come to make this strange avowal that he was devoid of a necktie?"

(*Aside.*) "Now, has he gone mad?" (*Aloud.*) "Really doctor, I don't in the least understand what you are saying to me. Does one put a cravat on a baby?"

(*Thumping his forehead.*) "Pardon, madam, my absent-mindedness. Without being aware of it, I have allowed myself to be drawn into making use of language which is intelligible to the initiated alone. Cravat is here, as in your dream, the symbolic representative of an object of quite another kind, of such a nature that if it were to come into your consciousness in other than symbolic form, and disguised, it would appear to you positively shocking. It is in order to prevent your being thus shocked that it assumes this innocent disguise, without which the moral Censor who keeps guard at the gates of your consciousness would not allow it to pass. But it is not without protest that it accepts the disguise imposed upon it. Hence, in the depths of your Unconscious life there arises a terrible

conflict, which reveals itself in these neuropathic symptoms which you have described: the sombre mood, the distress and the constriction of the throat. It is only when we have succeeded in stripping it of its disguise, and bringing it to light under a form which would be certain to scandalise you, that we shall be able to triumph over the painful affections of which you complain. But that will be the business of another interview. Till then closely observe, study, and keep in your memory your dreams, and all those ideas, of whatever kind they may be, which they may awaken in your mind, and, though they may appear difficult to you to tell, you will confide them to me without reserve." (*Taking up his memorandum book.*) "I am entering you for Wednesday, at 3 o'clock."

"Doctor, all this may be very deep, but, meanwhile, I have that constant feeling in my throat of masses of sand and bunches of needles."

"That is of no consequence, madam; suck some jujubes, and come back here on Wednesday."

The visitor leaves the room; the doctor touches his bell, and the servant introduces a new client.

It is a small spare man, very brown, very animated, and very agitated. He explains with much volubility that he suffers from nocturnal insomnia, while during the day he can hardly keep awake.

"It is a common enough symptom in many psychopaths, sir; let us come to particulars."

"To tell the truth, doctor, I have but little doubt as to the cause of my trouble, but I have not the power to resist it. I have to be in my office every day from 9 o'clock till 5, and I have an objection to bring, as some of my colleagues do, a small cold lunch, or to go and tipple with them at a neighbouring bar. So I eat nothing in the middle of the day, but in the evening I make up for it, and in the company of some good friends have a very hearty meal at a restaurant near the markets, which suffices me for the twenty-four hours. Then we smoke a quantity of cigars and drink a number of cups of coffee. Would that not be a sufficient cause for the fitful kind of sleep I suffer from?"

"Many doctors, sir, would say yes; but that would be only a shallow judgment on their part, based on mere contingencies. We must pierce to the depth of things, and discover the hidden

causes of what I unhesitatingly connect with a psychopathy. Insomnia is always the effect of a discordance of ideas which are—what shall I say—painful, not to be avowed, trying to emerge from subconsciousness, and which consciousness represses, because it would be ashamed to acknowledge them. They are the spectres of thoughts which we must investigate together, and which I hope to ferret out with your kind help.

“Let us see, now ; be frank with me and confiding, and conceal nothing. In your past childhood, I mean in the whole course of your early infancy, were there not some incidents, some secret emotions, the renewal of which, even the mere recollection of them, is painful to you ?”

“Painful to me? No, not at all ; nothing of the kind.”

“Look now ; search closely. Try and call up some of your remote recollections, and don't allow yourself to be stopped through a fear of having to tell some rather shocking things. Did you not experience towards your mother feelings of a very special kind, and a quite inexplicable feeling of hatred towards your father ?”

“No, not at all. I scarcely knew my father, who died when I was quite a youngster ; and as to my mother, she treated me as a worthless young scamp, and I can assure you there was no exaggeration in that.”

Nothing to be got from this line of inquiry ; let us try another procedure.

“Lie down on the couch. Close your eyes, conjure up the recollections of your early childhood, and the moment I say ‘Speak,’ you will say in a loud voice the first word that occurs to your mind, whatever it be. That's all right. Now, attention. Give your mind to what you are doing, and don't wriggle in that way like a cut worm !”

The Client (muttering under his breath : “Like a cut worm

. . . like a cut worm. . . .”

The Doctor (his eyes fixed on the chronometer) : “Speak.”

The Client, at once : “Asticot.”

The Doctor : “Reaction-time $\frac{2}{5}$ of a second ; good. This word should symbolise a Complex which is seething at the very threshold of consciousness. But what is the meaning of it ?”

He seizes his head with his hands, and repeats . “Asticot ! Asticot ? . . . That tells me nothing. Let me consult the note-book : Aba . . . Aca . . . Acro . . .

Arbalist . . . Asparagus . . . Astrolabe . . . Asticot is not there. What's to be done?" (*in an undertone*), "Spirit of Pansexualism, Goddess Libido, come to my aid, fertilize my sterile brain."

A pause.

Then, suddenly, his eye flashes with a penetrating gleam, and he cries: "Eureka! Zounds! It's as clear as water from a well!"

"A . . . s, the first and last letters of the word *anus*, the vile instrument of unspeakable forms of indulgence! This suppression of two essential letters was a disguise, upon my word cleverly enough discovered by the sexual Complex, but not clever enough to escape my lynx-eyed vigilance. And *anus* in Latin means also . . .

"You have studied Latin, sir?"

"Yes, sir, I was very good at it."

" . . . Means also an old woman. As to *ticot*, here the censor has not been too malicious—it's a very simple matter, an anagram. Its ordinary form should be *tioc*. From *tioc* to *ticot* is but a step. Certainly, it is the very proof we are in search of. This man is tormented by a doubly immoral idea of sodomic intercourse with the person of a venerable old woman. How splendid to communicate to the Master this important discovery!

"Is there any old lady between whom and yourself there is a sympathetic relationship, and who, so to speak, fills your thoughts?"

"Yes, doctor, my mother, to whom with pious affection I consecrate all my Sundays."

"And what age may she be?"

"Seventy-one years of age."

The Doctor (*sotto voce*): "Now we have it; it is the *Œdipus complex* in its full splendour."

"Well, sir, I am enlightened."

"Ah! And what is it that has enlightened you?"

"This word, having for you a quite commonplace meaning, has opened to me the gates of your subconsciousness. I can now rivet my attention on this, and I see . . . Ah! without doubting you in the least degree, your full clear consciousness remaining pure . . . I see by it that you are tormented by certain pangs which are the true cause of your insomnia."

"And these pangs?"

"It is difficult to speak about them . . . you know your Greek classics, sir?"

"Oh, yes, to some extent."

"You have read the tragedies of Sophocles, *Œdipus Coloneus*, *Œdipus Rex*?"

"Yes, certainly."

"Well, these pangs are of the same kind as those which overwhelmed the ill-fated spouse of his mother, *Jocasta*."

"And, good God, doctor! what relation do you see?" . . .

"And, moreover, the incestuous relations of *Œdipus* while criminal as regards their object, were correct in their nature, whilst you, poor unfortunate . . ."

The Client (*sitting bolt upright, with a scared expression*):

"Come now, doctor, what do you mean by that, and to whom do you refer? Which of the two of us has gone off his head?"

"Be calm, my friend, be calm. Which kind of women have you a liking for, blondes or brunettes?"

"Now what the deuce are you driving at by such a question?"

"Be calm, my friend, and answer without trying to fathom my object."

"Well, if you must know, brunettes. I have a repugnance to blondes. Blondes—they have a savour of the rabbit."

"Your mother's hair . . ."

"Is white, sir."

"I know; but when she was young was she fair or dark?"

"Fair, sir; very blonde."

"A bit doubtful this; it must be the disguise *a contrario* imposed by the Censor. This liking for brunettes is a taste inspired by the moral Censor in this unfortunate, in order more surely to conceal from him the impulses which, from the depths of his subconsciousness, are trying to emerge into the light of day. The more intense the impulse—and its intensity is revealed to us here by the shortness of the reaction-time—the cleverer is the disguise, and the more implacable the conflict between the combatants within the closed field of the nervous system of the patient.

"Come and see me again, my friend. I have no hope of effecting your cure in a single interview; this can only result from a complete confession by yourself, making a clean breast

of it, of the secret impulses which are the cause of your malady, I am entering you on my list for Tuesday next at three o'clock."
(*Exit.*)

And now, to those who may be tempted to see in the foregoing merely an amusing skit, written without any regard for justice and truth, our reply is to refer them to the works of Freud and his school; if they wish to escape a task of such magnitude, they will find in a work of Regis and Hesnard, *Psycho-analysis of Neuroses and Psychoses*, a very elaborate account of these theories, accompanied by authentic examples which will make their hair stand on end. If that seems still too long, they will find, under the signature of the writer of this article, a more concise *résumé* in the volume of *l'Année Biologique* devoted to the literature of 1914. They will see that we have not exceeded the limits of just criticism, and that the apparent exaggerations in this satire are, even as regards details, in exact correspondence with the enormities of the theory.

Functional Gastric Disturbance in the Soldier. By
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FUNCTIONAL disturbances of the digestive system are common accompaniments of neurasthenia. I shall avoid all attempt to classify them, and confine myself to describing certain cases in some detail with a view to bringing out the points of practical importance in causation and therapy.

The men who are returning from this war are in many instances suffering from neurasthenia. No system of the body has escaped, and so it is not surprising that symptoms of alimentary tract disturbance are frequently met with.

From our earliest days we are led to attach importance to the digestive tract. Common expressions of everyday life relate to the abnormalities of digestion, "sick of it all," "sick of life," "fed up," the latter a particularly pet expression of the soldier.

Anorexia arising from a mental state is not unusual. Its simple form exists in the young lady who becomes thin because

it is fashionable. When it is no longer fashionable she may find she cannot eat; she has developed primary mental anorexia. The secondary form of the trouble arises when the patient is unable to resume a normal diet after a period of special diet carried out as a means of treatment for organic disease.

No. 88, single, æt. 25, no abnormality found in the family history, passed standard I at school, at the outbreak of war was only earning 12s. a week in a public-house in London. When a boy he was treated in a hospital for one month for "sickness." He enlisted and was sent to the Dardanelles in July, 1915. There he developed dysentery and "gastritis," but stated that before this "his nerves got bad." There was diarrhœa and fever, and he was sick every day. He was treated in Alexandria, and ultimately recovered sufficiently to leave for England. The vomiting did not stop, however, occurring every day frequently. He could not walk, he thinks "his nerves caused a lot of it." Added to this there was trouble with his bladder, his urine used to dribble away in the day-time, and he was also wet at night. After arrival in England he was treated at a hospital, but the vomiting did not leave him, anorexia also was marked. Ever since leaving the Dardanelles he had lived on milk and custard. He was always kept in bed as his legs were weak. When admitted to the Moss Side Hospital an examination was made at once. The fact that his legs were not as feeble as he thought was demonstrated to him. He was aided to make use of his legs, and expressed surprise on finding that his powers of locomotion were not so bad. He was a simple-minded man, but undoubtedly was impressed by the success of his walking, and was comforted at the same time by being told that the outlook was all very favourable. He was put on a light diet and quickly went on to ordinary food. He was not sick once in hospital, and became an active worker in the ward, later going route marches of five miles with other patients. Two months after treatment began he went back to duty in good health. His weight had risen from 9 st. to 9 st. 7 lb.

In this man we have a gastric phobia making itself evident as the sequel of organic trouble, and the occurrence may have been assisted by the memory of the sickness he suffered from as a boy.

The anorexic condition developed in the way it might be expected to do. All solid food was naturally cut off while the

active symptoms of dysentery were present. But when the dysentery was cured this depressed, weak-minded man, lacked the initiative to tackle food which he considered would be less readily digested. He could keep down very little of anything, and the most easily swallowed was the least disturbing. There is shown in this case a certain amount of qualitative inhibition for food, but I regard this rather as the result of circumstances than a psychopathy. He was drawn along the path by the *régime* of a hospital; a small amount of individual attention would have obviated much if not all of the subsequent state. Bed treatment was the worst thing that could have been done for him. As long as he was treated as an invalid he remained an invalid. He at once responded when more rational surroundings were supplied, and a demonstration was given that the condition was not as grave as he feared.

A philosopher has said that all he tried to do was to make his listeners think for themselves. A neurasthenic is always critical, but also usually reasonable, and it is often productive of much good to make his thoughts run along new lines.

Another but pointed example of an elective anorexia is that of a soldier who had been in nine hospitals when he came under my care. He was well nourished, but complained that any food made him sick, he could not retain milk, beef-tea acted as an irritant, and so he had lived for some months always troubled with his stomach. He was allowed to choose his own diet, and his selection was a plate of potatoes well buttered. This dish could be kept down fairly well. Now it would be difficult to think of a more stubborn form of nourishment for a presumably delicate gastric organ to digest. This fact was pointed out, and notwithstanding the long illness a good result has been obtained.

Vomiting is a usual symptom in neurasthenia. In some patients it forms an insignificant part in their symptomatology, in others it is the chief or only trouble. Emotion, arising directly from incidents, or indirectly as the result of a mental process, has a disturbing effect upon the whole of the alimentary tract and commonly causes vomiting. What it is that draws the patient's attention to his stomach varies in different cases. Occasionally a direct agent is responsible for attracting the patient's attention to his stomach. One man was wounded in the upper part of his abdomen, another had a number of teeth

knocked out, in another the sickness accompanying dysentery continued.

First perhaps it would be well to name the symptoms commonly found to be associated with neuropathic vomiting. The sickness is not preceded by pain of any kind; it follows food frequently, but as frequently is separated from food by some hours. It may occur at night with the patient lying quietly in bed, it commonly accompanies such positions of the body as necessitate bending and stooping, as seen in scrubbing the floor. Railway and motor travelling bring it on. There is little or no warning given that vomiting is to take place. There may be retching, and this produces some tenderness of the strained abdominal muscles. Water-brash is the stimulant to vomiting in some cases. Rumbings in the abdomen, a feeling as if the abdominal contents are swaying backwards and forwards, has been described to me in some cases. Loss of the pharyngeal reflex is a not infrequent sign. I have not found tenderness, superficial or deep, at all a constant symptom; in fact what the patients are suffering from is causeless vomiting—without a cause, however, only so far true in that we do not know it after a physical examination. These cases that I will read to you, and which form the subjects of these charts, will illustrate my meaning.

No. 72, a N.C.O., æt. 28, enlisted at 18, was making from 30s. to £2 a week at 15. He was claimed out of the Army after two years, worked again at his former occupation, and made about 50s. a week. Became engaged to a girl and walked out with her for a year, but broke off the engagement and re-enlisted as the result of seeing her drunk. Underwent an operation for hæmorrhoids four years ago. When the war broke out he was abroad, landed in France, and was then in splendid health, weighing 11 st. 7 lb. with his boots on. Was shot through the upper part of the stomach and left arm on March 11th, 1915. The bullet was removed at Boulogne. Gastric irritability followed the chloroform and continued some days, meanwhile he had rectal feeding. Later he came to an English hospital, and "was not so bad." The vomiting nearly stopped. His arm had been in plaster all this time; he was sent to a convalescent home and took ordinary food because he wanted to get home. He was sick every day, however. Was sent to another hospital to undergo surgical treatment for his arm, and was there two months, throughout the whole of which time he vomited all

nourishment, "even a drink of tea." When in the last hospital he had great pain in the wound, and could not sleep at nights without a sedative. The abdominal wound, though of considerable length, was always a healthy one. The bowels were obstinately constipated, and required enemata to relieve them. On admission to the Moss Side Military Hospital, Maghull, he was sick after all food, and existed on soda-water and milk. He was depressed, and very anxious about his own condition. The corrugations of the forehead showed the amount of mental strain he was undergoing. There was a good deal of tremor of head, arms, and legs, while the bowels continued to be very inactive. He was intensely irritable, and required the greatest care in handling. In the early part of his stay at Moss Side, while not under my care, an incident occurred which greatly aggravated his condition. I have said how he had lost his *fiancée* as the result of her drinking habits, and had in consequence come to regard alcohol as one of the roots of evil of his life. He was in a condition to appreciate sympathy, and this was shown to him by a nurse. The suspicion arose, however, that another patient was using his soda-water to dilute whisky, and added to this was the knowledge that this patient was known to have paid attention to his favourite nurse, and that they had been photographed together. These details may appear trifling, but it is by detail, and by detail correctly used, that these cases unravel themselves. The patient was much upset by all this, and was transferred from such an irritating environment to another ward, and ultimately to my own. His weight at this time was 8 st. My conversations with him were directed to get a full history, and many facts were obtained, but only those of interest are recorded. A sister committed suicide by poisoning some years ago. Dreams relating to this event are of frequent occurrence. Treatment was directed to pointing out how that it was his own thoughts were causing him to be sick. For some days after there was no sickness. One day, however, he received the *Gazette* of his own regiment, and in it read of the deaths of his old comrades. He was sick twice that day, and his bowels began to give him more trouble. Subsequently he continued to have a certain amount of daily vomiting, which became accentuated upon my absence for a few days' leave. When I returned I found him in bed, his legs drawn up, and he complained of great abdominal pain, which he attributed to

constipation. He thought the anal outlet was becoming occluded. He had vomited twelve times in four days, and had had sleepless nights. My interview with him was at 9 p.m., and as he had besought me for morphia, I explained to him what I considered was the cause of his trouble, and sent up some harmless pink medicine. He had a good night, and for the next fortnight vomited only occasionally. The chief breakdown in this period was three attacks of vomiting in one day following a letter from his mother asking him to come nearer home. Again I explained how he was allowing his emotions to assert themselves abnormally. Attention was given to regulating his bowels. A period of partial remission from sickness followed, until one day vomiting took place three times. The cause on this occasion was a rebuff from the nurse to whom he was attracted. Nineteen days passed, during which time he was sick only twelve times. The next breakdown was heralded by a suggestion from a superior medical officer that he should go before a discharging board. The patient was a keen soldier, an ambitious man, and anxious to go back to the front. I had never suggested discharge to him, aiming as one should at the best result. The suggestion of discharge was disquieting, and though it referred to his wounds, he thought also of the stomach condition. However, following my explanation, he continued to make an effort, and was so far successful that in the next fortnight he was only sick twice. For the next month he made good progress, and only was affected on rare occasions, but broke down again, and upon inquiry it was found he had been dreaming of a "padded cell"—an asylum. This dream was the result of a visit to a picture palace in which the popular idea of a lunatic and a padded room were depicted in a life-like manner. A few weeks again passed in which nothing of interest happened until one night vomiting took place seven times. That day news had been received that an old friend, the man in fact who had taught him his trade, had been sent to an asylum. How very strongly this idea of the fear of the development of insanity in himself influenced him is here brought out. The patient was always extremely irritable, as I have said. The strict army discipline to which he had been subject for years made him always an easier person for an officer to deal with than anyone else. There were constant disagreements with patients and nurses. He himself felt, like many others who

have been through the fighting, that he was not the same man; he knew his personality had undergone a change. He thought of his sister and the mode of her death. A tactless remark was made to him in one of his hospitals that he was behaving like a lunatic. He never forgot that remark. It was not meant to be taken literally, but in his weakened and irritable nervous state he had not the power of proper discrimination, and so the remark was brooded over. Later he had another night of vomiting. Here the cause was on the surface, his favourite nurse, on my suggestion, had been removed to another ward, as the patient had had more trouble with her. Clearly he was becoming attached to her, and I told him my belief, and that the sooner he recognised that his attentions were not desired the better for himself.

What do we know of this man? He was a keen soldier, a clean living, steady man, much attached to his home and widowed mother, very fond of the sister he lost in such a tragic way, fearful lest a similar fate should overtake him. An emotional man always, he tells how he used to cry when the songs of his native land were sung. What are the crises of his life? The dead sister, the girl he gave up because she drank, the war and the wounds he received, the operation for piles and the previous constipation. They all come out in his illness. He seeks for someone else to replace his girl; he becomes attracted by a nurse, she, however, pays attention to another man, a man whom he knows to be a married man, and also one he suspects of taking his soda-water to dilute some spirit. He informs the nurse of all this, only to be not believed.

Sex then is one of his mental irritants. Another is the dread of an asylum. He reacted as the result of news of the certification of an old friend; the same result followed the cinema performance; and dreams of his sister's death produce an emotional display. In addition the war and his wounds are factors, and lastly constipation gave him cause for anxiety. The case as a piece of analysis is complex, as many of these cases are.

Many incidents, not forgotten but repressed, go to form the cause of his illness. Their memory produces a violent emotional disturbance, and the patient shows his emotion by vomiting.

Now I should like to give an example in which a patient's emotions were centred round his domestic life and friends, and

How the man showed his sympathy towards his home circle by rejecting his stomach contents.

No 69, a private, married, æt. 32, a reservist called up at the outbreak of the war. He went through Mons, the Marne, the Aisne, and was blown up by a shell at Ypres in the beginning of November, 1914. He lost his speech but recovered it in time to be home for Christmas. The face was injured by the explosion, and a number of teeth were lost. There was no sickness in France, but vomiting began in his first English Hospital. He, however, was sent home on leave, and while at home was sick at every meal. Even before leaving hospital "the least thing used to make him sick." I asked was it always food or his thoughts that affected him, and he said: "You are quite correct, sir, you know how I have always been with thinking." He came under my care towards the end of June, 1915, and was then suffering from a very hesitating speech. He was of good colour, and sweated excessively. The hands were warm, not cyanosed, and the general condition was good. He was tremulous and very emotional. The eyes became suffused with tears very readily, and in conversation one had to go carefully always on account of his irritability. He was much attached to his wife and family. His home before the war was a good one, but he had been worried on account of difficulty in making both ends meet. Vomiting occurred after most meals, and frequently also at night. He never got to sleep till late, he lay awake thinking. One of his children was seriously ill, and ultimately it died. During this time the sickness was worse, "he was thinking all the time." There never had been any pain or tenderness in the stomach. While in hospital it was pointed out to him how it was that his vomiting was produced. The charts of other patients were demonstrated to him. He was urged to make an effort to restrain his emotions. In addition what common sense suggested was done: his teeth were replaced by a denture. Very slowly he began to get the upper hand of his emotions, and to a corresponding degree the sickness improved. The patient's weight during the last six months of his stay in hospital was always within a pound or two of twelve stone. An occupation which carried with it a good deal of variety was supplied, and gradually the vomiting became less and less, until he became practically immune from this trouble. Finally

it was decided that he should appear before a medical board with a view to discharge. On the day of the board he was sick, although for some weeks he had been well, and again a fortnight later when sent for to sign discharge papers he vomited on the way to the office. He was one of the nicest men I have had under my care, thoughtful, unselfish, and pathetically attached to his family and regimental associates. He says how he always took things too much to heart. When his "mate" the soldier who had shared his dangers in France who had been with him in the same trench and in two successive hospitals, was discharged, he showed his emotion by tears and vomiting.

As the cases really describe themselves and are of chief interest, I will pass on to another example of emotional vomiting.

No. 78, private, æt. 26, married. Patient's ears are asymmetrical. His father is an alcoholic, who has been certifiably insane for some years. His wife died of phthisis in July, 1914. There is one child, who lives with the patient's mother. Nothing could be worse than the home, the insane drunken father, the old mother trying to look after an unhealthy child and helpless husband. Two years before the war broke out he worked as an unloader at a goods station, where a sack weighing 1 cwt. fell on him, and he became as a result nervous and tremulous. He enlisted at the outbreak of war but could not pass the class firing on account of tremor of the arms. Being anxious to go to the front, he volunteered, and was sent out. On the second night near the trenches someone dropped a box of bombs near the ammunition of a bombing party. There was an explosion, and in the darkness no one knew what was wrong, and some panic arose. After a month in France he was wounded in the hand and sent home. He was nervous, tremulous, and sweated a good deal, and had lost his appetite. The wound healed, but the tremor persisted, and so the patient came under my care. In December, while in hospital, he began being sick. This occurred usually in the mornings after food. There was no pain, but he had a curious sensation in the left iliac fossa. He used to be sick every day, and gradually became worse, vomiting daily two or three times. The hospital was quite close to his old home, and he made frequent visits. It was never a happy home even before the war—now that the wife was dead, the mother old and feeble, the child ill, and the father

always shouting for drink, it was hardly the place to cheer a neurasthenic patient. As he used to walk down to the station after lunch to catch the train he vomited once always, often more frequently. One day in the ward he was sick three times. He had had words with the nurse regarding some ward work. He says how he has always been ready for tears and quarrels, but never happy till he had made friends again. I tried to explain to him how the vomiting was produced. I told him he was quite a useless man for the army, and his first duty was to improve sufficiently to go back to his old work. He still vomited nearly every day, and usually after lunch on the way to visit his home. One night he vomited at 2 a.m., as he had been lying thinking in bed, worrying about a matter of discipline. After two months of treatment he had made progress, but was still worried owing to the continued illness of his child. To remove this trouble the child was got into a home. For twenty days following this piece of palliative treatment he was not sick. His breakdown occurred at home in the evening. His father "had been at it again," apparently cursing the army and all in it. Again there followed a period of eight days' freedom from sickness, until one morning he heard he was not for the discharging board. He was sick on the spot. Three days later I saw him, and assured him that he was to be discharged, and although in these days he had been sick at least twice, he continued well for the next month. The next attack of vomiting was at a football match. He was in a rather rough crowd, the men in front were drunk and arguing, and it "got on his nerves." In reviewing the case the first thing that strikes one is that it should never have been a part of my duty to look after this man. He was quite unfitted for a soldier's work. The tremor resulting from the accident when unloading sacks had never worn off. His stomach responded to his emotions in a very definite way. I suspect this man vomited more frequently than admitted, but even so much vomiting as he confessed to shows clearly the physical following the emotional disturbance. There is no definite factor which would predispose the occurrence of the vomiting. The first gastric disturbance took place when he was in a ward in which he was associated with many other neurasthenic subjects, and possibly the symptoms of a companion gastropath may have acted as a stimulant for the onset of his own disorder.

In many of the neuropathic conditions of the stomach one finds that the symptoms are of a mixed type. An active and passive inhibition may be present in addition to an elective anorexia. The following example shows this well.

No. 87, æt. 30, single, a N.C.O. Enlisted at 18. His childhood had been a very rough one, the poker and the belt were frequently in evidence. In 1911 the patient was the subject of dysentery, and had afterwards a difficulty in keeping down food. Vomiting took place two or three times daily for a few days, and was then followed by a short period of immunity. This state of affairs lasted for about two years. When the vomiting first began he was in India, and was about to be discharged as a time-expired man. Three months before his time was up the vomiting stopped, but came on again on the voyage to Southampton. The vomiting persisted during civilian life, and had occurred a few days before war was declared. He was well at the depôt, but the sickness recurred when on the march in France early in August, 1914. He was in some stiff fighting, but could keep no food down at all. Some malted milk tablets were the only form of nourishment retained. Ultimately this man was invalided home in November, 1914, on account of the continued sickness. After some hospital experience and three months at the depôt he was sent out to France again. Though vomiting daily he concealed the fact. A quick return to England was the result. Since the end of December, 1915, the history is one of successive hospitals. When admitted to the Moss Side Hospital he was pale, unhealthy looking and weighed 9 st. 5 lb. He had already experienced many forms of treatment in different hospitals, and so it was thought best to allow him to settle down before any definite line of treatment was adopted. Fourteen days passed in which sickness followed every meal. The patient then asked for some medicine to counteract water-brash. His request was complied with, but there was no appreciable alteration in the vomiting. Now that the diagnosis was clear, and the fact of medicine being useless demonstrated to him, treatment along the lines of explanation and persuasion was begun. For a week there was little or no effect. One day, however, the patient remarked that he had kept his tea down, and that the vomitings, though still frequent, were less in amount. He was encouraged to make further effort and instructed in the fact that the

vomiting was emotional and also partially habitual. A fortnight after actual treatment had begun he was sick only once during twenty-four hours. The bodily weight had gone up half a stone. A few days of further progress followed, when a further demonstration was given by the patient of the rôle that emotion was taking in the causation of his symptoms. The patient witnessed a fight between two soldiers and was immediately sick. A few days later there was a state of immunity for three days. At the time of writing he has not been sick for over a week, and the bodily weight is 10 st. 3 lb.

This example is a good one as showing the results that can be obtained by this method of treatment, even after the symptoms appear to be chronic.

I have not met with any cases of neurotic vomiting in which the symptoms were such as to endanger life, but here is one in which danger to life certainly might have been possible. This man would vomit over a hundred times in three days. He was *æt.* 19 years, and the fact that he was acting sergeant shows his degree of intelligence. The patient's father vomited after food for five years, but was cured by an operation. When the war broke out this man enlisted early, and was sent out to France in August, 1915. He was employed at a Brigade Headquarters as a clerk. Working hours frequently extended to sixteen or eighteen a day. Sleep was disturbed and much curtailed. He had an attack of diarrhœa and vomiting about Christmas time, and although the diarrhœa stopped, the vomiting persisted. This condition remained unchanged in spite of treatment in the various hospitals. Eventually the patient came under my care. His weight was 8 st. 5 lb. Vomiting was constant after all meals, and would take place as often as seventy times a day. During twelve hours a good-sized chamber would be half filled with froth and liquid mixed with semi-digested food. When the sickness first began, and during the earlier months, the material was ejected in a violent manner. Recently there has been little or no effort, and the condition is more closely allied to rumination than true vomiting. The pharyngeal reflex was not absent, but as sweating was present it was thought that this might be a suitable case for treatment with atropine. The result was not encouraging. The patient was singularly free from disturbing mental elements, and except that he had a brother of sixteen

in France, he did not worry about anything. Showing how his father's illness must have had some suggestive influence upon the cause of his illness, the patient more than once asked if an operation would cure him. It was explained to him that his father's illness was quite unlike his own. The patient knew that his father had had a pyloric stenosis. He would give as a supposed proof of disease of his stomach the fact that the milk he vomited was all "curdled in little lumps." Ignorance of simple physiological facts, therefore, acted in maintaining the continuance of his functional condition. The real cause no doubt was the enormous responsibility thrown upon a man of so few years. Like many others he had given a false enlistment age. The patient began to understand the cause of his trouble, and the vomitings became less in amount. He also gained half a stone in weight. The number of times he vomits is but a tenth of what it was, and with a little patience I look for a good result.

One can give many more examples of this class of case, but I think enough have been cited to show what effect emotion has upon the gastric processes. The exact mechanism of the production of the symptoms is not clear. How much is due to vagal stimulation is uncertain. The vagus can influence not only the secretions but the state of motility of the stomach muscle. Vagal stimulation performed experimentally can produce turbulent gastric peristalsis which may readily change into retrograde peristalsis, and vomiting occur.

The great practical point is that the vomiting is the result of emotional stress, and that the method of treatment to be adopted should be the removal or control of the offending emotional tone. This can be done by understanding your patient, giving him true insight into the production of his symptoms, removing any worrying element, and gradually restoring to the individual that self-confidence which has been lost. Tactful interrogation, perseverance, sympathy and the common-sense application of accumulated facts are all embraced in the term therapy. It is quite incorrect to think that it is necessary to wade through a morass of filth before correct treatment can be applied. Each case must be dealt with individually and on its own merits.

Chronic Infections by the Bacillus of Influenza and their Importance as Causes of Nervous Disorders.⁽¹⁾ By W. FORD ROBERTSON, M.D., Pathologist to the Scottish Asylums.

THE bacillus of influenza was discovered and accurately described by Pfeiffer in 1892. Its etiological relationship to the disease is now beyond serious dispute. It is a comparatively minute bacillus, Gram-negative, and devoid of capsule or spores. The chief seat of infection is the respiratory tract. The bacillus requires very special conditions for its artificial culture. The bacteriological text-books prescribe the use of fresh blood smears, and generally state that the organism can be grown along with other bacteria—that is to say, in symbiosis with them. In the laboratory of the Scottish Asylums it was ascertained that the bacillus of influenza has the remarkable property of being stimulated to growth by mere proximity to other bacteria, and thus the alternate drill method has come to be a routine of the laboratory whenever this bacillus has to be subcultured.

With acute influenza, occurring in epidemics, we are all familiar. As is well known, various nervous symptoms may occur, both during the febrile stage and at a later period. In the febrile stage there may be delirium, intense headache, and various forms of neuralgia. As sequelæ of the acute attack there may occur especially neuritis, neurasthenia, and mental depression.

An important fact, not generally known, but now clearly established by extensive observations, is that an acute attack by the bacillus of influenza stimulates other infections of which the person attacked happens to be the subject. Thus, catarrh of the respiratory tract occurring in the course of influenza is mainly dependent, not upon the action of the bacillus of influenza, but upon that of other pathogenic organisms that have been present, as active or as latent infections, previous to the attack, such as *Micrococcus catarrhalis*, the pneumococcus, *Streptococcus anginosus*, and *Streptococcus pyogenes*. An acute quinsy occurring in the course of influenza can be shown to be essentially due to streptococci: and influenzal pneumonias appear always to be dependent on the action of the pneumococcus, *Streptococcus pyogenes*, or other bacterium of high virulence, which,

in most instances, has previously been present in the bronchi as a chronic infecting agent. Similarly, an acute attack of influenza always causes a flaring up of the chronic infections associated with chronic rheumatism and rheumatoid arthritis, with consequent increase in the inflammation about the joints; and it is also a potent cause of acceleration of the infective process in pulmonary tuberculosis. It is certain, therefore, that chronic illness following acute influenza is not always directly dependent upon infection by Pfeiffer's bacillus. It may, indeed, be said to be the rule that after an acute attack of influenza the bacillus entirely disappears from the body.

The type of case to which I wish specially to direct attention is one that does not, as a rule, appear to be a sequela of acute influenza. In the twenty-two cases of chronic infection by the bacillus of influenza that I have been able to study, not one was dated by the patient himself from an acute attack. Several of the patients had previously suffered from one or more such attacks, but they believed that they had completely recovered from them. In most of the cases I could not obtain even this history, the patients stating that they had never to their knowledge suffered from influenza.

It has become apparent that cases of illness dependent upon chronic affection by the bacillus of influenza are fairly common both in and outside asylums. These cases are important for several reasons: the symptoms are generally of a distressing nature; the cases are at present not being recognised; and treatment by therapeutic immunisation is almost uniformly successful.

It is perhaps necessary to state that there is ample evidence that the bacillus of influenza never occurs in the human body, except as a pathogenic agent. It cannot maintain a merely saprophytic existence, as such important pathogenic bacteria as *Bacillus coli communis* and *Streptococcus anginosus*, for example, are capable of doing.

The clinical features of chronic infection by the bacillus of influenza are not characteristic. They are in many respects similar to those of chronic infections of the respiratory tract by other bacteria, especially *Micrococcus catarrhalis*, the pneumococcus, and some species of diphtheroid bacillus. I have studied many examples of each of these forms of chronic bacterial infection, and I am certain that nothing but a bacteriological

investigation can determine the exact nature of the bacterial attack. There are, however, certain forms of long standing illness in which we can at least suspect chronic infection by the bacillus of influenza. The general features are :

(1) More or less constant watery discharge from the nose, which, however, may be slight.

(2) The patient is repeatedly "catching cold." He has recurrent attacks of naso-pharyngeal catarrh and bronchitis.

(3) In some persons these attacks may occasionally be so severe as to be accompanied by rise of temperature, headache, malaise, drowsiness, and joint and muscular pains, as in acute influenza.

(4) The nervous symptoms include asthma, mental depression, neurasthenic phenomena, sleeplessness, headache, and what are described by the patients as "gripping sensations" in the head, and neuralgic or rheumatic pains.

A type of case that is exceptional, but by no means rare, is one in which the toxins of the influenza bacillus especially affect the heart, either through its muscles or its nervous apparatus. As a cardiac poison the toxins of the bacillus of influenza are certainly of the utmost importance.

It must always be borne in mind that the bacillus of influenza, when acting as a chronic infecting agent, never occurs alone : it is always accompanied by other pathogenic bacteria, such as *Micrococcus catarrhalis*, the pneumococcus, *Streptococcus pyogenes*, and *Streptococcus anginosus*, which have their influence upon the clinical picture.

Therapeutic immunisation with sensitised vaccines is almost uniformly successful in eradicating the infection and relieving the symptoms, but it is generally necessary to treat in a similar way one or more accompanying infections.

The proof that these chronic infections by the bacillus of influenza are a cause of the various symptoms that have been mentioned lies solely in the observation of numerous clear cases in which specific therapeutic immunisation has been attended by definite focal reactions and followed by recovery.

In the course of the past two years I have observed twenty-two cases of chronic infection by the bacillus of influenza. The general symptoms have been those already described. Several of the cases presented interesting and instructive special features, and I shall briefly mention some of them.

Nine of the cases suffered from well-marked mental depression; in eight there was bronchial asthma.

A man of middle age had suffered for several years from symptoms of a neurasthenic character accompanied by two special symptoms, a gripping sensation in the head and giddiness when walking. Bacteriological investigation of the case showed that he had a chronic infection of the nasopharynx and gums by the bacillus of influenza. There were complications in the form especially of *Pyorrhæa alveolaris*, and these had to be treated as well as the bacillary infection, the importance of which, however, was not open to question. Under therapeutic immunisation the symptoms almost entirely disappeared.

A naval officer had for several months suffered from depression, unfitness for work, slight recurrent colds to which he did not himself attach any importance, and from pains in various parts of his body, which he and his doctor regarded as rheumatic. I found that there was an influenza bacillus infection of the nasopharynx and gums, accompanied by a *Micrococcus catarrhalis* infection. Under therapeutic immunisation every symptom disappeared, and the patient is now perfectly well.

Another case illustrates the debilitating action of a chronic infection of this kind. The patient is a doctor who suffered for several years from recurrent attacks of nasopharyngeal catarrh, generally slight, but occasionally severe. He remained thin and the cause of his thinness was never clear, although he was known to have a *Bacillus coli* infection of his ascending colon. It was ascertained that he had a chronic infection by the bacillus of influenza, and for this he was treated by therapeutic immunisation. The catarrhal symptoms rapidly disappeared, his health improved in every respect, and he has put on exactly two stones in weight since April, when treatment was begun.

Two cases illustrated the powerful action that the influenza toxins may exercise upon the heart. One of these patients was a doctor who suffered from chronic bronchitis and heart weakness, associated with attacks of palpitation. Chronic infection by the bacillus of influenza had never been suspected. The administration of the usual small initial dose of an auto-genous influenza bacillus vaccine was followed by an extraordinary focal reaction in the form of a severe and prolonged attack of palpitation and very rapid action of the heart, which was regarded as confirming the view that the bacillary toxins

were an important element in the causation of the cardiac disorder. Unfortunately, this patient died from a suddenly developing intercurrent malady.

In the second case of this kind marked improvement took place under therapeutic immunisation.

In four of the cases the patients were insane. In two of these the symptoms were those of depression and stupor, in one mania, and in the fourth dementia, insomnia, and constant restlessness.

It is impossible to say if in these cases of insanity the influenza bacillus infection is the cause of the malady, for the effects of therapeutic immunisation have not yet been ascertained. The exact importance of infections of this kind in relation to insanity can be estimated only on the evidence of a long series of cases. To direct attention to the occurrence of this form of chronic infection, in the hope of being afforded opportunities of investigating probable cases, is one of the main objects of this paper.

At the present moment the matter stands thus: Chronic infection by the bacillus of influenza is a fairly common cause of ill-health, although as yet hardly recognised; the nervous symptoms that occur in some of the cases among the general population are so severe that it seems probable that, in persons with a hereditary predisposition to insanity, grave mental disturbances may easily be induced.

(¹) Paper read at meeting of Scottish Division of the Medico-Psychological Association held in Edinburgh on November 17th, 1916.

The Relative Amounts of Grey and White Matter in some Normal and Pathological Brains. (Preliminary Communication. (¹)) By JOHN CRUICKSHANK, M.D., Crichton Royal Institution, Dumfries, Temporary Lieutenant, R.A.M.C.

THE marked complexity of the convolutions of the brain of man, as compared with the lower animals, has suggested to numerous writers that the higher intellectual and other mental faculties characteristic of the human subject are in more or less direct relationship to the amount of grey matter in the brain. Attempts have therefore been made to measure the amount of grey matter in the brains of persons of very different degrees of

intelligence and mental development. Owing to the highly complicated nature of the convolutions of the human brain, the method of estimation by direct dissection of the grey matter from the underlying white matter has not been adopted except in the case of a very few brains, most workers having approached the subject by indirect methods. Some observers have directed their attention to the measurement of the surface area of the grey matter, others to the determination of the absolute amount of cortex. Danilewsky, as a result of observations upon the specific gravity of the brain and of the grey and white matter, has calculated that the cortex forms 30 *per cent.* of the total brain weight. Donaldson, on the other hand, has estimated the grey matter of the hemisphere as forming 50 *per cent.* of the whole.

In the work of which this paper is a brief summary, an attempt has been made to measure by direct dissection the relative amounts of grey and white matter in a small series of normal brains, and to compare the results with the findings in brains of cases of mental disease which at *post-mortem* examination exhibited varying degrees of atrophy. The procedure was as follows: The membranes having been carefully stripped, the pons-medulla and cerebellum were removed by cutting through the mid-brain as close to the hemispheres as possible. The hemispheres were then separated by mesial section, and the fluid expressed from the ventricles. One hemisphere was then laid on its mesial surface and divided into five portions, named for convenience in reference, the frontal, precentral, postcentral, occipital, and temporal portions. Each portion, which weighed approximately 100 grm., was then cut into slices about one-tenth of an inch in thickness, one slice only being cut at a time, the rest of the piece, along with the other parts of the brain not actually under examination at the time, being kept in a closed vessel in the ice-chest in order to prevent drying and decomposition. Each slice as it was obtained was laid on a glass plate and cut into smaller portions, and by a combination of cutting and scraping with a sharp scalpel the grey matter was separated from the white. It was found that considerable practice was necessary before a reliable separation of the two layers could be made, and the results obtained from the earlier specimens of brain had to be discarded. The work was exceedingly laborious, as, even with the help of an assistant,

each of the five portions of the hemisphere took from four to six hours for complete separation. As each slice was completed the separated material was placed under cover. It was found that the fresh unfixed brain gave the best results, as the difference in consistency of the softer grey and firmer white matter in the fresh brain was a very material aid in the separation. The necessity, which the use of the unfixed brain imposed, of carrying the dissection through in the shortest possible time increased the arduous nature of the work. The difficulty of separation was greatest at the occipital and frontal poles, owing to the small size of the convolutions and the degree of infolding of the surface. The precentral and postcentral portions were on the other hand comparatively easy, the proportion of white matter in these regions being large and the convolutions much wider. The dissection of the grey matter of the basal nuclei presented the greatest difficulty. The grey matter of the basal nuclei, averaging about 20 grm., was not reckoned as cortical grey matter, and is not included in the following results.

In the tables are given the main results with the series of five normal and eleven pathological brains investigated. The figures represent the amounts and percentages of matter in one hemisphere only. Table I shows the results when the normal and the pathological brains respectively are arranged according to the amount of grey matter in the members of each group. It will be seen that in the normal brains the weight of grey matter varied from 327 grm. to 253 grm., and the white matter from 237 grm. to 196 grm., the variations in weight corresponding mainly to the size of the brain. The weight of grey matter, expressed as percentage of the total grey and white, varied from 57.9 *per cent.* to 53 *per cent.* It is to be noted that, generally speaking, in the normal series the greater the amount of grey matter the greater was the amount of white matter. In the pathological series, the grey matter varied from 289 grm. to 218 grm., and the white matter from 259 grm. to 149 grm. The percentage of grey matter varied from 64 *per cent.* to 52.6 *per cent.*

Table II shows the results when the brains, normal and pathological, are arranged in three series or columns, in the order respectively of (A) their amounts of grey matter, (B) their amounts of white matter, and (C) their percentages of grey matter. In column A it is to be noted that the normal brains

are distributed at various levels throughout the series, namely, two at the top, one in the middle, and two near the bottom. That is to say, the absolute amount of grey matter in the hemisphere is not a distinctive feature of the normal brains. In column B, however, the normal brains are all in the upper half of the column. The normal brains, in fact, differ from the pathological brains, with one marked exception, in having absolutely greater amounts of white matter. This is expressed differently in column C, in which it is shown that the pathological brains, owing to the loss of white matter, have a percentage of grey matter, in proportion to the total grey and white, greater than in the case of the normal brains. The pathological brains, with one exception (Mr. R—), showed varying degrees of atrophy, and the results of the work have shown that the greater the degree of atrophy of the brains, the greater is the diminution in the amount of white matter. In Mr. R—'s case—a voluntary boarder, who suffered from melancholia of a few years' duration—the brain was large and apparently healthy, no trace of atrophy being visible. Microscopically, this brain was practically indistinguishable from a normal brain, and in the tables it will be noted that it falls among the group of normal brains.

While the figures in the tables give the weights of material actually obtained after separation, it is to be remarked that a certain loss of tissue, particularly of grey matter, occurred during the process of separation. The total loss of matter per hemisphere amounted on the average to about 30 grm., of which it is estimated that about 20 grm. consisted of grey matter.

The conclusions which have been drawn from these results are that the atrophy of the brain which is so common a feature at autopsy in chronic cases of insanity, is due more to the loss of the underlying white than to the loss of the superficial grey matter, notwithstanding the well-known morbid histological changes in the latter. This relatively greater loss of the white matter of the brain in chronic insanity is quite in keeping with our present knowledge of the neuron, when we remember such facts as the association of the myelination of nerve fibres with the acquisition of higher neural and mental function in the process of development, and the essentially nutritive rôle of the body and nucleus of the nerve cell. Further, the figures which have been obtained for the weight of the grey and the white

TABLE I.—Showing in a Cerebral Hemisphere of each of the Normal and Pathological Brains, (1) the Amount of Grey Matter, (2) the Amount of White Matter, and (3) the Percentage of Grey Matter.

Brain..	(1) Grey matter (grammes).	(2) White matter (grammes).	(3) Grey matter (percentage).
Normal, No. 8 . . .	327	237	57.9
" No. 7 . . .	290	227	56.0
" No. 10 . . .	275	227	54.7
" No. 6 . . .	254	223	53.0
" No. 9 . . .	253	196	56.3
Pathological, Mr. R. . .	289	259	52.6
" Mrs. T. . .	288	205	62.4
" Mr. L. . .	287	161	64.0
" Miss T. . .	286	173	58.2
" Mrs. D. . .	282	163	63.4
" Miss B. . .	268	173	60.7
" Mrs. B. . .	262	149	63.7
" Mr. C. . .	261	173	61.5
" Mrs. A. . .	261	174	59.9
" Mr. F. . .	235	177	57.1
" Mrs. F. . .	218	163	57.2

TABLE II.—Showing the Brains, Normal and Pathological, arranged in three series, in the order respectively of their (A) Amounts of Grey Matter, (B) Amounts of White Matter, and (C) Percentages of Grey Matter.

A.		B.		C.	
Brain.	Grey matter (grammes).	Brain.	White matter (grammes).	Brain.	Grey matter (Percentage).
Normal, No. 8	327	Mr. R. . . .	259	Mr. L. . . .	64.0
" No. 7	290	Normal, No. 8	237	Mrs. B. . . .	63.7
Mr. R. . . .	289	" No. 7	227	Mrs. D. . . .	63.4
Mrs. T. . . .	288	" No. 10	227	Mrs. T. . . .	62.4
Mr. L. . . .	287	" No. 6	223	Mr. C. . . .	61.5
Miss T. . . .	286	Mrs. T. . . .	205	Miss B. . . .	60.7
Mrs. D. . . .	282	Normal, No. 9	196	Mrs. A. . . .	59.9
Normal, No. 10	275	Mr. F. . . .	177	Miss T. . . .	58.2
Miss B. . . .	268	Mrs. A. . . .	174	Normal, No. 8	57.9
Mrs. B. . . .	262	Miss T. . . .	173	Mrs. F. . . .	57.2
Mr. C. . . .	261	Miss B. . . .	173	Mr. F. . . .	57.1
Mrs. A. . . .	261	Mr. C. . . .	173	Normal, No. 9	56.3
Normal, No. 6	254	Mrs. D. . . .	163	" No. 7	56.0
" No. 9	253	Mrs. F. . . .	163	" No. 10	54.7
Mr. F. . . .	235	Mr. L. . . .	161	" No. 6	53.0
Mrs. F. . . .	218	Mrs. B. . . .	149	Mr. R. . . .	52.6

matter in the different parts of the brain, and which are not published here, have shown that the loss of white matter is greatest in the occipital, temporal, and frontal lobes, and that the white matter of the precentral and postcentral regions suffers to a less degree. In this short communication it has only been possible to give the most striking results. A paper with fuller particulars regarding the age and sex of the patients from whom the pathological material was obtained, the nature and duration of the mental illness, and other details, will be published later.

(1) Read at a meeting of the Scottish Division of the Medico-Psychological Association of Great Britain and Ireland at Edinburgh, on November 17th, 1916.

The Water Content of Some Normal and Pathological Brains (Preliminary Communication)¹. By JOHN CRUICKSHANK, M.D., Crichton Royal Institution, Dumfries, Temporary Lieutenant, R.A.M.C.

IN the preceding paper it has been shown that the general or local atrophy of the brain occurring in chronic insanity is very largely due to loss of white matter. It seemed to be of interest to determine what chemical changes accompanied this shrinkage in the size of the brain. As a preliminary to an examination of the complex substances of which brain matter is composed, it was necessary to investigate the proportion of water to solids, as the figures obtained in this way are of the highest importance in regard to the interpretation of the results obtained by chemical methods. The examination of the various portions of brain tissue for the amount of water was therefore proceeded with as a routine measure. The whole of the grey or of the white matter, as the case might be, from each of the five portions, obtained as described in the preceding paper, was spread on glass plates in as thin a layer as possible and carefully weighed. The plates were then placed in a Hearson electric drying oven, the temperature of which was maintained at about 90° C. A current of dry hot air was passed into the oven from a fan attached to a small motor. After fifteen to twenty hours' exposure the plates were removed from the oven, and the solid material which remained was carefully and completely scraped off. It was then allowed to cool to room temperature and weighed. The material was

returned to the oven for some hours, again removed and allowed to cool. This procedure was continued until the material attained a constant weight at room temperature. The percentage of water in each sample was then calculated.

The following Tables show that the grey matter contains roughly 10 per cent. more water than the white, not only in the

TABLE I.—*Showing the Percentages of Water in the White and the Grey Matter of the Different Portions of the Cerebral Hemispheres of Normal and of Pathological Brains.*

Brain.	Frontal.		Precentral.		Postcentral.		Occipital.		Temporal.	
	White.	Grey.	White.	Grey.	White.	Grey.	White.	Grey.	White.	Grey.
Norm. 25	73.1	82.8	71.6	81.4	71.2	79.6	70.8	81.7	72.9	81.1
" 26	70.7	81.5	70.2	81.5	70.5	81.5	69.8	80.7	73.0	82.3
" 28	72.0	81.4	71.4	81.1	70.8	81.1	71.3	80.4	73.5	81.6
" 30	73.0	83.2	72.1	83.0	71.6	82.3	72.8	81.7	75.9	83.5
" 34	73.5	84.6	75.2	83.7	72.4	83.3	72.3	82.5	74.5	83.6
Path. 16	72.1	82.4	74.5	81.5	—	—	72.9	80.9	—	—
" 17	74.9	82.7	73.4	81.9	72.9	81.8	76.2	81.9	74.0	83.4
" 19	77.7	83.4	76.0	82.1	75.4	83.4	75.1	82.7	78.5	83.6
" 20	71.2	82.6	70.0	81.9	—	—	71.9	79.9	—	—
" 21	77.5	85.8	75.9	85.6	—	—	77.5	85.6	—	—
" 22	72.1	81.0	70.0	82.5	71.0	80.2	72.3	81.9	71.4	78.9
" 24	73.4	83.2	72.1	83.0	70.0	80.4	71.7	80.8	73.2	80.4
" 27	74.2	83.9	71.8	82.4	73.7	82.1	73.0	82.5	75.0	84.1
" 29	71.8	82.7	71.4	82.6	69.9	81.4	71.7	82.1	71.2	82.5
" 31	69.4	82.2	69.0	81.7	70.5	80.5	67.5	80.2	71.5	81.2
" 32	74.1	84.9	76.1	86.3	73.4	85.3	73.5	84.8	71.5	87.1
" 33	79.2	85.6	76.9	82.0	75.2	82.4	76.5	82.8	80.0	83.8
" 35	75.0	84.2	73.6	84.7	73.5	84.2	73.2	82.9	76.5	83.3
" 36	75.9	83.6	75.2	81.5	74.4	80.9	74.2	81.8	74.9	83.6
" 37	76.1	86.2	75.2	83.8	75.0	83.2	71.7	85.2	76.0	85.0
" 38	74.9	86.8	71.2	85.1	69.2	83.7	72.9	83.6	75.0	84.3

TABLE II.—*Showing the Average Percentages of Water in the White and the Grey Matter of the Different Portions of the Cerebral Hemispheres of Normal and of Pathological Brains.*

Brain.	White matter.					Grey matter.				
	Frontal.	Pre-central.	Post-central.	Occipital.	Temporal.	Frontal.	Pre-central.	Post-central.	Occipital.	Temporal.
Normal	72.4	72.5	71.4	71.4	73.9	82.7	82.7	81.5	81.4	82.4
Pathological	74.3	73.2	72.6	73.2	74.5	83.8	83.0	82.2	82.4	83.1
Difference	1.9	0.7	1.2	1.8	0.6	1.1	0.3	0.7	1.0	0.7

case of normal brains, as has been observed by others, but also in the pathological and atrophic brains. From Table I it will be seen that in the series of five normal and sixteen pathological brains examined, there is considerable variation in the amount of water not only in different brains but also, though to lesser extent, in different portions of the same brain. In the case of the pathological brains the amount of water is, in the majority of cases, greater than in the corresponding portions of the normal brains. This is most evident in the case of brains 19, 21, 33, and 37. In Table II are given the average percentages of water in the grey and the white matter of the different portions of the cerebral hemispheres of the brains in the two series. The pathological series shows the greater water content in both grey and white matter in all the portions. Further, the increase in the amount of water in the pathological series is greatest in the white matter of the frontal and occipital regions. The grey matter of these regions also shows a marked increase in water.

It was found that the more marked the degree of atrophy of the brain the greater was the amount of water in the brain tissue. The amount of water was always increased in brains which showed marked atheroma of the basal or other arteries.

(¹) Read at a meeting of the Scottish Division of the Medico-Psychological Association of Great Britain and Ireland at Edinburgh on November 17th, 1916.

Clinical Notes and Cases.

Crime in Dementia Præcox. By RALPH M. TOLEDO,
Assistant Physician, Government Lunatic Asylum, Malta.

CRIMES connected with dementia paralytica and dementia of senility are relatively common, and many text-books speak of "medico-legal periods" in describing these diseases.

Having followed the progress of cases admitted in the Criminal Section of our asylum during the last few years, I desire to put on record several of these which serve to illustrate the relationship between "criminal acts" and those peculiar "psychical states," characterised by a rapid impoverishment of the entire mental life, which Kraepelin included under the name of "Dementia Præcox."

The "crimes" of violence in the cases under review were all

committed in the "predemented stage" of the disease, very often under the influence of a "fleeting delusion," and the reasons alleged by the patients always "silly and changeable."

CASE 1.—Man, æt. 30, shot dead his wife at 3 p.m. in a crowded street. He tried to run away. He accused his wife of adultery, but failed to bring forward "proofs." During his period of detention he told the police that he "heard voices" gossiping about his late wife's character. The judges appointed experts to report on his mental state. He was declared insane and sent to our asylum.

His mental condition deteriorated rapidly, and he is now a dement with the characteristic signs and symptoms of the paranoid form of dementia præcox, and subject very often to impulses of a very dangerous character.

CASE 2.—Lad, æt. 20. Charged with having dangerously wounded with a knife a friend of his, as the latter had refused to return to him (for just reasons) a toy worth 1½*l.* The accused was examined by experts by order of the magistrate and declared insane.

The jury, curiously enough, found the prisoner "responsible," and the judge had to "convict him." After serving a year in prison he was released, but had to be certified insane six days after he left the prison, as he fiercely assaulted his mother.

He is a typical case of hebephrenic dementia, silly in his way of thinking and acting, and at times exhibiting impulses of a dangerous character.

CASE 3.—Man, æt. 30. Convicted for having wounded his wife. After a few months' stay in prison he was sent to our asylum as insane. On admission he complained of hearing people at night gossiping about his wife's character, and of his inability to satisfy her sexual desires.

He is at present a typical case of præcox, fond of neologisms and stereotypies, and worried by auditory hallucinations.

CASE 4.—Man, æt. 29. Convicted in Alexandria, Egypt, for having wounded with a revolver an intimate friend. Certified insane after eight months' stay in gaol, and sent to the Malta Asylum. His mental condition rapidly deteriorated, and he is now a dement with characteristic catatonic attitudes. Has dangerous impulses.

The following two cases may serve to illustrate the changes of the moral faculties that very often precede the demented stage of the disease. They are both characterised by a sort of abnormal suggestibility on the part of the would-be demented.

CASE 1.—Lad, æt. 19. Labourer, of a very good character. Contracted quite unexpectedly a friendship with persons of suspicious character. Convicted soon after for circulating counterfeit coins manufactured by his new friends.

After a few months' stay in prison he commenced to complain of "impairment of vision" and to refuse to leave his cell, stating that he "was unable to walk alone."

Exhibited resistiveness and wetted his bed. He was at first looked

upon as lazy and also as a malingerer. The examination of the patient by Dr. Xuerets, our Chief Physician, squared matters at once, and the "poor dement" was sent to us for care and treatment. He is now destructive, of wet habits, exhibits stereotypies, and at times impulses of a dangerous nature.

CASE 2.—Man, æt. 26. A mechanic, described as a good father and husband. Contracted friendship with a man notorious for his bad character. Convicted with him for frauds.

After a few months' stay in prison he changed his humour, complained very often of headache, and called the doctor several times, thinking that he was dying of "typhoid." Refused food, believing it was poisoned. He was transferred "under observation" to our asylum.

On admission he was hallucinated, passed sleepless nights hearing the voices of his wife and child, and answering "hostile voices" coming out from the walls of his cell.

He is now a dement, very dangerous, wet in his habits, troubled very often by "voices," and destructive of clothes.

Remarks.—The crimes in the cases quoted above should not, I think, be taken as the outcome of mere impulses.

Impulsive acts of a dangerous or harmless character form a prominent symptom in all the forms of dementia præcox.

They are, of course, unpremeditated, motiveless, and very seldom accompanied by signs of emotion. Their occasional appearance breaks, so to say, the monotony in the patient's stereotyped and much circumscribed life.

On the other hand, the "crimes" referred to by me in the first four cases cited seem to have been the ultimate result of a faulty process of reasoning, and there was in all a certain amount of premeditation.

In the latter two cases the offenders had exhibited such a degree of malice as to make the prison officers suspect that the prisoners were feigning insanity.

Part II.—Review.

Organic to Human: Psychological and Sociological. By HENRY MAUDSLEY, M.D. London: Macmillan & Co., Ltd. Price 12s.

When in years to come the progress of scientific thought in the nineteenth century has to be described, there should—and there probably will—be found an honourable position in the roll of fame for Dr. Maudsley. To many whose worship is given to false but specious gods, this may appear hyperbolic and fulsome eulogy. Time will show. At present we are still too devoted to mysticism and

to metaphysical disquisition, with their apparent profundity and real shallowness, to be able to do anything like justice to those who give their time and energy to recording facts and drawing warrantable inferences therefrom. We are so accustomed to explaining the known by the unknown that we resent any attempt at a reversal of the process almost as an insult to our intelligence. In the old days the doubter would have been racked, stoned, or burnt for daring to suggest such a change. Probably he would be now did power remain with those whose cherished illusions are attacked. We have, however, fortunately arrived at a stage in our history when we not only have freedom of thought—and this we must have had ever since we had thoughts at all—but when we also have a very wide range of freedom in expressing them. That such liberty at times degenerates into license is a regrettable but inevitable concomitant. Yet, while it permits the enunciation of those trivial and puerile platitudes which, when the pill of nonsense is skilfully gilded with verbiage, pass for philosophical profundities, it also allows the utterance of opinions which, being opposed to popular sentiment, would formerly have entailed persecution upon those who published them, or which would have been suppressed by others who, like Erasmus, have no desire for the martyr's death. Dr. Maudsley, had he lived in the good old persecuting days, would scarcely have survived the publication of the *Physiology and Pathology of Mind*. Probably the title alone would have caused the powers to invoke the assistance of the common hangman. Probably also the author would have been roasted on a funeral pyre of the first edition! Certainly he would not have been able to state, as he does of the present volume, that it was written "to employ the writer in work which might occupy the time and ease the burden of the dreary decline from three to four score years." We should have keenly to regret these volumes in which he has rendered more precise and scientific the philosophical ideas of Hobbes, Locke, Descartes, Condillac, Cabanis, Spencer, and others. He has had the advantage not only of being able to avail himself of the work of those eminent thinkers, but also of having been able from his study of disordered mental processes to consider psychological problems from a point of view which was not familiar to them. In this latest volume, as in those which have preceded it, use is frequently made of this special knowledge to elucidate matters which might otherwise remain obscure.

Any work which deals with such subjects as ethics, psychology, and sociology from a biological point of view must, at the present time, necessarily be iconoclastic. The breaking of popular idols is, when not actually fraught with danger, certainly a thankless task. Dr. Maudsley has not been deterred by any consideration of this kind. As one reads his trenchant criticisms of many vague theories and baseless speculations which pass for axioms, Nietzsche's phrase of "philosophising with a hammer" recurs as an appropriate description of the process. The blows are not, however, given in the crude manner which such a phrase implies. His hand has not lost its cunning any more than its force. There is no hint of that decrepitude which the words of the preface might lead us to infer. The style is as vivid as ever, the reasoning as cogent, and the criticism as keen.

In former times anyone who formulated his doubts as to everything

being for the best in matters philosophical or theological was branded with some opprobrious epithet. Dr. Maudsley has well earned that of "materialist," and frequently enough has it been bestowed upon him. But, as formerly, those upon whom such appellations are bestowed are apt to look upon them as titles of honour rather than of obloquy; for the implication is, almost invariably, that the recipient has had courage sufficient to champion an unpopular cause. At a time like the present, when national upheaval has given rise to a recrudescence of emotionalism and mysticism, it is more than ever necessary that every effort should be made by those who, like Dr. Maudsley, can dispassionately point out the basis of actions, a basis which is, to so many others, obscured by the dust of conflict or lost to view in the clouds of prejudice.

In this book Dr. Maudsley ranges over a wider field than he has done heretofore. He applies the biological, evolutionary method to social organisation as well as to psychology. He has previously carried to a logical conclusion the application of the evolutionary theory to mental development, and he has made it sufficiently clear that mind is merely the name which we use to describe the functioning of highly-developed nervous reflexes. Here again he repeats, when dealing with one portion of brain function, that "subtile physico-chemical sympathies and synergies of motions and rhythms are constantly at work in the bodily unison beneath consciousness; it is not it which excites them but they which excite it when consciousness supervenes." The non-realisation of this most important fact—for the stage has been reached when it might well be accepted as such—or the negation of it by those who hold that mind is something separated from body, dwelling like Mahomet's coffin 'twixt earth and heaven—either one or the other of these errors has led to the promulgation of theologies which are inconsistent where they are not incredible, of ethical codes which are impossible of observance now—and probably ever will be so, of social schemes which are utopian and unrealisable, and of psychological systems which are obscure or unintelligible. It may be said that many of these matters are outside the province of the psychologist; and his intrusion into such domains is impertinent if he has confined his search for knowledge—like the fakir—chiefly to the umbilical region or, in more elegant phrase, to introspection. Dr. Maudsley makes it clear that the days are past when such methods as these can be looked upon as the ultimate resort in acquiring information. "The introspective ego, be it ever so acute, expert and free, is tied down by material bonds." It is, however, too much to ask of the generality of those who designate themselves psychologists—a term which includes at the present time all sorts of odd people, such as thought-readers, crystal-gazers, spiritualists, and, as Dr. Mercier would add, psycho-analysts—that they should apply themselves to the study of nerve-structure and function before launching out into windy disquisitions on the *Mind*. "Psychology must come down from the misty region of abstractions and base itself firmly on facts." That is a hard saying for those who find it so much easier to learn a number of words—with capital letters—or to coin new ones, and then give them forth with a pontifical air. Yet, as Dr. Maudsley says to the metaphysician, "a full and exact study of bodily structure

and function before he rises to his abstract syntheses would be a right addition to his reasoning or *reckoning* (which all reasoning fundamentally is), in no case a disadvantage, and might be unexpectedly instructive and gratifying." To this must be added a study of the influence of environment, in the widest acceptance of the term, in moulding the plastic organisation; for it is by "adaptive working experience and its consequent physical structuralisation in the brain—the literal instruction or information—that is, of cerebral plexuses of structure and function," that, ontogenetically and phylogenetically, memories are incorporated and skill gained.

Lack of this understanding of the organic basis of personality has been the cause of failure of schemes for the rapid amelioration of social conditions by revolutionary or anarchical methods. The state is an aggregation of individuals whose potentiality for improvement may be—and usually is—low. It is *they* who must be educated, not an abstract conception called the *State*. Positive harm may be done if this fact is lost sight of; the "abrupt imposition of a rigid social system" may cause "serious and irreparable damage to a mature national organisation." For the individual, it is not sufficient to endeavour to inculcate morality by means of precepts, however admirable. "Not instruction acutely to think only but also to feel and do rightly"; and the ability to assimilate moral precepts is no criterion of social righteousness. Some of those who have uttered the most commendable moral maxims have been among the most infamous members of the community, if good conduct is taken as an earnest of indwelling virtue. The perfectibility of the human race is, too, possibly a delusion. In any case, if it is eventually to be brought about, long ages must elapse before it can become a fact. That being so, it is of little use to expect mankind as at present constituted to be able to conform to the impracticable schemes of idealists and of visionaries. It is necessary to guard against the extravagant imaginations of the moralist as well as against the spiritual debauches of the mystic.

These are some of the topics dealt with by Dr. Maudsley; and this is but an inefficient sketch even of a portion of what he has written. It is, however, difficult to compress into a small space a reliable summary of so comprehensive a book. Withal, the charm of the style cannot be conveyed at second-hand. It is hoped, however, that sufficient has been said to indicate its value, and also the advisability of speedily becoming more intimately acquainted with its contents. More especially may it be commended to those who are too apt to scorn the base ascents from which they originated, and who, with their heads in a misty atmosphere of speculation and hypothesis, fail to see whither their feet are tending.

Dr. Maudsley in the writing of this book has indeed controverted the saying of Montaigne that "He who commits his decrepit age to the press is a fool if he thinks to squeeze out anything thence that does not represent him deformed with dotage and stupidity"; nor has his understanding grown "costive and thick." May he yet continue in health and strength, and with ability still further to confute that dictum!

HUBERT J. NORMAN.

Epitome of Current Literature.

I. Neurology.

The Bio-chemistry of the Brain. (*La Biochemica del Cervello.*) Dr. Giacomo Pighini.

This is a review by Georges Bohn in the *Revue Philosophique*, September, 1916, of a book in which Dr. Giacomo Pighini has published five lectures which he delivered at the Clinical Institute of Milan.

Dr. Pighini, says the writer, is certainly correct when he declares that the facts so laboriously established by histologists are subject to criticism, and that the deductions which they have drawn from these facts from the points of view of the physiology, psychology, and pathology of the brain are marred by a fundamental error: they are based on the interpretation of images which are for the most part artificial. Thus the famous "corpuscles of Nissl" do not correspond to any real structure.

Dr. Pighini attaches more importance to the study of the chemical constituents of the nervous substance of the brain. Among the most important and characteristic of these constituents are the lipoids, or the "noble fats" as they have been called; the cholesterines, the non-saturated and the saturated phosphorus compounds; to each of which belong certain particular properties for the working of the brain. Cholesterine has the property of neutralising a great number of toxins; the non-saturated phosphorus compounds have a great affinity for oxygen, hence they play an important rôle in the internal respiration of the tissues; further, they retain in solution many organic and inorganic substances, and contribute thus to the regulation of exchanges in the substance of the nervous tissues; as to the saturated phosphorus compounds, they are the stable elements of the brain.

The study of the comparative chemistry of the brains of men and of various superior animals shows that these brains differ chemically among themselves, and that the connections between the different constituent substances present values almost constant in the same species. That animal and vegetable species differ chemically the one from the other, is a truth that every biologist now considers as evident. There are also variations according to the stage of development and age, and this has been verified in the case of the brain. These researches ought to be pursued further, as well as those relative to the topographical distribution of different chemical substances in the healthy and diseased brain. For the moment, there are encouraging facts; for example, it has been observed that in the brain of paralytics the proportion of cephalin is reduced by a third or more.

Dr. Pighini devotes the whole of one lecture to the subject of the neutralisation of toxins by the brain, and one reads this chapter with great interest. One fact will show how the subject is treated. When one injects a guinea-pig, either into the carotid or directly into the brain, with an emulsion of tubercle bacilli, in a little time one finds no trace of it; in contact with the cerebral substance, as one can prove in

vitro, the bacilli become granular, lose their staining properties, and dissolve. But this bacteriolysis sets free the toxins of the microbe of tuberculosis; these are fixed by the nervous substances, and, instead of being neutralised as other toxins, they are, on the contrary, made more active to the point of almost certainly killing the organism; hence the thundering progress of certain cerebral and spinal tuberculoses.

Another remarkable property of the cerebral lipoids, at least of the non-saturated phosphorus compounds, is that of disengaging in burning a great number of calorics; hence much energy is developed at little expense. It has been remarked that during a prolonged fast, when all the other organs and tissues are considerably reduced in weight and volume, that the brain is little changed. The explanation appears to be that in the brain, which contains substances endowed with great thermogenic value, the combustion of very small quantities of these substances is sufficient to produce the energy necessary for the working of the mind. It is not astonishing, in these conditions, that the respiratory exchanges of the brain, either in excitement or repose, are less than those of other organs; between the states of waking and sleeping the differences are almost insensible; after intense mental work the exchanges remain the same. Paul Bert compared the quantities of oxygen absorbed and of carbonic acid set free per 100 gm. of various tissues, and found the figures less for the nervous tissues. Batelli and Stern have repeated the experiment with modern technique, and have entirely confirmed the results. It is, however, interesting to note that though it respire feebly, the brain shows itself very little able to resist asphyxia.

The author then proceeds to examine the various theories relative to narcosis and sleep. But up till now chemical explanations of these phenomena have been unsatisfactory, and this is said to be the most feeble part of Dr. Pighini's book.

In conclusion the reviewer observes that in spite of the rather one-sided manner in which Dr. Pighini has treated his subject, the perusal of his lectures may be profitable to both psychologists and philosophers.

J. BARFIELD ADAMS.

2. Physiological Psychology.

Suggestion as a Fact and as a Hypothesis [*La suggestion comme fait et comme hypothèse*]. (*Revue Philosophique*, September, 1916.) E. Boirac.

The labours of the School of Nancy, says the writer of this article, have definitively established the important rôle played by suggestion in the greater part of parapsychic phenomena. That suggestion is a fact is no longer to be disputed, but it is perhaps necessary to understand more clearly the nature and conditions of this fact; to determine in what cases suggestion manifestly intervenes without any possible doubt of its presence, and in what cases its presence is merely supposed as a more or less likely explanation or interpretation of phenomena; that is to say, in what cases suggestion is a proved fact, and in what cases it is simply a hypothesis of which the proof remains to be established.

The word suggestion is capable of being understood in various senses. According to its ordinary acceptation, there is suggestion each time a

person evokes—generally by a word—in the mind of another person an idea which would not have occurred to the latter in the ordinary course of thought, and which is an idea capable of exercising some influence on the sentiments or conduct of the thinker. But in its special acceptation, the word suggestion implies the notion of an involuntary or automatic obedience of the person to the idea which has been suggested to him.

The term hypnotic suggestion is often applied to the special acceptation of the word to distinguish it from the ordinary meaning. The ordinary condition of suggestion, that is to say, in which the person (subject) may normally resist, or in which he obeys either in virtue of a consent, more or less the result of reflection, or as the effect of credulity or natural docility, is produced in the state of waking, when the person is fully conscious and has complete use of all his faculties. The special condition, on the contrary, in which a person cannot resist, even when he has the desire to do so, is produced during a state of hypnosis, or during a state of apparent waking more or less analogous to hypnosis. Hence, suggestion, so understood, is a function of hypnotism, which may be defined, at least partially, as “a state which develops a special suggestibility absolutely automatic and irresistible.” The name hypnotism shows that we conceive the condition as “a state of torpor or cerebral stupor in which the greater part of the superior functions are suspended, or struck with inhibition,” whilst there is produced an exceptional activity of the cerebro-spinal axis.

However, there is another conception of hypnotic suggestion, that of the School of Nancy, which is altogether different from the above. This is the formula of the School: “Suggestion is the act by which an idea is introduced into the brain and accepted by it.” From a strictly physiological point of view there are no ideas in the brain, but only cells, fibres, etc. The word brain has been used improperly in place of the word mind; and the definition, given above, is purely psychological.

The analyses of suggestion made by the School of Nancy are always confined to the sphere of psychology. They are concerned with belief, persuasion, expectant attention, imagination, etc., all terms belonging exclusively to states of consciousness.

The methods habitually employed by the School of Nancy to produce suggestion are, or pretend to be, purely mental. No doubt they tell us that they look more or less fixedly at the patient, that they make light touches on his forehead, eyelids, etc., but all these gestures have, they believe, no importance; they have simply the object of fixing the attention and striking the imagination of the patient. The true agent, the only one which is really efficacious, is the word of the operator which insinuates or imposes the idea, and suggestion is finally realised when the mind believes.

One must remember that the masters of the School of Nancy are not savants making disinterested experiments in a laboratory; they are doctors operating in clinics with the intention of curing patients. The patients come to them knowing that they are going to be treated by suggestion, and are already convinced, or nearly so, of the efficacy of the treatment, and are impressed by the mysterious power which they

attribute to the person who is about to apply it. One understands that under these conditions, employing, or believing that they employ, only the force of persuasion, the School of Nancy honestly believes that no other force exists; but it is wise to look elsewhere, and in doing so one may find perhaps that the formula of the School is too narrow to enclose all the observed facts.

Many operators maintain that they obtain the hypnotic state, generally accompanied by an abnormal suggestibility, by methods purely physical, without the intervention of any idea. Thus Braid provoked hypnosis by prolonged gazing at a brilliant point, independently of all suggestion. Other men have employed the same method with success. Further, the hypnotising of animals is very difficult to explain by the theory of suggestion. When one hypnotises a cock by holding its beak fixed for some minutes on a white line, it is playing with words to say that that is suggestion, that is to say, the effect produced by an idea, as though the cock understood that one wished it to sleep, and persuaded itself, *ipso facto*, that it was impossible for it not to sleep.

It appears to us more probable that hypnotism is a particular state of the nervous system, narrowly related, no doubt, to suggestion, but which cannot be entirely ascribed to it. This state resembles sleep, and the School of Nancy maintains that hypnotic sleep does not differ from ordinary sleep, but is sleep produced by suggestion. However, in ordinary sleep, the sleeper does not hear anyone who speaks to him, or if he hears, he awakes; his tactile sensibility may be a little attenuated, but it exists, and if he be roughly touched, he awakes. How does it happen then that in hypnotic sleep the subject hears his hypnotiser, answers him, obeys all his suggestions, and yet continues to sleep? How is it that the subject often presents a complete insensibility, so that one can touch, pinch or prick him without his appearing to feel anything? And how does it come about that he awakes only at the command of his hypnotiser, and that being awake he has, as a general rule, no recollection of what happened during his sleep?

It may, of course, be said that the difference between hypnotic sleep and ordinary sleep is in reality the effect of suggestion. If the hypnotised subject continues to hear his hypnotiser, to reply to him, to obey him, it is because the latter has suggested it to the former before putting him to sleep, or that the subject has suggested it to himself. If he remembers nothing when he awakes, it is because this amnesia has been suggested to him. Unfortunately these assertions are contradicted by facts. The operators of the School of Nancy may, indeed, suggest to their subjects that they must continue to hear and to reply while they are asleep, and that they must remember nothing when they awake. But the great majority of operators make no suggestion of any sort to their subjects, not even, at least not verbally or explicitly, that of going to sleep. They look fixedly into the eyes of the subject, make some passes, and wait for the result. It is true that the fixed gaze and the passes may be considered as suggesting sleep, but the sleep thus suggested can only be that of which the subject has already the idea, namely, ordinary sleep. Hence, it is necessary to conclude that all the modifications and additions made to ordinary sleep result from suggestions altogether independent of the action of the operator. Is it the

subject who suggests them to himself? That means that there exists a traditional type of hypnotic sleep known beforehand to the subject, who sends himself to sleep under the suggestion of this type, and not under that of ordinary sleep.

To explain how this type was formed, and how it imposed itself on all the subjects, it would be necessary to search for its origin in the first experiments of animal magnetism, for the somnambulists of the disciples of Mesmer. De Puységur and others presented already—before the hypnotised subjects of Charcot—all the characteristics of general anæsthesia, consecutive amnesia, etc. The first authentic case of somnambulism described by the magnetisers, was, it appears, that of Victor Vilet, who went to sleep spontaneously under the influence of the passes made by De Puységur, and who from the beginning, to the great surprise of the operator, presented all the symptoms of hypnotic sleep.

The writer says that it has frequently happened that he has operated on subjects who were ignorant of everything about hypnotism, and who under the influence of passes, hands placed upon the shoulder-blades, etc., went off at once into a profound sleep with anæsthesia, amnesia, etc. On the other hand, he has frequently operated on subjects who knew all about hypnotism, and were very anxious to be hypnotised, but who were refractory to all attempts at hypnotism or suggestion. How can one explain this difference between different individuals in the manner in which they react to hypnotic or suggestive manœuvres? Some would find the explanation in auto-suggestion. If such a subject, they would say, in spite of his desire to be sent to sleep, and in spite of the complaisance with which he lends himself to the attempts of the hypnotiser, remains rebellious to all suggestions, it is, no doubt, because he has suggested to himself that he will not go to sleep. But by such a method of reasoning one can explain or prove all that one wishes without the expense of observation or experiment.

Suggestion, we are told, owes its power to the natural suggestibility of the brain, or rather of the human mind; it is the normal consequence of the natural credulity and docility of the entire human species. To go more deeply into the subject, it is a consequence of that psychological law, by virtue of which every idea tends to affirm itself and to realise itself, unless it be prevented from doing so by the equal tendency of another and contradictory idea. This law appears to have been first enunciated by Spinoza, and to have been repeated by Herbart, Dugald Stewart, Taine, Fouillée, and others.

However, this law, which renders suggestions possible, renders auto-suggestions equally possible, and these must in many circumstances be in opposition to those. Every human being is under the influence of auto-suggestions on many points, such as habits, education, experiences made during past life, etc., which may constitute counter-suggestions to a suggestion coming from a stranger. Among these auto-suggestions may be included faith in the evidence of our own senses and memory, and in the constancy of the order of nature.

If a suggestion coming from without does not contradict or offend any of these fundamental auto-suggestions, it has a chance of being accepted by us, and of obtaining our belief, consent, and even

obedience. So we may call such a suggestion by the name of plausible suggestion.

There are suggestions which may be called paradoxical, as, for example, when a person wishes to make us believe that it is night when it is midday, or that we cannot move our legs and arms simply because he says so. Such a suggestion would arouse in us an immediate and energetic counter-suggestion resulting from our fundamental auto-suggestions. In the case of a hypnotised subject, the spring of the normal counter-suggestions does not work, the fundamental auto-suggestions seem to be paralysed, and the subject believes blindly the most unlikely and impossible things.

The problem of hypnotic suggestion is to know precisely why this suggestion does not meet with the natural opposition, and it is very clear that the reason is not in the suggestion itself. All happens as though an unknown influence created a momentary void in the mind in such a way as to allow the suggested idea free play to develop itself without impediment. This unknown influence, without which suggestion cannot succeed, is what Durand de Gros called *hypotaxia*, and which is more generally designated by the name of hypnotism.

It appears to the writer that the mistake that the School of Nancy and others make is to explain concrete facts by abstract terms, such as suggestion and suggestibility. Here is a man, whom I can cause to have the most unlikely hallucinations, whose limbs I can paralyse by the mere exercise of my will. What is the cause of these extraordinary effects? Oh! it is very simple. It is all caused by suggestion. But this suggestion, how do you explain it? Whence comes its power? Oh! that also is very simple. It is the consequence of suggestibility, which is a natural property of the human brain. So the Schoolmen believed that they explained the reason why opium caused sleep by saying that opium had a sleep-producing virtue.

Suggestibility is not a fact subsisting by itself, an absolute fact; it is an effect depending on causes yet unknown. We are sufficiently acquainted with the laws of psychological life to know that this life has, at least in part, its conditions in the organism, especially in the nervous system. The cause of any modification of psychological life must be sought for in some modification of the nervous system. The hypnotic state, it has been shown above, is not universal, that is to say, it is not the normal condition of the human mind, and its cause must be sought for in some modification of the nervous system.

There is *a priori* no reason to suppose that this modification, which is of a physical or physiological nature, can be produced by suggestion, which is psychological. On the other hand, it has been abundantly proved that by manœuvres purely physical, such as prolonged fixation, passes, etc., the hypnotic state can be produced in a great many subjects, and may prepare them to submit to the effects of suggestion.

It is then false that hypnotism can be brought about by suggestion, because the success of suggestion, in the great majority of cases, requires the preliminary condition of hypnotism.

A hypothesis may be used in two different ways, theoretical or experimental, according as one employs it to explain facts already known, or to experiment in order to discover new facts or to prove a

new law. Suggestion may play this double rôle in parapsychical sciences, and we ought to consider it turn by turn as a theoretical hypothesis and as an experimental hypothesis.

It is especially as a theoretical hypothesis that suggestion has been used by the School of Nancy. There it is employed to explain the various hypnotic phenomena and their different particularities. The partisans of this School make constant use of suggestion in their practice. But this practical use is simply an operative proceeding and not an experimental hypothesis. Knowing that suggestion produces certain effects, it is quite natural to employ it when one wishes to produce them; but there is no experimental hypothesis in the matter unless one tries to obtain by suggestion some effects, with respect to which one is ignorant as to whether it is really capable of producing them.

What is the value of suggestion as a principle of explanation of the phenomena of hypnotism? The exclusive partisans of suggestion tell us that it is the key to all these phenomena. To such an assertion there are three objections.

(1) In researches so difficult and so little advanced, the pretention of explaining all by a single principle is not very scientific. The most urgent need is to observe the growing number of facts under the most rigorous conditions of certainty and exactitude, and by submitting them to every possible scientific method of examination to try to discover their laws. It is true that a hypothesis is necessary in such a research, but it must be an experimental hypothesis, which has for its object not the explaining of facts and connections already known, but the discovering of new facts and new connections, and which besides, far from being sufficient in itself, has its only *raison d'être* in the experiments which it gives rise to and controls. On the contrary, a theoretical hypothesis, that which has for its object the coordination and explanation of acquired results, is placed in the last term of the operations of the method, not in the course of a science which is in process of making, but only when it is at the end of its researches. And surely no one can assert that the science of parapsychic phenomena has arrived yet at that stage!

(2) Every attempt to account for an assemblage of facts as numerous and varied as these with which we are dealing, meets with the difficulty of the plurality or interchangeability of causes. The exclusive partisans of suggestion reason in fact as though the same phenomenon were always produced by the same cause. Stuart Mill says: "It is not true that the same phenomenon is always produced by the same cause; the effect sometimes comes from A, sometimes from B. . . . Many causes may produce a mechanical movement, many causes may produce certain kinds of sensations, many causes may produce death. A given effect may really be produced by a certain cause, but it may be perfectly capable of being produced without it." So, although suggestion does in fact produce certain parapsychic phenomena, as somnambulism, for example, yet it does not follow *ipso facto* that these phenomena cannot be produced by another cause altogether.

(3) A principle of explanation is the most satisfactory when it is the most clear, that is to say, when it contains the least part possible of the

unknown. Now the analysis of suggestion which has been made above, either as a fact or as an operative proceeding, has shown us that there are few facts more obscure and where the part played by the unknown is more considerable. To explain such or such a parapsychical fact by suggestion is in many cases to explain *obscurum per obscurum*, if not *per obscurius*.

All these objections, which appear to us to be very strong if they are applied to suggestion as a theoretical hypothesis, would singularly lose their strength if they were applied to suggestion as an experimental hypothesis, for in the latter case it concerns no longer an explanation which is given as complete and definitive of a whole order of phenomena, but as a simple provisional interpretation of a particular phenomenon or of a particular group of phenomena, an interpretation which, even if erroneous, carries with it its own corrective, since it envelops in itself the project and the plan of an experiment by which it may be immediately confirmed or contradicted.

J. BARFIELD ADAMS.

The Three Laws of Psychical Activity [*Las Tres Leyes de la Actividad Psíquica*]. (*Revista de Filosofía*, July, 1916.) Bunge, C. O., Professor in the University of Buenos Aires.

We know the existence of the world and we discern the qualities of things by applying our senses to the exterior, and the exterior produces sensations in our interior by the functions of our nervous system. Our mind, coordinating the experiences of memory, transforms the sensations into perceptions.

If in a lonely road we see a man in the distance, our visual organs rapidly reflect his image, and this image causes in our optic nerves an instantaneous and involuntary sensation; the optic nerves transmit the sensation to the cerebral centres by an operation likewise instantaneous and involuntary, and these centres correlate the sensation of the man whom we see with our latent memories of other men whom we have seen; then we possess his perception. When we look at this man, who is an unknown, we link his image by a mental operation equally spontaneous with that of many other men whose generic qualities we know, and we estimate his differential marks, his face, his conditions, his classification; these elements constitute ideas.

We all know what is a sensation, a perception, an idea; but in common and even in scientific language these words are too vague to signify a series of psycho-physiological phenomena, more or less alike more or less different, as are emotions, desires, sentiments, passions, etc. This is because the mechanism of the mind is unconscious in the beginning of its movements, and hence it appears subtle, fugitive, and complicated. Each primary sensation is accompanied by its perception and its idea; but this idea subdivides itself into a series of new perceptions and images, and these in their turn give rise to new ideas.

Passions, sentiments, desires, emotions, can always decompose themselves into a vast assembly of sensations, perceptions, and ideas. So, when we recognise as a mortal enemy the man who comes towards us

at the hour of twilight in a solitary road, the primary sensation transforms itself *ipso facto* into a series of secondary and tertiary sensations, each time more and more complicated. We look instinctively to see if the man is armed; we inspect his weapons and his strength; we feel the emotion of fear and the passion of hate; we call to mind similar cases in order to prepare the better for defence or attack.

If the wayfarer coming towards us is unknown, our mental operations may be arranged as follows:

(1) *Primary sensation*.—Reflection of the image on the retina.

(2) *Primary perception*.—Transmission of the image by the optic nerves to the cerebrum.

(3) *Primary idea*.—Representation, description, and classification of the image.

If we recognise in the wayfarer our mortal enemy, the scheme is more complicated. The primary sensation and the primary perception are the same. But the recognition of the image introduces a new element into the primary idea, and gives rise to secondary, tertiary, and other sensations such as fear, hate, etc., as indicated above.

English psychologists have formulated two fundamental laws of the mind: the law of association by resemblance, and the law of association by contiguity.

An idea being evoked or provoked, we immediately proceed to classify and fix it in a determined place in our mind by means of other relative ideas, alike or identical. One would say that the human mind was a well-arranged library, divided into a logical series of shelves for ideas: An idea being produced, we proceed to search for the department in which similar ideas are to be found, and when we have discovered it, we associate it with them. Such is the law of association by resemblance.

Intelligence, when it reasons, does not proceed by leaps and bounds; on the contrary, it follows a gradual process. This may be seen very easily in any example of reasoning. If we go out into the street and find there a tumult of armed men who are vociferating loudly, we imagine that a revolution has broken out. How do we arrive at this conclusion? By a large and graduated series of associated ideas and judgments. We think that generally armed multitudes do not go vociferating about the streets; that this implies an abnormal state of things; that a revolution is an abnormal state of things in which men rebel against the constituted powers; that these rebellions break out at times in noisy manifestations of a few armed men; that the police always suppress street disorders; that if they have not suppressed this one, it must be because they have not been able to do so; that if they have not been able to do so, it is because it is great and powerful; that if it is great and powerful, it is not a mere noisy faction but a multitude which has risen against the powers that be, in short, that it is a revolution. So by an uninterrupted continuation of rapid judgments we arrive at our conclusion. Such is precisely the law of association by contiguity.

The laws of association by resemblance and by contiguity embrace the two most frequent phases of mental operations, but not all the life of the mind in its many manifestations. Following another and more

general principle, the writer endeavours here to explain its laws, which may be reduced to three: (1) The dynamic law of the mind. (2) The static law of the mind. (3) The stato-dynamic law of judgment.

(1) *The dynamic law of the mind.*—Psychical life manifests itself by an ascending activity, from the most simple to the most complex, from the primary sensation to the primary perception, from this to the primary idea, and thence to the secondary, tertiary and other sensations, perceptions and ideas.

This is the primary law of the working of our nervous system. Our senses are impressed by exterior phenomena, and transmit their impressions to the cerebral centres, from sensation to perception, from perception to the idea, and from the idea taken from the exterior to other interior sensations, perceptions, and ideas.

It is to be observed that Spencer applies the term "strong impressions" to the sensations, perceptions, and ideas which emanate directly from reality, and the term "weak impressions" to the secondary, tertiary, and other sensations, perceptions, and ideas. These do not appear to the writer of this article to be appropriate designations, because the intensity of a sensation, of a perception, or of an idea, does not always depend on the immediate reality. The interior memory, which a lover retains of the object of his passion, is always a stronger impression than those which he takes directly or in reality of the other women who pass before his retina. Hence, the ascending movement of the dynamics of the mind is not ascending in intensity, but in quality, that is to say, in complexity.

(2) *The static law of the mind.*—Every psychical operation leaves a double trace on the mind: a recollection, and a facility for repeating the operation of verification.

This law is so evident that at any moment we can observe it in ourselves or others. The existence of memory constitutes the base of our concepts. We take no notice of a sensation, perception, or idea unless we differentiate and correlate it with previous ones. Every mental movement engraves a latent image on our mind, which at any moment experience can place in relief.

Again, "function makes the organ." From this biological principle follows the corollary; the development of faculties depends on their exercise. We are born mentally feeble, but with faculties which exercise will strengthen. The physical and psychical functions of our organism grow more and more robust by activity and exercise. The individual adapts his faculties to his needs, and his needs regulate the exercise of his faculties. The more suitable and continued the exercise, the greater is the development of the faculties. Various physiological theories explain the phenomenon of intellectual specialisation, the principle of them all being that the greater activity of any cerebral region corresponds to the greater irrigation of blood.

(3) *The stato-dynamic law of judgment.*—The ascending dynamic operation being realised, the new sensations, perceptions, and ideas combine with the traces of old sensations, perceptions, and ideas, and in virtue of this combination reasoning is produced, principally by means of three operations: association, contiguity, and simplification.

Thinking is the conscious operation of the mind. A new idea having

been acquired by the dynamic law, it is combined with ancient ideas by the static law. But how far has the activity of the mind advanced? At what results has intelligence arrived? First, it associates congruous, correlative, concomitant, or similar ideas; afterwards, it arranges a gradual and continuous series of premises. These operations constitute what are called the laws of association by resemblance and contiguity. Does the mind stop here, or does it pursue these operations to infinity? Here intervenes, however, a third process, simplification, which, according to the writer, psychologists have not sufficiently defined. When hundreds of ideas are floating in our mind, our intelligence by an instinctive operation searches for solutions, that is to say, clears unnecessary ideas out of the way, solves equations, sums up, multiplies, divides, induces, deduces, analyses, draws conclusions; in short, simplifies. To abstract, to discuss, to deduce, to induce, to conclude, merely implies a simplification of various and complicated elements.

J. BARFIELD ADAMS.

Reflections on Psychological Introspection [*Reflexiones sobre la Introspección Psicológica*]. (*Revista de Filosofía*, July, 1916.) Dr. Rodolfo Rivarola.

The mechanic, says the author, attending to the movements of a machine in motion, does not stop to examine the theories and laws of mechanics, or their evolution; in the same way the scientist utilises his mental mechanism without studying the origin or evolution of the ideas with which he formulates his conclusions and his laws. If, however, he turns his observation inwards, it is as though someone else were examining him, or he himself were examining another person, inducing and discovering by means of gestures, words, or any other manifestations or signs, the series of ideas, sentiments, and realised impulses which constitute the complexity of the mind.

When I think of another observing or inducing, I think of myself observing or inducing; otherwise I should know nothing either of his observations or of his inductions.

If a clever artist or novelist paints or describes a sunset, I can compare his observations and experiences with those which I possess of sunsets which I have seen and admired in nature. A man blind from birth could comprehend absolutely nothing of the picture nor of the description. A man who had lost his sight at an age sufficiently advanced for him to have preserved the memory of colour could understand the spectacle as described by words as well as one who was in full possession of the sense of vision.

Under our observation and reflection fall two orders of phenomena, the one material, the other mental, which require different methods of investigation and description. However much we may wish to reduce Nature to an organic unity, it is certain, particularly when dealing with matter and its manifestations, or with the reduction of matter to energy or any other phenomenon, that we speak of ourselves as standing apart from Nature, as though we were standing in a balcony, and were looking down on Nature defiling past us in the street. This is called the objective method. The scientist can say I and Nature, the observer

and the observed, and he describes the observed in a duality which he cannot in any way avoid. One might say that there is in this an insuperable logical inconvenience. Let us see, however, if the position be not susceptible of some elucidation.

Human thought has always followed two currents of ideas.

(1) That what exists has been created, therefore that a Creator pre-exists, exists, and will always exist whether his creation continues or disappears.

(2) That what exists is the perpetual transformation of a substance without beginning or end: forms change; uncreated substance is eternal.

On the first is founded religion, the religious sentiment, etc. On the second is founded the scientific and intellectual interpretation of phenomena which believes like the first that it possesses the truth with a conviction which does not yield in intensity to the most extreme conviction of a religious believer. That which admits of two existences, Creator and created, spirit and matter, is dualism; that which admits of the unity of substance and of the infinite evolution of forms, is monism.

There is an analogy between dualism and the objective method which is frequently feared and repudiated by dualists. The independence of the observer and the observed is as much dualistic as the separate existences of the Creator and the created. However, it is precisely in monism that one meets with the greatest use of the objective method. To do away with this apparent contradiction it is necessary to remember that monism, if it affirms the unity of substance, affirms at the same time the plurality of forms. Substance cannot be studied directly, but only by aspects, forms, or phenomena. So arises the possibility that in relation to determined aspects, and only in relation to them, is possible the organisation of knowledge by the objective method. It is with reference to these aspects that we speak of the exterior world, that is, of the world which we are able to observe as different to ourselves.

There are, however, other aspects of nature which the most rigorous monism cannot study unless on a base essentially subjective. These are the phenomena of the interior world, that is to say, the series of aspects of nature which we understand only because they are within us, and which we designate commonly by the name of spirit, mind, soul, consciousness, will, and action. To attempt to explain these aspects by the objective method appears to be as great a mistake as to endeavour to explain the aspects referred to above by the subjective method. To try to obtain an explanation of the cosmos solely by reflective meditation appears to be a process as much exposed to error as to endeavour to obtain an explanation of thought by means of the microscope.

One is accustomed to call natural sciences those which are concerned with the organising of the knowledge of the exterior world, and mental sciences those which are concerned with the interior world of man. Generally there is no difficulty in recognising the natural sciences, that is to say, those which can be cultivated objectively. Others occupy an ambiguous position, having been considered as natural sciences, and studied as such without altogether being so. Psychology occupies such

a position. If by psychology we understand the study of the phenomena of consciousness, it is a study of something which is in the observer himself. It is because he possesses consciousness that he is able to observe. The idea of consciousness has not been derived from any outside explanation or experience. If the organism capable of consciousness had not pre-existed in the observer, and if he had not met with the idea of consciousness in himself, he would not have searched for it in others. Yet in the examination of organisms—whose movements and functions appear to us to be connected with consciousness—we proceed objectively in all the experiments by which we prove the phenomenon of consciousness. Thus we search for the relation between an object, the knowledge of which comes to us by our senses, and a conception, the knowledge of which appears in the perception, and the consecutive analyses of the perception by which we acquire ideas.

The majority of the works on mental science have to submit or appear to submit themselves to the method, purely objective, of the natural sciences. The psychologist's material, however, which is nearest to his hand, is in himself at every hour of the day and night when he is awake, and even in the time which immediately precedes or follows sleep. It is his own consciousness which distinguishes him from the other human and non-human beings, and the other natural and artificial things which surround him. But it is difficult to find among the classical psychologists, those, that is to say, of the official science, who are regulated peremptorily by the laws of imitation and of the School, one who gives an examination of himself, a balance and inventory of his own mentality, or a description of his own sensibility and of his own will. The introspective method, which appeals in each one to the testimony of his own consciousness to prove that it conforms with the consciousness of others, is more or less condemned. It has only been loyally utilised by literary men, philosophers, or savants who have written of themselves in memoirs, autobiographies, novels, poetry, confessions, or recollections, without any intention of *making* psychology, much less of *making* scientific psychology. Meanwhile, the manuals and treatises on psychology go on explaining the soul and its faculties, the mind and its phenomena, always objectively as though they were describing a bone or a stone.

If we talk of the things of inside in the same way as we talk of the things of outside, it is necessary to prove that we have the same right, and the same security or reason of certitude. Can we count, weigh, and measure the elements of ideas, sentiments, and actions in the same way that we count, weigh, and measure the bones of a skeleton?

One may believe that every investigator or expositor of mental science speaks of himself, when he appears to speak in objective language of things foreign to his own personality, as though he were not treating of his own ideas and judgments, of passions which he felt, or comprehended because he had felt them, and of impulses and actions executed or impeded by the order or illusion of his own will. But one must admit also that the obligation of objectising perceptions, ideas, memories, imaginations, sentiments, and volition as exterior things, takes away from the observer, or at any rate from the reader the security

of a real fact of observation. If the psychical fact the most directly observable, and the only one of which one can speak with great security, be that of one's own consciousness, the language of the greatest sincerity will be that of one's own person. It was thus that Descartes spoke in his *Discours de la Méthode*.

J. BARFIELD ADAMS.

3. Clinical Neurology and Psychiatry.

Some Neuroses of the War. (Bristol Medico-Chirurgical Journal, July 1916.) Clarke, J. Michell.

A neurosis, according to Gould, is an abnormal nervous action or an affection of the nerves or nerve-centres of a functional nature. Dr. Michell Clarke excludes all cases which exhibit any one or more of the definite clinical signs which are usually associated with structural change in the central nervous system. He admits, however, that present conceptions of what constitutes functional, as contrasted with organic, lesions may require modification. Several observers have noted that organic lesions of the nervous system may be produced without evidence of external injury. Usually there will be found structural changes in these cases.

It is, however, possible that minute multiple lesions, especially if widespread, may through a massed effect give rise to symptoms or signs not recognisable by present clinical methods of investigation as due to an organic lesion, but rather to those of functional disturbance or neurosis. These shade indefinitely into cases with undoubted signs of structural change.

As the neuroses of war are partly due to the same causes as those occurring in civil life, and partly to other special causes, some of them will be familiar while others present unfamiliar or special features. Hysteria, for example, exhibits the ordinary manifestations, namely, monoplegias, paraplegias, and hemiplegias, with or without sensory disorders and muscular contractures, affections of the special senses, such as deafness or amaurosis, and of special nervous mechanisms such as of speech, and of anorexia or vomiting. Most of them are quickly cured by the accepted methods, and cases of recent origin are more amenable to treatment than those of long standing. Hysterical paralysis in a limb may be caused by a wound which may be superficial or deep, slight or severe. Most commonly the paralysis is distal to the injury or does not extend further centrally than the position of the wound. Anæsthesia is usually present and is of the glove or sleeve, stocking or sock distribution. The upper limit of the anæsthesia is transverse to the long axis of the limb, as a rule is sharply defined, and the boundaries of the loss of the different forms of sensation are coterminous. All forms of sensation may be lost together, but those to light, touch, and pain are more frequently affected than those to heat or cold. Sensation to either heat or cold may be preserved and the others lost, or cold felt as warm. Attention to the distribution and characters of the anæsthesia rarely leaves any doubt as to its true nature. The affected limb is often cold, bluish-red, and sometimes slightly œdematous.

The cause need not be a wound. These troubles may, as in civil

practice, occur after any injury. Hysterical contractures of the limbs without paralysis are not so common. Hysterical paralysis and anæsthesia may complicate paralysis due to an organic lesion. Lapse of time aids in clearing up the diagnosis, for the functional disorder tends to pass off. Even in hysterical paralysis of long standing there may be wasting of the muscles; it is of slight degree and affects the muscles of the whole limb. The electrical reactions are retained.

Aphonia may be present; there is a tendency to relapse, and it is difficult to bring about a permanent cure. There may be dumbness with or without deafness from shell-shock. In most cases the cause was the shock of a shell-explosion, with or without burial, sometimes producing loss of consciousness for varying periods, sometimes not, but in either case leaving the patient in a dull, dazed, or stuporous state, from which he emerged to find himself dumb and often deaf as well. In most cases hearing returned before speech. Recovery took place in some quite suddenly; in others gradually, with ability to pronounce a few words in a stuttering manner at first. Patients were aided by means of demonstrating to them the physiological movements of the lips and tongue in speaking. Some of them exhibited the eagerness to write what they cannot say, as seen in the classical type of this affection, but others were dull and apathetic. Similarly with those suffering from deafness without obvious lesion the patients did not make the efforts to hear that a deaf person does.

Hysterical vomiting occasionally occurred. It was cured by keeping the patients strictly on milk until vomiting had ceased for some time. Hysterical convulsions occurred in only one case. He had not suffered from epilepsy. There was a history of a slight wound, and a subsequent fall on the head from a height of 6 ft.

In other cases the hysterical features were accompanied by more or fewer evidences of a state of general nervous shock. These neuroses present symptoms or groups of symptoms not familiar in civil practice before the war. The causes are numerous—*anxiety, overstrain, want of sleep, wounds, concussion from high explosives, noise, horrible sights, and fear.* The most potent are the concussions caused by high explosives and burial in the *débris* produced by a bursting shell. The longer the patient was buried the greater the effect. In the majority of these cases of neurosis there is a history of mental or nervous disease in the patient's family. Occasionally the breakdown occurred only after the system had been weakened by some debilitating disease.

The chief symptoms noted are exhaustion or prostration, both bodily and mental, apathy even to the extent of an absence of the desire to recover, pronounced fatigability. There is often wasting or disturbance of nutrition, with or without anorexia. Depression, with loss of self-confidence, is present in the early stages. It is often associated with fears of permanent paralysis or ill-health. Tremors of the limbs are common. Patients are extremely sensitive to noises. Cerebration is slow. Memory is defective; in the more severe cases even for remote events. Affections of the special senses are common soon after the accident, but seldom persist long. Definite nystagmus is rare; nystagmoid movements are not infrequent. Insomnia is at first the rule, and sleep is disturbed by terrifying dreams. In some of these cases there is

a more defined loss of power, either hemiplegic or paraplegic. As a rule there is at first more or less general loss of power of all the muscles of limbs and trunk. In all cases electrical reactions were normal; the results in the hemiparetic cases were good. Treatment by rest, good feeding, massage, passive movements, and exercises. The leg in all cases recovered before the arm.

Incoordination is present in some cases. The deep reflexes are usually exaggerated. Sphincters unaffected.

Considering the cases as a whole, Dr. Michell Clarke concludes that the pathological changes must be widely distributed through the nervous system. "The disturbance affects the highest cortical levels, the middle levels with the subconscious mechanisms for everyday activities, the motor centres in the cord with their issue in the final common path, and the muscles themselves, and often also the afferent paths and the receptive apparatus for localisation and the components of deep sensibility." There is possibly a block in the passage of nervous impulses from one neuron to another, and this may be due to an alteration in the constitution of the terminal ramifications of the axones and the dendrites. The disorder of voluntary movement may be explained by an overaction of the cerebellum, or by the want of counteraction of the cerebellum owing to the impulses from the cerebrum being in abeyance.

Cases of conscious simulation of nervous disorders have been conspicuous by their absence: the influence of fear is not so great nor so lasting as might have been anticipated. In a few cases, however, the fear of returning to the front does retard recovery: where, therefore, there is no prospect of his return to active service the patient should be so informed.

HUBERT J. NORMAN.

Compression of the Carotids in Epilepsy and Hysteria (Nouvelle Iconographie de la Salpêtrière, 1916-7, No. 1.) C. Tsiminaskis.

This is a clinical study of the effect of compression of the carotids in cases of epilepsy and hysteria from the point of view of diagnosis, pathogenesis, and the mode of production of the seizures in these maladies, following on the lines suggested by Binswanger.

The exogenous or endogenous irritants which are the presumed cause of epilepsy doubtless give rise to instantaneous functional alterations in the seat of the disease, and it is these functional alterations that determine the fit. Is it possible to cause these alterations experimentally, and thus provoke a seizure? In man we can produce a hyperæmia, or a partial anæmia of the brain. It is not possible for anatomical reasons to occasion a complete anæmia, for we can only limit the supply of that part of the brain supplied by the carotids. The artificial production of hyperæmia in the subjects of idiopathic epilepsy did not give rise to fits. If, however, anæmia is induced we get positive results. In every case in which it is possible to compress the carotids (*i. e.* where the subject is not too fat, or suffering from arterio-sclerosis) compression gives rise to loss of consciousness in about thirty seconds. In healthy people (non-epileptic) consciousness is regained as soon as

the compression is relaxed. In epileptics, however, unconsciousness occurs more rapidly and is followed by a fit, which is of the same type as that occurring normally in each subject. This holds good for fits of the Jacksonian type as well as ordinary epilepsy. The post-epileptic state also was that normal to each person. Out of 116 cases experimented on, failure to induce fits only occurred in nine, and these were cases in which fits usually took place at very long intervals (three months to one-and-a-half years). Similar investigation was made in forty-two cases of hysteria. They were subjected to compression of the carotids on their first examination only, and suggestion was carefully avoided. In every case typical seizures resulted. The author believes that his method may have important bearing on the diagnosis in cases of doubtful epilepsy, nocturnal or masked cases, and that further experiments on these lines may yield information as to the cause, and possibly the cure, of this group of diseases.

W. STARKEY.

4. Treatment of Insanity.

*Treatment by Suggestion. (Dublin Journ. of Med. Sci., April, 1915.)
Smyly, Cecil P.*

Dr. Smyly believes in the efficacy of treatment by suggestion, but deprecates the use of such a method in cases to which it is unsuited. At the same time he criticises the attitude of those who are "firmly convinced that the practice of mental therapeutics is closely allied with that of black magic." Experiments in the use of suggestion are as necessary as they are in other scientific matters, but such tricks as "persuading a person to eat a candle, in the belief that it is a banana," are quite unjustifiable.

Individuals differ in suggestibility as they differ, for example, in the accommodative power of their urethra: and harm may be done in both instances by the ignorant or unskillful person who uses the bougie or who makes the wrong suggestion. It is as reasonable to impugn the utility of bougies because evil results in the one instance as it is to depreciate the value of suggestive therapeutics because the procedure is wrongly used or applied to unsuitable cases in the other.

It is the patient's own mind which brings about curative results, and not the substitution of the will of someone else. He must allow his attention to be directed in a certain direction or to be deflected from one upon which it has been unduly concentrated. For this a certain degree of passivity is essential: resistance renders the method inapplicable. The attention may be concentrated upon one group of ideas so closely that others, though really perceived, are not heeded, and thus, for example, analgesia may be produced. It is essential, however, that the condition which is giving rise to the painful stimuli should not be neglected. Suggestion cannot directly affect a cause which exists outside the brain. There are, however, maladies which are due to the excessive attention which is paid to normal stimuli. If the attention can be diverted by means of suggestion a cure will result in these cases.

Dr. Smyly has used hypnotism and suggestion successfully in instances where it was desired to produce anæsthesia for surgical

purposes ; for insomnia ; for abdominal pain ; for constipation ; and for other conditions. In the treatment of mental symptoms, such as "phobias, obsessions, etc.," he records only one complete cure and one case improved out of six.

It is essential that a correct diagnosis should be made before any attempt is made to treat a case by means of suggestion : otherwise almost all the symptoms may be removed, while the cause is absolutely unaffected, and being unnoticed may escape proper treatment. On the other hand, suggestion may be of great assistance to other methods of treatment, such as, in giving the patient confidence to undergo an operation. Even in acute medical conditions it may tide him over the crisis, or persuade him to give himself a fair chance in a chronic malady, and in inoperable malignant disease suggestion may be able to render his last days at least more endurable. But, as the author says in conclusion, "to claim that hypnotism, Eddyism, or faith-healing can cure such cases is as foolish as it is unscientific, and can lead only to disappointment or disaster.

HUBERT J. NORMAN.

Dial as a Hypnotic Remedy. (La médication hypnotique par le Dial. Le Progrès Médical, April 5th, 1916.)

In August, 1915, *Le Progrès Médical* drew the attention of therapeutists to this then new hypnotic. Since that article appeared a number of practitioners have made trial of this drug, and have communicated their results to the journal, which gives a summary of these in a short leader.

Dial (diallylbarbituric acid) is closely related to veronal (diethylbarbituric acid), but differs somewhat in its effects. It is much more active, or at least possesses the same potency in a much smaller dose ; it is more rapidly absorbed and eliminated ; it is without action on the kidneys, and causes no irritation of the alimentary canal.

Experiments on dogs and rabbits have shown that an identical narcotic effect with that of a given dose of veronal is obtained with one-fifth the quantity of dial. These experiments have demonstrated the complete disintegration of this product in the course of metabolism, with the absence of any evidence of accumulation, even during prolonged administration. The average dose is between $1\frac{1}{2}$ and 3 gr. (0.10 and 0.20 grm.). From observations that have been communicated it has been found that it is possible to obtain sedative effects with a much smaller dose, $\frac{3}{4}$ gr. (0.05 grm.), and that in psychoses and states of extreme excitement $4\frac{1}{2}$ -6 gr. (0.30-0.40 grm.) are sometimes successful. $\frac{3}{4}$ gr. is the sedative dose in simple nervous agitation, and may be repeated three times a day. $1\frac{1}{2}$ gr. is the hypnotic dose in nervous insomnia of moderate intensity. It should be given at bedtime in the case of patients who are sleepless in the beginning of the night, and on waking when the insomnia is in the middle of the night or towards morning : but in the latter case it is indispensable that the patient should be allowed to sleep a little later in the forenoon, otherwise, if wakened prematurely, he might suffer from vertigo or headache. The same dose of $1\frac{1}{2}$ gr. is also a suitable one in nervous agitation complicated with anxiety, but it may have to be repeated three times a day. $2\frac{1}{4}$ -3 gr.,

given in a single dose at bedtime, should be administered in cases of obstinate insomnia ; this is also the dose in grave conditions of nervous agitation, when, if necessary, it may be repeated twice during the day. Finally, $4\frac{1}{2}$ gr. may be given in states of maniacal agitation, and especially in psycho-motor excitement, in neuroses with phobias, and in melancholic anxiety: it is also the dose which it will be most often necessary to employ in alcoholic delirium, and for the cure of morphinomania. Should secondary symptoms arise it is an indication for suspension of the treatment for some days. It may then be resumed without unpleasant results if the state of the heart is satisfactory.

As regards the value of dial in epilepsy, there have been too few trials of it to justify the expression of a definite opinion at present. In one case the attacks completely disappeared from the time treatment was commenced, to return on its cessation, and disappearing again when it was resumed. It would appear, then, to be capable of rendering real service in the treatment of this affection, and fresh trials are to be encouraged where dial, associated perhaps with codeine, bromides, chloral, or belladonna, may be expected to play either a principal or an accessory part.

Dial is manufactured in the Ciba laboratory, at St. Flons (Rhône), the proprietors of which kindly offer to place samples at the disposal of members of the medical profession.

T. DRAPES.

5. Sociology.

Disease and Domesticity. (*Glasgow Medical Journal*, August, 1916.)
Craig, James.

No crisis in life brings out the best in human nature more markedly than serious illness in the household. Individual sacrifices are made one to another without a thought of personal comfort or personal right. There is a reverse side to this picture, but the occasions on which it is shown are few.

Many domestic worries result from undue irritability in individuals who are really suffering from bodily diseases of which they make no complaint. A judiciously administered aperient may not only relieve an overcharged or irritated bowel, but may also "minister to a mind diseased." Most of the minor and recurrent forms of mental derangement of an evanescent kind are greatly influenced by attention to bodily health in this respect. That many people have come to realise this is evidenced by the immense vogue of laxative pills and lotions. Yet the disorganisation of bodily structure is too often lost sight of when disorders of conduct are being considered, and the individual is held responsible for derelictions which are entirely the result of the tyranny of his faulty organisation. Action is deferred in many instances until contravention of the law, for example, has occurred ; whereas a wise prescience would have brought about intervention at an earlier stage. "The ideal of all law should not only be the restraint of the criminal, but the restraint of the potentiality for all crime." Frequently the lunatic has to commit some crime before he is dealt with by the law.

The drunkard must become a criminal before he can be forcibly put under restraint. Many drunkards even boast of their roystering habits. Where people have such ideals it is necessary to prevent them by repressive measures from carrying these into force. Such measures must precede in many instances the inculcation of higher ideals.

Chronic kidney disease, with alternating skin and mental phases, is one of the chief of those conditions which give rise to domestic trouble. A kidney toxin which produces scars and sores in the arms and face and legs is one which renders "the spirit irritable, the mind lugubrious, and the outlook on life and other human beings suspicious and even malicious." Sufferers from kidney trouble are only too often the victims of the quacks. Perhaps they are persuaded to take some form of violent exercise, whence results probably a cerebral hæmorrhage. "Every man over fifty years of age should get a medical opinion about his heart and kidneys before taking up any violent form of exercise." Where uræmic convulsions do not take place in a patient whose blood is charged with toxins, "some derangement of the intelligence centres" is sure to result. This may take the form of delusions of such a nature as to bring about strife in the domestic circle.

Syphilis affecting the central nervous system is a fertile source of trouble. Before the condition is recognised much evil may have arisen. It is only later that the cause of much irritability and suspiciousness is ascertained. The concealment of syphilitic infection is frequently attended by dire results by precluding early and adequate treatment.

In the study of sociology it is necessary to take into account the part played by maladies of all kinds in influencing conduct. Only by so doing is it possible to understand the apparently irrational behaviour of many members of the community. Cranks, faddists, and peculiar people are often only those needing a little medical attention. They, and the unduly irritable invalid, do not need coddling and spoiling, but frequently more drastic measures of treatment.

Experience of human nature is often more valuable to the physician than recondite knowledge of pathology. The personal factor is an important element in the cure even of organic diseases. To be able to inspire hope in the patient is to have made a step towards cure. Empiricism and optimism frequently bring about beneficial results which more rational knowledge conjoined with pessimism cannot achieve.

H. J. NORMAN.

A Note on Calumny [Note sur la Calomnie]. (Revue Philosophique August. 1916.) Ossip-Lourié.

The calumniator, says the writer, is neither a liar nor a mythomaniac: he is a false interpreter. The suggestion of error, the base of the lie and of the myth, is not absent from calumny, but calumny is not, as the lie and the myth, the creation of a fiction. It is the disfiguring or alteration of the truth. It is a false interpretation, generally voluntary, of a quality or of a truth.

Whilst the lie and the myth are frequently found among children, calumny is unknown among them. This is easily explained. Children are imaginative and inventive, but they have not yet acquired

the faculty of logical interpretation. Thus it will be seen that the writer places the calumniator on a higher intellectual level than the liar.

Uncivilised people are familiar with and practise largely the art of lying, but they are ignorant of calumny, which, like the use of asphyxiating gas in warfare, is the prerogative of progress.

Why do people calumniate their fellows?

The habit of saying and repeating words and phrases without verifying their value or exactitude leads to calumny. The writer, in his work *Langage et Verbomanie*, has pointed out that verbal calumny is allied to verbomania.

Certain miserable people hate all who surpass them, and this hate engenders jealousy which ends in calumny. Such people calumniate persons who have never done them any harm, and who deserve neither their rancour nor their animosity.

Calumny spreads itself much more rapidly than authentic truth. To recognise a truth, it is necessary to search for it, to make an effort to discover it; calumny gives itself up at once, it is sufficient to receive it, and there is no need to ask whence it comes, or what are its credentials.

Very few people have the habit of going to the bottom of things. The number of those who accept an opinion only after having verified it is very limited. We are always talking of criticism, but we apply it rarely, if ever, to words and judgments which we hear around us. We judge our neighbour on the appearances of faults and qualities which he does not possess, we give our confidence to those who scarcely deserve it, and we suspect people only because others speak ill of them.

"I am going," says the writer, "to give utterance to a paradox (in the true sense of the word, *παρα δόξαν*, that which is contrary to convention or to prejudice). I hold that it is necessary to distrust opinions, be they good or bad, which are identical and unanimous. When three persons express an absolutely identical judgment on a subject or an object, one may be certain that this judgment has been suggested to them, that it is repeated and admitted without control. If it were personal to each of those who express it, it would at least show shades of difference."

Returning to the consideration of calumny, let us not forget that there are certain men who experience a veritable joy when they succeed in diminishing the moral value of someone who is their superior.

Calumny not only spreads rapidly, but it has a vigorous life. There exist at the present day nations still stained by the calumnies cast upon them in the Middle Ages. For calumny does not only affect individuals; it spares neither groups of men nor nations.

There are two points to be noted.

(1) The source of a collective calumny—the calumny which affects a group of men or a nation—is very easy to discover, but it is a difficult task to find out the source of an individual calumny. How can one know when and where a verbal calumny was first cast upon a given person? The victim is very often the last to suspect the injury, and he is utterly unable to defend himself from it. One cannot say

too much about the suffering of a man of keen emotions who feels that the slur of a calumny has fallen upon him. In closely observing patients suffering from the delusion of persecution (*persécutés-persécutés*), one can prove without difficulty that in many cases the point of departure of their idea of persecution was the effect of a calumny, of which they were conscious without being able to prove their suspicions.

(2) An individual calumny has sometimes an accidental character ; it may be, for example, the product of the great haste in which we live, whilst the collective calumny has always a character clearly determined and utilitarian.

Calumny ought to be considered as a symptom of certain varieties of moral psychopathy, associated with many perversions of instincts and appetites. In all cases it is a morbid phenomenon which denotes a trouble of the consciousness or a trouble of the intelligence, and in the collective domain a trouble of social vitality.

As to those who lend a complacent ear to calumnies, it is necessary to attribute to them the same moral and intellectual poverty that we attribute to those who themselves forge the malicious stories.

One agrees with the writer when he says that the habit of back-biting is found among the mentally unstable. No one will deny that. But no one will deny either that the habit makes its appearance quite as frequently among the sane. It is found in all classes and among all peoples, with the possible exception of children and uncivilised races, and there are few men or women who at some time or other have not been the victims of false aspersions.

"Be thou as chaste as ice, as pure as snow,
Thou shalt not escape calumny."

J. BARFIELD ADAMS.

Anarchism in the Eighteenth Century [*L'Anarchisme au Dix-huitième Siècle*]. (*Revue Philosophique*, August and September, 1916.) L. Proal.

These articles are extremely interesting. The writer from his judicial position has had exceptional opportunities of studying the anarchist at first hand, and in elaborating his argument he has drawn freely upon his extensive acquaintance with French literature.

Anarchy, he says, was not born yesterday, it did not burst out suddenly ; there is no such thing as spontaneous anarchy. Everything has a cause, and the causes of anarchy are many. They are political and economic, but they are also literary and philosophical. Anarchy is not only the offspring of *l'Internationale* and *la Commune* ; it is the result of a long work of destruction which has taken place in the minds of men. It commenced by making war on religious beliefs, while wishing to preserve deism and the doctrine of the spirituality of the soul. Then it combated deism and spiritualism as simple theological dogmas, wishing only to keep morality natural and independent. Soon the obligations and sanctions of morality were despised, and duty was replaced by individual right, and by the worship of I, myself. From negation to negation one arrives at moral nihilism, and then one passes to political nihilism.

The *Assemblée Constituante* made a very complete enumeration of the rights of man. It proclaimed the sovereignty of the people, individual liberty, equality before the law, equality of taxation, liberty of conscience, and of speaking and of writing. The Jacobins found these insufficient, and they claimed and exercised the right of regicide and of insurrection. Then came the Fouriéristes and others who demanded the right of free love and adultery. The Socialists of 1848 completed the list by adding the right to work and to public assistance. Anarchy of to-day is a negation of all duties to society and the family, and a claiming of all rights. It has even added others to the above list, claiming the right to idleness, theft, assassination, abortion, and *sabotage*.

The right to abortion is advocated in an article which appeared in the number of *La Guerre Sociale* for December 28th, 1910. In this article the journalist complains of the prosecution of those accused of abortion, and reproaches the doctors for lending their aid to justice, when the most part of them practise abortion themselves. "There is not a doctor," the anarchist writer says, "who does not practise it occasionally, unless he be tainted by cowardice or religious prejudices." Abortion is only dangerous, he adds, because it is practised by unskilful hands; "suppress the article of the penal code which forbids it to doctors and midwives under the penalty of hard labour, and it will no longer present more danger than the extraction of a tooth. Do you find it dangerous even when practised by specialists? Then be logical, and cease to prosecute the neo-malthusians who teach the practical means of avoiding an undesired pregnancy."

Statesmen and historians have spread abroad the idea that progress can only be accomplished by force, and the masses of workmen imagine consequently that a new revolution is the best means of bettering their conditions. Some writers have made history, which ought to be for the people a school of morality and justice, a school of immorality and injustice, of violence and anarchy. Some historians have excused the revolutionary crimes, and have favoured their imitation. Believing only in force, and admitting only the right to happiness, the anarchists expect the triumph of their ideas only from a violent revolution. Like the terrorists of '93 and the apologists of revolutionary crimes, they think that the progress of humanity cannot be accomplished by peaceful evolution, and that a violent revolution is necessary and legitimate. "All that favours the triumph of revolution is legitimate," said Bakounine, "all that hinders it is immoral and criminal." The word "revolution" is a magic word which inflames the imagination of the anarchists. Caserio stabbed President Carnot with the cry of "*Vive la révolution!*"

Is there not also the spirit of anarchy in a great number of the romantic writers who glorify passion and the revolt against society? The right of free love and adultery is claimed in their novels as well as in the *brochures* of the anarchists. Extracts from the writings of George Sand are cited in an anarchist pamphlet, entitled *The Immorality of Marriage*.

But it is especially in the eighteenth century that one must look for the philosophical origins of anarchy. Tocqueville, writing under the

second Empire, came to the conclusion that no one any longer read the works of the philosophers of the eighteenth century. "What Frenchman," he asks, "would think to-day of writing the books of Diderot or Helvétius? Who would read them? The incomplete experience, which we have acquired during sixty years of public life, has been sufficient to disgust us with this dangerous literature." But the theorists of anarchy and the militant anarchists have not ceased to read the philosophers of the eighteenth century, and to be inspired by them. In the prosecution of Babeuf and his accomplices, who were true anarchists, one of them, Germain, said: "By the reading of Mably, of Rousseau, and of Diderot, I sharpened my courage against the oppressors of humanity." And he sharpened his knife also.

To-day in their books, pamphlets, and newspapers, the theorists of anarchy invoke without ceasing the authority of Diderot, Helvétius, Rousseau, Volney, and Condorcet. It is from the writings of these authorities that they draw their arguments for attacking social institutions; they turn against contemporary society the violent criticisms which were addressed to the society of the *Ancien Régime*. From the writings of the eighteenth century they sort out the good and the evil, leaving the good, and choosing the evil. They take care not to borrow from Rousseau his moral and religious beliefs, his admiration for the gospel, from Montesquieu his spirit of wisdom and of moderation, from Voltaire, Diderot, Helvétius, and Condorcet their respect for civilisation, for property, and for the family. But they borrow from Rousseau the hate for the great and the rich, the hate of all social inequalities, from Voltaire, Diderot, and Helvétius the hate of Christianity and the priests, from Mably, Condorcet, Volney, and Diderot the dream of an ideal society, where all men would enjoy a happiness without bounds in following the laws of Nature.

Anarchy is not only an unchaining of anti-social passions; it is also an overflowing of sophisms. Anti-social passions do not suffice to make the anarchist; they are accompanied by false reasonings, intellectual insanities, chimerical dreams, which have tainted the moral sense, and lighted up revolt. When the magistrates examine a man accused of anarchy, it is very rare for them not to find in his answers reminiscences of revolutionary readings, and even entire phrases borrowed from the works of the philosophers of the eighteenth century.

"Having had occasion," says the writer of these articles, "in my magisterial career to examine and judge a certain number of anarchists, I have been struck by their enthusiasm for the philosophers of the eighteenth century, whom they consider as their masters. I can show how such and such a prisoner has been led to crime by reading such and such a philosopher. Revolutionary sophisms slip easily from well-made minds, from well-balanced brains, but they penetrate easily into the minds of degenerates and half-fools, who are already drawn by their morbid temperaments towards false ideas and a revolt against society."

The philosophers make the laws responsible for all, for ignorance, misery, and crime. "What is the crime," asks Condorcet, "of which one cannot show the origin, the first cause, in legislation, in institutions?" Helvétius is persuaded that "it is only by good laws that one

can form virtuous men." Assuredly, there is much truth in these maxims. The tax on salt, for example, was the cause of smuggling. In the eighteenth century the edicts and other fiscal and revenue laws depraved men, and the philosophers were right in saying so. The *cahiers* of the *États Généraux* tell the same tale; in those of Nancy, in particular, the people complain justly that the excess of penalties has altered the character of the population.

But the philosophers have not only criticised the fiscal, revenue, feudal, civil, and criminal laws which oppressed civil and religious liberty, but they also professed revolutionary doctrines, in which the anarchists of to-day search for incitements and justifications. Rousseau writes: "It is clear that it is necessary to put to the account of established property, and consequently to that of society, the assassinations, poisonings, highway robberies, and even the punishments of these crimes." "I believe," says Diderot, "that no one will deny that where no property exists, there will be none of these pernicious consequences."

In making public happiness and morality depend only on good laws, and misery and crime on bad laws, the philosophers have weakened the sentiment of personal responsibility, and have excited sentiments of revolt against society. "Society," says Holbach in his *Système de la Nature*, "is a cruel stepmother for the people, who revenge themselves by theft and assassinations." These anathemas are repeated by the anarchists, who call themselves the victims of society. "I have even heard workmen," says the writer of these articles, "reproach society for dividing riches unequally, because they could not live according to their desires."

"Society," said the anarchist Léauthier at the *Cour d'Assises*, "has the duty of assuring me of my existence. As it does not do so, it is culpable towards me, and I have determined to revenge myself by striking the first *bourgeois* whom I meet."

The president of the *Assises* having said to another anarchist prisoner: "You assassinate in order to satisfy your passions; what do you think society may expect from a man who manifests such sentiments?" "It is I," replied the prisoner, "who expect something from society; it ought to support me, and it is not extraordinary that one employs every means for being happy, when society abandons the citizens."

One would hardly believe to what an extent contemporary anarchists are impregnated with the ideas of Diderot. It is not, however, the learned precursor of Lamarck and Darwin whom they wish to glorify, but the revolutionary, who set up the theory of anarchy before Proudhon, and even employed the word for the first time. "And this anarchy of Calabria pleases you?" he says. "I appeal to it from experience, and I wager that their barbarism is less vicious than our urbanity."

Diderot is one of the favourite authors of the anarchists. In Paris, some years ago, they wished to make a manifestation at the tomb of Ravachol, and when they were prevented from doing so, they compensated themselves by making a demonstration at the foot of the statue of Diderot. The anarchist, Vaillant, who threw a bomb in

the *Chambre des Députés*, invoked the authority of Diderot in his defence.

The anarchist doctrine is connected directly with the writings of the sensual philosophers of the eighteenth century. Helvétius derived the idea of right from the desire of happiness, Holbach from utility, Destutt de Tracy from need, Volney from the instinct of conservation. Caserio, the assassin of President Carnot, asked for *Les Ruïnes* and *La Loi Naturelle* of Volney to read in his prison. Étievant, another anarchist, sentenced by the *Cour d'Assises* of Versailles, cited in his defence *La Loi Naturelle* of Volney, and the writings of Rousseau.

Anarchists are enthusiastic materialists and atheists. In addressing himself to the jury, Vaillant told them that they were only atoms lost in matter, that human history is only a perpetual play of cosmic forces for ever renewing and transforming themselves. Emile Henry made confession of materialistic and atheistic faith before *La Cour de la Seine*. "We are materialists and atheists," said Bakounine, "and we glory in it."

As religion is a conservative force which teaches obedience to laws and authorities, the anarchists wish to destroy it. Proudhon, whom Kropotkine calls "the immortal father of anarchy," had already proposed to suppress Christianity. "The Revolution does not make covenants with the Divinity," he said. "*L'ennemi est là.*"

The hostility of Proudhon against Christianity did not arise from the same causes as those of other socialists and anarchists, Fourier and Saint-Simon for example. Fourier reproached Christianity for being the enemy of voluptuousness. Saint-Simon was indignant that Christian morality should teach exclusive love, a union for ever indissoluble. Proudhon, on the contrary, has written some beautiful pages against divorce and free union. He believed in the doctrine of the family, and he could not listen with patience to George Sand's theories of free love.

It is from the writings of Helvétius, Holbach, Diderot, and Voltaire, that the anarchists have borrowed the idea that religion was invented by the priests, and that it is utilised by governments to teach obedience to the people. Caserio speaks of religion with contempt, seeing in it only an instrument of domination. In his pamphlet, *La Peste Religieuse*, the anarchist, Most, considers priests as the gendarmes of despotism, and he reproaches them with protecting the strong box of the *bourgeois* by making the claims of the people sleep by preaching hope in a better world, and confidence in Providence.

Together with the hate of religion and priests, and the hate of laws and governments, the anarchists draw the hate of wealth and society from the writings of Helvétius, Diderot, Mably, and Rousseau. "The nation," says Helvétius, "is divided between oppressors and oppressed, between robbers and those who are robbed." Brissot, who played an important part during the Revolution, wrote in his *Recherches Philosophiques sur la Propriété et sur le Vol*: "The robber is the rich man. Exclusive property is a theft from Nature. It breaks the equilibrium which Nature has put in all its works. Equality being banished, one sees the odious distinctions of rich and poor appear."

During the Revolution, Babeuf thought that the moment had come

for those who had been robbed to make the robbers, that is to say, the rich, restore the stolen goods. Thus, by a chain of sophisms, which reaches back to the eighteenth century, the contemporary theorists of anarchy and their disciples have arrived at excusing theft by calling it restitution. At the *Cour d'Assises* the writer has heard an anarchist, accused of theft, excuse himself by saying: "I am not a robber, I am a *restitutionnaire*."

The writer then proceeds to a close examination of the works of the eighteenth century philosophers, particularly of those of Rousseau and Voltaire, pointing out their errors, and the unfortunate influence which these errors have had on the development of modern anarchist theories.

In concluding his second and last article, the writer says: "The only great philosopher of the eighteenth century who has had a solely beneficial influence, in spite of some errors of detail, is Montesquieu, because he has always examined political, religious, and social questions without passion, without party spirit, with a penetrating comprehension of all the aspects of these very complex problems, drawing his principles from experience and from the nature of things, proposing the reformation of abuses with prudence, endeavouring to make everyone love his duties and his country. He left to others the declamations and diatribes against laws, governments, and social institutions. So I have never heard a theoretical anarchist or the author of an anarchist crime invoke the authority of Montesquieu and seek for an explanation of his theory or of his crime in the writings of that philosopher."

J. BARFIELD ADAMS.

Spanish Ethics: Problems of Contemporary Morals [Ética Española, problemas de Moral contemporánea]. André, Eloy Luis.

This book is reviewed by J. Pérès in the *Revue Philosophique*, September, 1916.

In this work the author presents us with a not very flattering picture of the present moral state of Spain, and advocates certain methods for the regeneration of the country. It is with a sententious and highly-coloured *verve*, which reminds one of the style of Seneca—a style always to be found among the moralists of the Peninsula—that the author tells his rosary of the present evils of Spanish social life, where theological virtues are travestied by the dogmatism of ignorance, by parasitism and ambition. The ascetic sobriety—a veritable marasmus—which characterises the people, is the child of misery and discouraging inequalities, and proceeds in great part from an endemic laziness, tinctured with ignorance and pride, besetting sins of the Spaniards. The natural riches of the country are exploited by cosmopolitan finance, the intellectual life rests on a borrowed culture, the whole constituting "*une civilisation achetée toute faite*."

The author attributes some of these conditions to the geographical situation of the country on the borders of two civilisations and two continents, turn by turn invader and invaded. Hence the dualism of the dominant castes and of the masses translates itself into two orders of tendencies—sometimes separated and sometimes mixed—in the Spanish

character, historic optimism joined to a pessimist contempt for present realities. The past imperialism of the nation is condensed in the individual into an individualism prompt to revolt, but held in check by an excess of authority, and on which the eccentric geographical position is not without its influence, as has happened in the case of English individualism, otherwise very different. The contemplative disposition of mind, indifferent to the aspects of Nature, which characterises the peoples of the Peninsula, turns among some towards things of the other world, among others to the uncertain gains of gambling and the lottery.

This individualism, to a certain extent savage, remains, according to the author, the most indisputable characteristic of the race, of which the *chef-d'œuvre* of Cervantes has synthetised the eternal motives in the greedy pragmatism of Sancho and the ascetic idealism of Quixote, "the one taking something from all, the other imposing on all his manner of living."

The author sees in this state of barbarism, in this national laziness, a reserve of latent energies. How are these latent energies to be aroused? Not by Europeanisation, not by Africanisation, neither by French democratisation, nor by German aristocratisation. The task will be to humanise the race by returning to the land. Culture, in the literal sense of the word, implies a love for the food-giving territory made fertile by man. The rich soil until now is of more value than the man who has not known how to make the best of it. But the national spirit has also its latent wealth. Here, also, things must be searched for at the bottom. It is to the old autochthonous foundation of the race, covered by Roman, Visigoth, Germanic, and Arab layers, that the appeal must be made. Where is this autochthon to be found? Without doubt in the unchangeable type of the labourer, the servant of the land. In him is the possible element of renovation, when he is no longer weakened by privations. This element may also be found in the children, for they are nearer to Nature; in them atavisms are more powerful, and they are less under the sway of exotic influences. Here the idea of regeneration by education appears. The author seems to think that even history, on condition that it is not only a museum of dead biography, but a storehouse of latent life, might be used as a means of teaching Spain to recognise the better traits of her true personality.

But the regeneration of the country does not only signify the passing from a warlike and ecclesiastic *régime* to an industrial *régime*. The idea is combined in the thought of the author with that of a return to Nature, and even a return to the origins of things, that being understood in the sense of a preponderance of young elements.

Spain must elaborate, according to her hedonism and idealism, a doctrine of humanity which will aid her in fulfilling her destiny. For such an evolution even her eccentric geographical position is favourable—a position "at the point of convergence of the mental and economic currents which connect Europe, Africa, and the New World."

J. BARFIELD ADAMS.

A Man, Supposed to be Possessed of an Evil Eye, Murdered to Free a Family from his Malignant Influence [Il "jettatore" massacrato per liberare la famiglia]. (Archivio di Antropologia Criminale, Psichiatria e Medicina Legale, February, 1916).

Superstition dies hard. The notion that an individual can be endowed with the power of injuring another merely by looking at him still lingers in the mental lumber-rooms of many people. I have even detected the idea in the ill-natured gossip—an excellent pabulum for the cultivation of such germs—of persons who had received more than a smattering of education. When fear, with its well known disturbing influence on the logical processes of the mind, has so taken possession of men and women, who believe in such a superstition, that they are the victims of terrifying hallucinations, one cannot be surprised at a tragic ending to the drama in which they play their parts. This is illustrated by the facts which were revealed in a criminal trial in Italy last year.

Toso Giuseppe, æt. 38, a day labourer, had been allowed by the farmer to sleep in the hayloft of a dairy farm in Magliano-Alfieri for about two years. One afternoon, Signora Riva, the farmer's wife, uneasy at not seeing Toso at his usual work, went to search for him in the hayloft, access to which was obtained from the courtyard by means of a ladder. She found the labourer dead, lying stretched out in a normal position in the place where he usually slept. A rapid examination of the body made by Signora Riva and some persons who had come in answer to her cries of alarm, showed that the straw around was soaked with blood which had flowed from wounds inflicted by some sharp instrument. At the autopsy it was found that there were six wounds in the region of the left clavicle and on both sides of the neck, the deepest of which had severed the jugular vein, the carotid, and the vagus, and had caused the hæmorrhage which was the immediate and only cause of death.

The next day the *carabinieri* arrested Coscia Virginio di Battista, on suspicion of having committed the murder. Coscia was a peasant, æt. 43, born at Castagnito Alba, and living at Magliano-Alfieri. He was married, and was the father of six children, and for some time he had gone about lamenting the malignant and occult influence which Toso exercised on the health and interests of his family. For this reason he had conceived a strong resentment against Toso, which he had given vent to with great lamentations before the mayor and the rector of the place.

Coscia is fact confessed that he had killed Toso in order to liberate his wife and family from the malignant arts of the "*jettatore*."

"I was convinced," declared Coscia in his examination, "and I am so still, that Toso exercised a malignant influence on my family ever since the day when he met and spoke to my daughter, Maria. We had no longer any peace in the house. All, except my eldest son, Battista, complained of the frightful visions with which they were terrified."

The examining authorities insisted on the probability of an accomplice, particularly when they observed that at merely hearing the name of Toso, Coscia's wife gave signs of strange hallucinations.

"The crime was committed by me alone," insisted Coscia. "No one lent me aid or assistance. I was induced by no one to kill the wicked man. My wife, although she has often lamented with me the baneful influence which Toso exercised upon our family, which since last Easter has lived in a frightful condition, never suggested that I should injure him. On the contrary, if she had known that I could allow myself to commit any acts of violence, she would have dissuaded me."

However, Coscia sought to lessen his own responsibility by asserting that he had killed Toso in self-defence.

"I had gone to the hayloft," he said, "to conjure him to have pity on us, and to spare us from his malignant influence. He advanced on me, and seized me by the neck. Then, with a reaping-hook, with which I was armed, I defended myself. I wounded him in order to set myself free. Afterwards, ignorant of the consequences of the blow, I descended from the hayloft, returned to my house, and without washing the reaping-hook I hung it up on the usual nail."

But this version of the affair—the aggression on the part of Toso, and the defence on the part of Coscia—appeared unlikely when one considered that the body lay in a position of repose in the accustomed sleeping-place, and that the nature of the wounds, which seemed to have been produced by firm and decided blows, indicated a determined resolution.

To complete the moral picture of Coscia—a man who had always conducted himself well, and had never before been in trouble with the police—and that of his wife, who had a preponderating influence over the diseased imagination of her husband, it will not be useless to observe that they had both gone with their daughter to the Rector of Canale to obtain a blessing to conjure away the malignant influence of Toso. Also, when once a sensible priest refused to reinforce Coscia's superstition by a new benediction, the latter went to complain angrily to the Bishop of Alba, and begged him to recall the reluctant ecclesiastic to his duty.

As to Toso, he was generally described as an amiable man, who conducted himself quietly, and was absolutely averse to malignant practices, of which, besides, he would never have been able to see the object, and which existed only in the fancy of ignorant people, who were obsessed by an unjustifiable terror.

"Once," said Coscia, "he touched the arm of one of my children, and immediately the arm became diseased. The doctors could not understand the case. I carried the child to the seventh son of a seventh son, who said that it was a disease caused by a sorcerer. Another time Toso frightened another of my children, who could not raise its arm when it returned to the house. I took it to be blessed by a priest, and this time the malignant influence ceased. I went to the Mayor and to other persons in authority, but they could do nothing to reduce this man to impotence, and my house became a perfect hell."

"Why," asked the President, "did Toso persecute you?"

"I don't know, and I never knew," replied Coscia. "But of six children, he looked on four of them and ruined them."

And Coscia continued to narrate how it was the holy Sabbath when

Toso touched the arm of the child Maria, and that then the 'jettatura' entered into her.

"All my other children were in a state of terror," he continued. "They always saw before them the figure of Toso in the act of catching hold of them. On the 3rd of January last, I found my wife and children at home all complaining of the terrifying visions of Toso—visions which they could not drive away, and then I decided to put a stop with the reaping-hook to this malignant influence. In the dead of night I went to the hayloft, where the 'jettatore' was sleeping, and I killed him."

"Is it true what you said in your previous evidence," asked the President, "that Toso had caught hold of you, and wished to throw you down from the hayloft?"

"I don't know. I had lost my head," replied the prisoner, without any longer insisting on the hypothesis of provocation.

But he insisted energetically in his declaration of having committed the crime alone, without the aid of his wife or of anyone else, and without any light. The latter circumstance, however, experiment clearly showed to have been impossible, because Coscia could not have found his way in the dark hayloft to the corner where his victim was sleeping, neither could he have avoided a trap-door, which he did not know was open.

Several witnesses deposed that Coscia was in the habit of uttering words of vague menace against someone, but that he had never been known to injure even the hair of anyone.

A grave digger deposed that having blamed Toso one day for digging a grave badly, the 'jettatore' told him to be careful, because he would meet with a misfortune, and when the grave-digger returned home, he found his daughter almost blind.

"Now that the sorcerer is dead, all will feel themselves safe," concluded the grave-digger.

The wife of Coscia was convinced that if Toso had not died, everything would have gone to ruin under his influence; now, on the other hand, everything went well, nothing was broken, and nobody was ill.

The trial closed with a characteristic declaration by the prisoner.

"What do you say about it?" asked the President. "Does everything go better in your house now?"

"Yes, I prefer my life now to what it was last year," replied Coscia. And he went away in the custody of the *carabinieri*.

J. BARFIELD ADAMS.

6. Historical.

Philosophical Culture in Theocratic Spain. [*La Cultura Filosófica en la España Teocrática*]. (*Revista de Filosofía*, July, 1916.) Dr. José Ingenieros.

The expulsion of the Moors has been the cause commonly assigned for the mental decadence of Spain during the succeeding centuries. Possibly too much importance has been attached to this event. For many years before their expulsion from the Peninsula the Moors themselves were in a state of decadence. Politically they were in a state of

anarchy. The brave days of Abd-er-Rahman III and those of Almanzor were but memories of the past. The golden age of the Schools of Cordova had closed. The architects, who had built unrivalled mosques and palaces, and the gardeners, who had laid out paradise and pleasure, had passed away, and their cunning had died with them. And what was more, the West could no longer borrow from the East the oil to feed the dying lamp of knowledge. Learning was expiring in Egypt, in Damascus, and in Baghdad. Persia produced no new Abu Ali Ibn Sina. A veritable blight had fallen upon Islam.

Still, the Moors were not utterly exhausted, and there were yet possibilities in a nation which had produced thinkers like Averroes and Maimónides, surgeons like Albucasis and Avenzoar, and builders like those who reared Es-Zahra and the Alhambra. The wholesale expulsion of such a people must have impoverished the country.

With this modified opinion Dr. Ingenieros appears to agree. The violent expulsion of the Arab and Jewish populations, he says, had a good deal to do with the material and cultural ruin of Spain. But he points out other and possibly greater causes. Among the minor sinister influences were the hegemony of Castile, with the consequent suppression of the healthy rivalry between the different peoples of the Peninsula—the ethnology of Spain is much more complicated than is generally supposed; the decay of the ancient universities, though here the expulsion of the Arabs and Jews played its part, for the population of these university cities had been largely Arab and Jew; the “invention” of Madrid, a city without memories or traditions. But the cause of the mental decadence of Spain, which in Dr. Ingenieros’ opinion eclipsed all others, was the restriction of philosophical culture to theology and its handmaiden, Scholasticism. There is no exaggeration, he says, in the words of Emilio Castelar, that “Spain committed suicide to save Catholicism.” Dr. Ingenieros does not touch upon the point, but there would seem to be something in the air or soil of Spain which is favourable to the growth of orthodoxy. In the palmy days of the Caliphate of Cordova the Andalusians were the most orthodox of Mohammedans, as in later years the Spaniards were the most orthodox of Catholics.

It is a long story that the learned author of this article has to tell of the struggles which went on for three centuries between theology, always victorious, and humanistic science, always suppressed. At first free thought or rather free enquiry, the child of the Renaissance, which flourished in the rest of Europe, though not welcomed, was not absolutely refused an entrance into Spain, for Charles V possessed a more liberal mind than his successors. The doctrines of Erasmus filtered into the Peninsula, and it looked for the moment as though brighter days were dawning for philosophy. But with the death of the Emperor, and the accession of his gloomy-minded son, Philip II, a reaction commenced, and a darkness like that of the Middle Ages closed over the country. But, if I may be pardoned for slightly altering the metaphor, this midnight sky was not wanting in stars of every magnitude. Dr. Ingenieros’ paper is laden with names of writers, some of whom would have been no disgrace to the most intellectual nation. Two of these names stand out in bold relief; they are those

of Francisco Suárez and Luis Vives, the protagonists of the Spanish struggle between Scholasticism and Free Enquiry.

Francisco Suárez (1548--1617) was born at Granada, and studied at Salamanca. From the time that he entered the Society of the Jesuits, he cultivated theology and philosophy. He taught in Segovia, Salamanca, and other centres of Spanish learning, and also in Rome. He died at Lisbon. He consecrated his whole life to study, and was a man of immense erudition, being familiar with the writings of the Greek, Alexandrian, and Arab philosophers, and particularly with those of the great doctors of Scholasticism. He was the greatest theologian of the Jesuit Order. But it is not only as a theologian that one must regard Suárez. He was also a philosopher. "There is no room for doubting," says Dr. Ingenieros, "the systematic value of his philosophical work, or the considerable influence exercised by it on Catholic metaphysics." Heerebord calls him the "Pope of metaphysicians." His great work, *Disputationes Metaphysicæ*, has been regarded as the breviary of Tomist Scholasticism during three centuries.

Luis Vives (1491--1540) represents the antithesis of Suárez in Spanish philosophical culture during the sixteenth century. Vives, who was descended from a French family long settled in Catalonia, was born at Valencia. At first he studied in his native city, but under such second-rate masters that he determined to seek better instructors in Europe, and he hastened to put this determination into execution after having been present at certain *Autos de Fe* where women were burnt alive. In 1509 he arrived in Paris, where he studied for three years. His studies at the great French university being finished, he did not venture to return to Spain, where the Inquisition was busy suppressing all original and scientific thought. He proceeded to Bruges. In 1516 he made the acquaintance of Erasmus. The friendship of the two men grew apace, and "the master of Rotterdam could never have met with a better disciple." In 1519 Luis Vives was nominated to a professorship in a college attached to the University of Louvain, then much frequented by illustrious followers of Erasmus, and from that time he identified himself definitely with the Humanistic movement. In 1523 he taught in Oxford. Later he returned to Bruges, where he died.

The Valencian doctor shares with Erasmus the glory of the humanistic movement in philosophy. Of the many books which he wrote, some of which figured in the Index of the Holy Office soon after they were published, *De Animâ et Vitâ* is the most interesting. It was a profound, original, and scientific work, and exercised a well-deserved influence on human thought during the sixteenth and seventeenth centuries. In place of studying like the schoolmen the essence of the soul, Vives applied himself to studying the manifestations of psychical life from a point of view purely empiric and functional. He considered the manifestations of the soul as a result of organic life, and the superior psychical functions appeared to him to depend on inferior biological functions. He assigned to the cerebrum the function of knowing, although at his time one could not have had a very clear idea of the structure and physiology of the brain. Lange considers Luis Vives to have been the precursor of modern empiric psychologists. *De Animâ*

et Vitâ preserves even in our day an actual value, though it may be purely historic.

One of the most singular and atypical figures of Spanish Protestantism was Miguel Servet (Servetus). He was born at Villaneuve, in Aragon, in 1509, and died at Geneva in 1553, being burnt alive by the orders of Calvin, who thus imitated the Holy Office in the name of the new Protestant fanaticism, and proved that persecution and bigotry are not the prerogatives of any particular religious sect. Miguel Servet was learned both in medical science and in theology, which he studied at Toulouse. He shares with Harvey the honour of having discovered the circulation of the blood. No other Spanish Protestant equalled him in profundity of thought. He held that ideas are the only intermediaries between the Divinity and the perceptible world, and neo-platonic influences may be traced even in his theological writings.

The empiric psychology, which characterised the *De Animâ et Vitâ* of Luis Vives, reappeared in the work of the celebrated physician, Juan Huarte de San Juan, entitled *Examen de Ingenios para la Ciencias*. He renewed the idea of the physiological and cerebral base of the understanding. He considered temperament as the base of character, deducing from that the inequality of human genius with relation to the different kinds of intellectual culture. He examined the influences of the organism on the temperament, and those of the environment on the individual character. His conclusions have especially a practical and pedagogic value; he considered that the mental characteristics of individuals should be recognised early, in order that each should dedicate himself to the studies most conformed to his natural bent. He classified the sciences in accordance with the mental faculties which are required to cultivate them; sciences of memory, sciences of understanding, and sciences of imagination. Francis Bacon repeats this classification, and it is very probable that he was acquainted with Huarte's book, which was widely circulated. Huarte's work has been compared with *Les Caractères* of La Bruyère, but though it lacks the descriptive and worldly interest of the latter, it surpasses it in scientific fundamentals.

In 1554, the physician, Gomez Pereira, published his *Antoniana Margarita*. Among other questions he treats of the souls of men and animals: he distinguishes the sensitive from the intellectual soul, subordinating the one to the other. He denies understanding to animals, although without considering them as machines, as Descartes does. Unfortunately, in many parts of his work one cannot appreciate his opinions on account of the mistaken nomenclature which he employs.

Gradually the Spanish mental renaissance was stifled by the Inquisition. Humanistic philosophers were forced to be silent or to emigrate. Scholasticism reigned supreme in the world of intellect. "The fatal mania of thought was cured in Spain, and not a single sporadic case occurred before the middle of the eighteenth century." This does not mean that during all this time there were no illustrious geniuses and profound thinkers in the Peninsula. The earlier part of this period was the golden age of Spanish literature, which Lope de Vega, Cervantes,

and Calderón raised to the highest point of fame. But the Inquisition prevented writers from cultivating lofty didactic and speculative thought, and turned their intellectual activities to work which was purely literary. If during those long years philosophy survived in Spain it is necessary to seek it on the stage and in the novel, where one finds faithful pictures of the contemporary mind. The social condition of the people is also admirably painted in the Spanish novel with its roguish humour, which Dr. Ingenieros looks upon as the most original creation of the intellect of the Peninsula.

In the middle of the seventeenth century, mysticism found expression in the *Guia Espiritual* of Miguel de Molinos, in which is revealed a doctrine of the annihilation of the passions and of the will which resembles that of the Nirvana of the Buddhists.

Omitting that of Molinos, only three other names raise themselves above the dull mediocrity of the seventeenth century. They are those of the learned Quevedo, the prudent Saavedra Fajardo, and the cautious moralist, Gracian.

The intellectual twilight of the Peninsula was already darkening into night at the death of Carlos II. Scholasticism, growing feeble in the seventeenth century, became even more weak, if it were possible, in the eighteenth. The Catholic dictatorship stifled the thought even of the theologians themselves. Then, until the reign of Carlos III, the shadow of night grew deeper, and theocratic Spain sank into a profound sleep.

J. BARFIELD ADAMS.

The Revival of Spanish Philosophical Culture [*La Renovación de la Cultura Filosófica Española*]. (*Revista de Filosofía*, July, 1916.)
Dr. José Ingenieros.

In his second article Dr. Ingenieros takes up the story of Spanish thought from the reign of Carlos III, and carries it on to the present day.

During the latter half of the eighteenth century the influence of the French Encyclopædists made itself felt in Spain. In the reign of Carlos III a group of writers appeared, which was called the Aragonese party—the antithesis of the Castilian—some of the more conspicuous members of which were considered to be so much under the influence of French ideas that they earned for themselves the epithet of “*Afrancesados*.” Letters and science awoke. For the moment it seemed as though another golden age of literature were about to dawn. “A Vives only was wanted,” says the writer, “an Encyclopædic Vives, more modern, more Spanish than the other, who would live, teach, and write in Spain and for the Spaniards.”

Some of these writers turned to sociology, others to political economy and other sciences. Among their names are a few of more than passing interest, such as Mayans y Ciscar, the ethnologist, Masdeu, the historian, and Hervás y Panduro, the illustrious philologist.

But the commencement of the reign of Carlos IV (1788–1808) was the signal for a new decadence, and matters were quickly complicated by the loss of national liberty and the separation of the American Colonies. Further, the wall raised to prevent the penetration of

European culture was consolidated by the crisis of 1808-14, and the circumstances of the French invasion converted the patriotic cause into one which was anti-French and anti-European.

The Cortes of Cádiz (1812) had abolished the Holy Office, but the restoration of Fernando VII (1814) was also the restoration of that opprobrious tribunal. Then the Spanish Renaissance died again, and was buried by religious fanaticism. The same malignant power, which four centuries before had closed the crusades by the expulsion of Arab and Jewish civilisation, which later had opposed the Inquisition to the awaking of Humanism and Free Enquiry, came again to stop up every crevice by which the new lights of the continuators of the Encyclopædia—the ideologists—might have entered from France.

This reactionary system was prolonged, with slight oscillations, during the regency of Maria Cristina, during the reign of Isabel II, and only came to an end with the revolution of 1866 which expelled the last-named monarch.

One can easily understand that under such conditions no philosophy could flourish in the Peninsula. However, in spite of the Scholasticism and erudite traditionalism, which monopolised the seats of learning, various currents of modern thought made their appearance. Openly scientific and naturalistic in character, they looked for the moral and intellectual regeneration of Spain by means of the introduction of foreign doctrines. After 1850 these partisans of modern thought showed signs of greater activity. They undertook numerous translations of Descartes, Kant, Leibnitz, Hegel, and above all of Krause. This last-named author, who occupies a secondary rank among the philosophers of his own country and of his century, took a high position in Spain. This he owed not to the intrinsic value of his doctrines, but to the ethico-politico-pedagogic sense that they acquired in the hands of his Spanish disciples. These, apostles rather than philosophers, thought they could best accomplish the social regeneration of Spain by the diffusion of public instruction and severe ethical precepts which should bridle the abuses of political and religious power.

Gradually other manifestations of Positivist liberalism, successively represented by Comte in France, Spencer in England, Ardigò in Italy, and Ostwald in Germany made themselves felt in the Peninsula.

One of the most interesting parts of Dr. Ingenieros' paper is that which he devotes to the consideration of the revival of philosophical studies in Catalonia. During the nineteenth century and at the present day various Catalan writers have conquered and are conquering a firm position for themselves in the domain of renaissance philosophy. Positivism finds itself represented by Gener, biological pragmatism by D'Ors, biological nietzscheism by Ruix, psychological biology by Turió, and physical naturalism by Comas Solá. They may differ among themselves on many points, but all agree in considering scientific culture as the necessary foundation of philosophical speculation. This appears to be the best augury for the future development of philosophical studies in Catalonia. The traditional theological current of thought, notwithstanding the renown of the great Catalan Scholastic, Jaime Balmes, has less signification in this province than in the rest of Spain.

One of the Catalan writers mentioned above, R. Turró, of the Municipal Laboratory of Barcelona, has recently (1914) published a volume on the origins of knowledge, *Los Orígenes del Conocimiento*, in which he studies the natural formation of knowledge in accordance with the principles of biological psychology. In the course of nutritive assimilation, he says, the organism acquires a "trophic experience," which is the point of departure of "sensorial experience," the base of knowledge and of human logic. On the subject of which it treats, says Dr. Ingenieros, "there is no work in modern Spanish literature which can compare with Turró's: even in European philosophical literature his work deserves to rank with the most systematic productions on account of its rigorous and excellent method. One comprehends without difficulty that the author has commenced the study of philosophy only after a severe discipline acquired during many years spent in laboratory work, and one observes in his book the benefits of this fundamental advantage."

In the particular domain of æsthetics the works of Prof. José Jordán de Urries deserve to be mentioned. In these works he treats of experimental æsthetics, converting into a psychological science what was before only a speculative study.

The revival of science in Catalonia has nowhere produced more brilliant results than in the work of the faculty of medicine of the University of Barcelona. In connection with this school, one may mention the work of the celebrated bacteriologist, Jaime Ferrán, the labours of the hygienist, R. Rodríguez Méndez, the physiological studies of Augusto Pi Suñer, and the publications on histology and neurology of Prof. Carlos Calleja.

Mental pathology, abandoned in Spain by official education, shines in Catalonia with greater brilliancy than in any other region of the Peninsula. The admirable *Instituto Pedro Mata* of Reus immortalises the name of the true creator of Spanish mental pathology. It is directed by the eminent Prof. K. Rodríguez Méndez and the illustrious alienist, Arturo Galcerán Granés, who is the president of *La Sociedad de Psiquiatría y Neurología* of Barcelona.

After Pedro Mata there are two Catalans who are the most conspicuous representatives of the classical struggle between the old superstitious psychiatry and the new scientific psychiatry. Madness, considered as a malignant possession of the soul by mysterious, invisible influences, came little by little to be looked upon as a functional disturbance of the cerebrum, which pathological anatomy leads us to understand better and better every day. These two currents of thought were represented in the revival of Catalan culture by Pi y Molist, the admirable student of Cervantes, who analysed the beauties of Don Quixote, and by Giné y Partagás, whose learned works and lectures introduced modern scientific criticism into mental pathology. For the first, according to his beliefs, madness was a total or partial disintegration of the soul; for the second, according to his experience, mental diseases depended upon structural and chemical alterations of the cerebrum. In the last years, the laboratory and clinical experience have pronounced for Giné y Partagás, preparing thus a naturalistic conception of the functions of the mind. To-day, all psychologists take the facts of

biology as the foundation of their studies. Philosophers, who do not ignore science, affirm that biological psychology is the axis of morality, logic, and æsthetics, studies which were formerly looked upon as branches of speculative philosophy.

The key-note of Dr. Ingenieros' former paper was despair; that of this one is hope. "The last generation of the nineteenth century," he says, "witnessed the *desastre* of 1896, and the end of the colonial power of Spain. This crisis gave rise to a particular sociological literature, the orientation of which was European and antitraditional. Books appeared, different in origin and in critical value, which gave hope of a renovation of Spanish ethics, opposing the virtues of work and the dictates of the sciences to the two traditional cankers of the Spanish character—laziness and routine. These, and these only, have caused the poverty and ignorance of Spain."

It will be observed that the writer's conclusions are not very different from those of Eloy Luis André, a notice of whose work *Ética Española*, appears in this number of the Journal.

Dr. Ingenieros concludes his paper thus: "At the same time that civilisation suppressed the conditions that give rise to the roguish novel, Spanish culture separated itself from theological scholasticism and approximated itself to the natural sciences. This evolution, slow but inevitable, permits one to hope that Spain will rise to the philosophical level of the other countries of Europe; and that in time she will think again in the thought of the world, with her own strength and accents, as in the centuries of Isidoro, Averroes, Maimónides, and Lulio."

J. BARFIELD ADAMS.

Part IV.—Notes and News.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE ORDINARY QUARTERLY MEETING of the Association was held at the Medical Society's Rooms, Chandos Street, London, W., on Tuesday, November 21st, 1916, Lieut.-Colonel David G. Thomson, M.D., President, in the chair.

There were present: Sir G. H. Savage, M.D., and Drs. T. S. Adair, R. Armstrong-Jones, H. S. Aveline, D. Bower, J. Chambers, R. H. Cole, M. Craig, T. Drapes, T. Duff, J. H. Earls, C. F. Fothergill, H. E. Haynes, T. B. Hyslop, C. F. McDowall, H. J. Mackenzie, A. Miller, W. T. Nelis, H. Hayes Newington, J. G. Porter Phillips, D. F. Rambaut, J. N. Sergeant, G. E. Shuttleworth, R. P. Smith, J. G. Soutar, T. E. K. Stansfield, J. Stewart, R. C. Stewart, W. R. Watson, H. Wolseley-Lewis, and R. H. Steen (Acting Hon. General Secretary).

Present at the Council Meeting: Lieut.-Colonel D. G. Thomson, M.D. (President), in the chair, Drs. T. S. Adair, R. Armstrong-Jones, James Chambers, R. H. Cole, T. Drapes, H. J. Mackenzie, A. A. Miller, H. H. Newington, J. G. Porter Phillips, J. N. Sergeant, G. E. Shuttleworth, J. G. Soutar, T. E. K. Stansfield, T. S. Tuke, H. Wolseley-Lewis, and R. H. Steen (Acting Hon. General Secretary).

The following sent communications expressing regret at their inability to be present: Drs. G. D. McRae, C. C. Easterbrook, Bedford Pierce, John Mills, J. R. Gilmour, G. E. Peachell, P. W. MacDonald, Capt. G. W. James, R. B. Campbell, Lieut.-Col. Keay, G. N. Bartlett, Norman Lavers, James M. Rutnertord, H. Devine, and F. R. P. Taylor.

The PRESIDENT said the first business of the meeting was to deal with the

minutes of the May meeting. As these had already been published in the Journal for July, he presumed that members would be willing to take them as read.

Agreed.

The PRESIDENT said that before proceeding to the agenda paper, he wished to ask those present to pass a vote of condolence with the mother and other relatives of a distinguished member of the specialty who had just died. He alluded to Dr. Ralph Brown, M.D., Lond., B.S., etc. Members might have noted an obituary notice concerning him in the *British Medical Journal* of a week or two ago. Though young, he had had a distinguished career. He was Assistant-Physician at Bethlem and Bridewell Hospitals, and his qualities were well borne testimony to in Dr. Porter Phillips' memoir to which he had just alluded. Dr. Brown was about to obtain a commission in the R.A.M.C., but he was attacked with typhoid fever, and had the disease so severely that he succumbed to it. He was sure the deceased's relatives would appreciate a vote of condolence from the Association.

The resolution was accepted by members rising in their places.

With regard to the business arising from the previous Council meeting, he wished to say that the interests of the Association were being closely watched by the Council, particularly in regard to a Bill for the State Registration of Nurses, for which a Special Committee had been appointed.

Another matter which had been receiving the attention of the Council, through a separate Sub-Committee, was the question of the formation of over-seas branches of the Association. The senior members of the Association would remember that this subject was taken up very strongly as far back as 1891, but, for various reasons, it never materialised. It was now being taken up again. There were certain difficulties arising in the Colonies with regard to the examination of mental nurses, and other matters, which would be very much facilitated by the formation of such branches, as also would the main interests of the specialty and the Association. The Secretary, Dr. Steen, desired him to say he would be glad to know the names of any Colonial members who were likely to be interested in the matter.

The ballot was then taken for the election of OSWALD HENRY VEVERS, M.R.C.S., L.R.C.P., late Junior Assistant Medical Officer, Nottingham City Asylum, Norton Vicarage, Worcester.

The PRESIDENT nominated Dr. Haynes and Dr. Mackenzie as scrutineers.

Dr. Vevers was duly elected.

PAPER.

"Functional Gastric Disturbance in the Soldier," by Colin McDowall, M.D., Capt., R.A.M.C. (Temporary).—(See p. 76).

Dr. R. H. STEEN expressed his appreciation of the paper, and said he hoped others would follow him in a discussion upon it. He would not like Captain McDowall to go away without knowing how much his contribution was valued. He had put excellent work into it, and its preparation must have occupied a great amount of time.

What at once struck one about the cases described was the presence of hereditary predisposition. Practically all the cases had a relative who had been in an asylum or who had suffered from nervous disease. Another thought which came to him while listening to the paper was, that in reading psychopathology one was as a rule given very few actual cases, but treated to a vast amount of psychology. But with regard to the paper just read one could congratulate the author on presenting plenty of clinical material fully described.

With regard to the emotions, these exerted a very strong influence on bodily conditions. This was specially shown in the book which Cannon had written, in which he paid special attention to the influence of the emotions on the stomach, intestines, and adrenal glands. One could easily understand an emotional event causing sickness. With regard to the patients who were sick after hearing distressing news he, Dr. Steen, could understand vomiting following these emotional incidents, but he would like to ascertain the views of the author as to why the vomiting persisted for days and weeks. The author made use of the term "repressed emotions," and he would feel obliged if, in his reply, Captain McDowall would explain further what he meant by it. He presumed he meant emotions which had not had their

ordinary outlet. Therefore he supposed the theory of the treatment would be that if one talked to the patient, and discussed with him the whole situation, encouraging the telling of the whole story, this resulted in the repressed emotions having at least a partial outlet. One knew how, in ordinary life, if one had a secret trouble, or something which was causing anxiety, it was a great relief to be able to tell someone else about it. And he would like to know from Dr. McDowall exactly what he did in those cases; did he take the patient in a room by himself, or was somebody else present? Also, what was the actual method of procedure, and how did he start? Did the author first obtain the history, and then ask the patient for his confidence? He certainly would like to congratulate Dr. McDowall on his excellent results, for practically all the cases had made good recoveries.

Dr. ROBERT ARMSTRONG-JONES wished to congratulate Dr. McDowall on his paper, as he also certainly congratulated Dr. Steen on his remarks in opening the discussion; these were extremely practical and to the point.

He thought that if the author had done one thing in this contribution, he had supported William James' theory that in such cases as were narrated the emotion was not the cause of the vomiting, but the vomiting produced the emotion; and in the illustrative cases, when the vomiting ceased, the emotion appeared to have passed away. Some said we were emotional because we cried: others that we cried because we were emotional. There certainly seemed much to be said in favour of the ideas of William James.

He would be glad to hear from Captain McDowall whether his patients had any elevation of temperature at about the period of vomiting, as that was a very important factor. At a military hospital, where he attended several times a week, he had seen many cases of shell-shock. On the previous day he saw one in the person of a South African, who had a neurotic history, and was troubled with the same kind of vomiting as the cases under discussion. Associated with the vomiting was a frequent elevation of temperature, which, in one instance, went up to 101° F.

While he was a dresser at St. Bartholomew's Hospital, he remembered Sir Anthony Bowlby experimenting with some of the children there in reference to the emotion of fear. For instance, he took the temperature of a child just before an arm or a leg wound was dressed, and in nearly all of them he found the temperature was elevated one or two degrees.

What he had very frequently noticed in neurasthenics was the exercise of the imitative faculty. One of the most frequent results of neurasthenia in soldiers appeared to be a tremor of some kind—a jerky or rapid tremor; and it was fatal for their recovery to send them to wards in which were patients subject to convulsions, because they would copy them.

He would like to know how Captain McDowall acted with regard to his cases eventually. Were they fit for service again, or not? That was the question most often put to him—could such and such men be sent back again? A typical case was the following: A boy, a Canadian, had shell-shock, following which he was aphonic for three weeks. He regained his voice, and was sent back to the Front on September 30th. On October 2nd he was again suffering from shell-shock and aphonia, and he was again in a military hospital. These seemed to be feeble people to send back again, and it was desirable that some conclusions should be arrived at as to what to do with them. When once a man had had real shell-shock, he seemed to be poor material to send to the Front again. He could quote many more cases, but he would be content with expressing his appreciation of the contribution and Dr. Steen's comments.

Dr. J. NOEL SERGEANT said the question of the relation of shock to gastro-intestinal disturbance interested him very much, because he had always been susceptible to the latter. When, in his younger days, he played football, he always had to visit the lavatory before a match, and he related an incident in British Columbia in which he underwent a thrilling experience, with a similar sequel. Even addressing an assembly produced warning qualms. He could, therefore, readily believe that the more serious forms of shocks could cause gastro-intestinal disturbance, and that it might become chronic. The disturbance was probably due to the fact that instead of the patient realising that the vomiting was due to the shock, he, in many instances, attributed it to something else, such

as grave organic disease or derangement. It was quite clear for the uninformed to attribute the condition to a mysterious disease of the bowels. Cases of the kind described continued to vomit when the cause had been withdrawn because they transposed cause and effect, and regarded the vomiting as the disease: it really acted as an irritant, and was responsible for the continuance of the vomiting. To convince such patients that the vomiting was due to the shock, and that no other factors were present, was equivalent to removing the irritant, and this paper was of particular interest to him as tending to confirm that interpretation.

Dr. FOTHERGILL said he also had seen a certain number of soldiers suffering from emotional vomiting. He agreed that the proper course was to go fully into the history of the case when the patient was first seen, and let him see that an interest was being taken in his condition. But when organic disease could clearly be eliminated, patients should be stiffly treated in reference to the vomiting. If they were declared to be able to take only a milk diet, the plan was to feed straight away on full diet, and if that was vomited, have another meal of like dimensions ready to be taken in its place. By that course of procedure many of these cases were cured of their vomiting at the start. One such man had been for weeks on ordinary milk diet, varied with occasional milk-puddings, and he vomited persistently when anything else was given him. He was in the habit of talking a good deal about his condition. He, the speaker, put him upon full diet: he vomited it, and a second full meal was brought for him. He never vomited again. He had done that in a number of neurasthenic cases, and the results were remarkably good. One case, that of a lady, had been operated upon by Mr. Rowlands for gall-stones. After the operation she persistently vomited whatever was given to her. With Mr. Rowlands' consent, he started her off on full diet. This she vomited, and a similar meal was at once given to her. She never vomited after the second meal.

He had never seen a rise of temperature in these people. With regard to the condition of patients who had recovered from shell-shock, he did not think they were the kind of people to send back into the Army, because the strains and stresses incidental thereto would be almost certain to break them down again, in one way or another.

Dr. DRAPES said he thought the main point to be elicited from the paper was, that all the patients whose cases were described were of the neurotic class, and therefore their vomiting should be regarded as of the hysterical order. Civil practitioners were, of course, familiar with the occurrence of that phenomenon in persons who had never been subjected to shocks in the sense in which they were met with in military life, but whose vomiting arose from purely emotional causes when there was no organic disease present. Lately he attended a young man who had been vomiting, said he had a weak stomach, and was labouring under a strong apprehension that he was going to die. He was a robust looking young fellow, and when Dr. Drapes first saw him he was lying in bed. Asked what was the matter with him, he said he could not eat anything, and he was evidently very frightened; in fact, he burst out crying, as in a similar case referred to by Sir George Savage in his paper contributed to the annual meeting. The fact was found to be that some of the Sinn Fein rioters—of which Enniscorthy was a hot-bed—threatened to do something to him because he was a loyal man. He had a brother in the Army, and the rioters were down upon him for that reason. He told the young man that that was now over, and that he should dismiss the idea from his mind. He assured him there was nothing whatever the matter with him, and that he ought to get up and start at work again. In two or three days he was all right, and he was back at work in a week. The giving of good solid meals had a good deal of the power of suggestion in it, and would be likely to be effective when the patient was convinced that he was able to take more than a milk diet.

Dr. Armstrong-Jones had raised the question whether, in these cases, the emotion produced the vomiting, or whether the physical symptoms caused the emotion. The argument that the vomiting produced the emotion he could not feel was sound: it was much more likely to be the other way round. If, what Dr. Armstrong-Jones said was true, that the vomiting produced the emotion, the cure of the vomiting should have a like effect on the emotion. Dr. McDowall, acting on an exactly opposite principle, endeavoured to remove the morbid emotional state, and was rewarded by the cure of the vomiting. Probably some members

would have read the April number of the Journal, in which was a contribution from Dr. Salmon of Florence, in which the author urged the very interesting theory of hysteria that it was due to a hyperæsthetic condition of the cenæsthetic centres. The cases now related seemed to indicate that that impression was the right one. When a vivid impression was made on those centres, such as by the shocks of war, they became more easily susceptible, and sensitive to stimuli from other parts of the brain. This hypersensitiveness might be permanent, and cause many hysterical symptoms. This would explain the point raised by Dr. Steen as to the persistence of the vomiting after the cause had ceased to operate. The cases quite bore out Dr. Salmon's theory, and would make fine material for the psychoanalyst. Incidentally, also, they showed the value, in neurotic conditions, of a good talk.

The PRESIDENT said that before asking Captain McDowall to reply to the various remarks he would like to add his tribute to the chorus of thanks, and say how interested he was to hear the account of his cases.

There were one or two points on which he would be glad to receive a little more enlightenment, particularly that mentioned by Dr. Armstrong-Jones, as to how, when the men recovered from this condition, the medical boards were induced to discharge them as unfit for further military service. He, the President, had seen many of those cases, though probably not so many as previous speakers had. Some 12,000 sick and wounded men had passed through his hospital, yet he could count upon the fingers of one hand the cases he had had of neurasthenic or hysterical vomiting. There were, of course, many shell-shock cases, and cases of outbreaks of acute mental disturbance, but vomiting in those states he had found to be very rare. From that chair he mentioned, about six months ago, the case of a man who had vomiting of the hysterical type; whenever anything unusual occurred in the ward he vomited; the provocation needed to bring on an attack was very small. He assumed that the cases which were seen by Captain McDowall were selected cases, those which were sent to his special hospital. (Captain McDOWALL: Yes.) The treatment which the author carried out—interrogation and getting at the personal history—revealed an industry and a patience which he did not think was very common. Most were, perhaps, inclined to take such measures as Dr. Fothergill referred to, making the patient eat a good meal, and if that were vomited, having another ready to be eaten. Both claimed success for their methods. Certainly the idea expressed by Dr. Fothergill was much the simpler to carry out.

As an administrative officer, what he was chiefly interested in was how discharge was obtained from the Army for the cases when they recovered.

Captain McDOWALL, in reply, said that when the patient was talked to and his history obtained in the first instance, no one but the patient and himself was present in the room. The notes when obtained were locked up, and he never discussed the cases with anyone else. The patient was made to understand that the notes were not communicated to anyone else. That was a great help.

They were dealing with all sorts of cases, and it was a method of psycho-analysis and common sense. There was no groping for filth; if there was filth in the history of the case, it had to be removed. Some element of sex came into everybody's life, but in these cases, if it did not happen to be in obtrusive evidence, he did not look for it nor emphasise it.

Dr. Armstrong-Jones said the vomiting was the cause of the emotion, but his own idea was that the emotion was the cause of the vomiting. Recently, a little girl came running into a drawing-room while he was there—she was expecting her father back from the Front—exclaiming "Oh, mother, I am going to be sick!" There it was clearly a case of emotional disturbance causing the vomiting.

He had not found a rise of temperature in any of his cases. They were not all what would strictly be called shell-shock cases. One or two had never been exposed to shell fire.

He agreed that there was a lot of imitation about these cases, though he did not think it was intentional. These cases were sent to them after they had become more or less chronic; some had been nine or twelve months in different hospitals.

With regard to the question whether such cases were fit to return to the Front, and the further question how their discharge from the Army was secured, some 36 per cent. of those discharged during the last two months had been returned to

full duty; they were put upon home service for a time, and later were returned to the Front. Many, however, would never be able to go back to the Front. He had not previously had any war experience, but he believed there was no more troublesome person to be dealt with than the vomiting hysteric, nor a more troublesome person to keep right. The man whom he mentioned as having been discharged from the Army had been sent back to the Front, but a few days later he was returned, and went to a provincial hospital, from which he was sent to him, the speaker. He vomited four times a day for nearly two years. His case was fully discussed, and it was felt that he was only a case for discharge from the Army.

The personal question was an important one; the patients must be dealt with as individuals. As to whether some of these men would be any good if sent back, certainly they would. They kept touch with their patients when they went out. One of them recently received the D.C.M.

He was able to confirm Dr. Sergeant's personal experiences from cases he had had. A boy recently told him that he always had diarrhœa after a Rugby match. Urinating was quite a common concomitant of examinations.

Dr. Fothergill talked about the need for firmness in these cases. Of course there must be firmness of treatment: but if a man were returned to the Front simply after having got him to take solid food, he did not think there had been a cure, because the cause had not been removed.

Dr. Drapes' instance, and the way he dealt with it, showed he was carrying out psycho-analysis and common sense, and that was what he himself claimed to do.

IRISH DIVISION.

THE AUTUMN MEETING of the Irish Division was held at the Royal College of Physicians, Dublin, on Thursday, November 2nd, 1916.

The following Members were present: Major Dawson, Drs. Drapes, Rainford, Mills, J. O. C. Donelan, Irwin, H. Eustace, Rutherford, Redington, Leeper (Hon. Sec.).

Dr. Drapes having been moved to the Chair, letters of apology for unavoidable absence were read from Dr. Hetherington, Londonderry, and Dr. Nolan, Downpatrick. Letters were received from the representatives of other members stating that they were prevented from attending owing to their military duties.

Before the business of the Meeting was proceeded with, the Hon. Sec. drew the Chairman's attention to the loss which the Division has sustained since its last meeting by the deaths of Dr. Charles Fitzgerald, late President of the College of Physicians, and Dr. Kirwan, Superintendent of Ballinasloe Asylum. Resolutions of sympathy with their families were proposed by Dr. Rainford, seconded by Dr. Mills, and passed in silence, the members standing in their places, and the Hon. Sec. was directed to forward these resolutions to their respective families. Dr. H. Eustace, in the absence of his brother Dr. W. Eustace, who was prevented from attending by illness, kindly proceeded to introduce the discussion upon "The General Paralysis of the Insane, with especial Reference to Recent Modes of Treating this Disease," which stood in his brother's name on the agenda paper.

DR. EUSTACE'S INTRODUCTION OF DISCUSSION.

It is with very considerable trepidation that I venture to present a paper in accordance with the wording on the agenda, *viz.*, "The General Paralysis of the Insane, with Especial Reference to Recent Modes of Treating the Disease."

My difficulty lies in the fact that I have only nursed cases of this disease, and I have never had an opportunity to adopt any of the modern lines of treatment by the new arsenical compounds, etc.

However, I have emulated the industrious mole, and by burrowing in the works of some savants I have raised a trifling mound, which may possibly interest you, and will, I hope, produce a discussion!

In 1894 Fourier wrote on *Les Affections Parasymphilitiques*, including locomotor ataxia, dementia paralytica, certain types of epilepsy, and (Osler adds) arterio-sclerosis. Fournier held that these affections are not exclusively and necessarily caused by syphilis, and that they are not influenced by specific treatment. About

the same time Drummond boldly stated that all cases of general paralysis of the insane and aneurism were due to syphilis; and I think it is now almost universally admitted that syphilis is a necessary antecedent of general paralysis of the insane.

Certainly when we meet with a difficult case for diagnosis we become very positive when we receive a report from the laboratory to the effect that the blood of the previously dubious case gives a positive Wassermann. Moreover, Noguchi and others have demonstrated the spirochæte in brains of persons dying of general paralysis of the insane.

Perhaps the greatest difficulty still exists in determining whether a case is one of general paralysis of the insane or cerebellar tumour, as both may give a positive Wassermann, and the "titubating gait" may be simulated in general paralysis of the insane; but, of course, if the tumour is in the middle lobe and rapidly growing very distinctive, symptoms soon appear.

Here are some conundrums which have puzzled all of us, and have recently been embodied by Pierce, and I wish here to acknowledge my great indebtedness to him for many striking articles in *The Medical Annual*:

(1) How is it that careful treatment by mercury during the acute stage of syphilis does not prevent general paralysis of the insane developing later?"

The cynic will reply that the administration of Hg. has not been sufficiently prolonged in these cases, and that it should be given systematically for a year at least.

(2) "Why are ordinary tertiary symptoms of syphilis rare in general paralysis of the insane?"

We have one case at present under our care, "E. T—," who has tertiary skin lesions on his scalp and extremities, which lesions appear to improve a little under Donovan and Fowler solutions, but they never completely heal up. He is the only case of general paralysis of the insane presenting tertiary lesions of syphilis that I have seen.

Marie and Levaditi were impressed with the number of cases presenting very mild primary symptoms of syphilis who afterwards became paralytic, and also by the absence of tertiary syphilitic lesions met with in general paralysis of the insane. They proceeded to experiment on rabbits and apes. Blood from a general paralytic was injected into the scrotum of a rabbit, and in one case cutaneous lesions containing spirochætes were produced. The effects of this virus on rabbits were compared with those of Truffi's virus, and the following differences were noted:

(a) The incubation period was longer in case of the virus of general paralysis of the insane.

(b) The lesions were more superficial, scaly, and not indurated.

(c) The treponema showed a preference for the superficial layers of the skin. If, says Pierce, "it is demonstrated that the primary lesion is a specific superficial cutaneous lesion it shows that general paralysis may be transmitted by contact much more easily than ordinary syphilis, the special organism of which is said to lie in the deeper layer of the skin."

If these experiments are confirmed they will clear up many of the problems connected with general paralysis, and they naturally raise the question whether the treponema of general paralysis is biologically the same as that found in syphilis.

They suggest that general paralysis is due to a special variety of the *Treponema pallidum* possessing special affinity for the nervous system.

(3) The third conundrum is how to explain "remissions" in general paralysis. Mott points out that the multiplication of spirochætes leads to the production of toxins which cause the meningo-encephalitis, and subsequent necrosis of nervous elements.

No doubt, he says, anti-bodies are produced to which may be attributed the remarkable remissions of general paralysis.

I now approach, "oculis defectis," the recent modes of treatment of general paralysis.

When salvarsan was first exploited the wife of one of our general paralytics sent me a cutting from a Scotch newspaper headed "Universal Cure for Insanity!" A few days afterwards I received another from the same source with the heading amended to "Cure for General Paralysis" I Naturally I wrote to the distinguished

doctor, whose report had fulminated the brain-pan of the editor of the daily newspaper, asking him to kindly give me some details of the successful treatment of general paralysis by salvarsan. The following day he replied that he could only say "that some cases of general paralysis had appeared to benefit by its administration."

He had no reason to thank his editorial friend, and he might well exclaim "Stands Sauchiehall Street where it did"!

As regards treatment, Mott states that neither mercury nor antimony can pass from the blood into the cerebro-spinal fluid, and he doubts whether the introduction of salvarsan serum by lumbar puncture will be found of value.

Erlich himself suggested that the molecule of salvarsan is probably too large to pass through endothelial membranes.

Myerson reports on 7 cases treated by salvarsanised serum. In 4 cases there was some clinical improvement. In the remaining 3 there was no improvement.

Marie and Levaditi report on 12 cases of general paralysis treated intramenigeally with "salvarsanised serum." A rabbit is injected intravenously with salvarsan; an hour later the blood is withdrawn and the serum decanted. The skull of the general paralytic is trephined in the anterior temporal region on each side, and 5 c.c. of the serum introduced beneath the dura. The serum is injected slowly on both sides and directed at first forwards and afterwards towards the parietal region.

What the authors call severe reaction then set in within a few hours—fever, vomiting, partial convulsions, and katatonic states.

However, they cheerfully remark that these symptoms quickly cleared up, and decided improvement followed. In all 12 cases there was marked benefit, but they clearly state that it is too early to say if the improvement is permanent.

In the *Lancet* of January 24th, 1914, Dr. W. d'Este Emery records good results in 3 cases, 1 of general paralysis of the insane and 2 of tabes, by following the method of Swift, who injects the curative material directly into the cerebro-spinal fluid by lumbar puncture.

The curative material, in Swift's opinion, consists of anti-bodies which circulate in the blood after an injection of salvarsan. He gives an injection of that drug or neo-salvarsan, waits for an hour, bleeds the patient, allows the blood to clot, collects the serum, and injects it, after heating it to 60° C. to destroy the complement, and diluting it with normal saline solution, into the spinal canal.

Emery's criticism on this theory is that it seems quite impossible for large amounts of antibodies to be developed in so short a time.

I may be allowed to add a few words on treatment in "congestive attacks."

(1) We have found that "hexamine" or "urotropic," as it was first called, seems to help in warding off these attacks.

It is of course largely used as a genito-urinary antiseptic, and it is excreted as formaldehyde by the kidneys, but it is also found in the cerebro-spinal fluid.

Erukar (*Practitioner*, April, 1916), points out that this drug is of no use when the urine is alkaline, and as the cerebro-spinal fluid is alkaline it cannot exert any antiseptic action there, and consequently its ameliorative action in general paralysis of the insane is "wrop in mystery."

(2) The inunction of mercurial ointment with the administration of calomel sublingually appeared to save the life of a case, G. P—, under our care, who lay unconscious or semi-conscious for a week.

This man was the exception to the rule I have laid down that general paralysis of the insane cases are not benefited by antisyphilitic treatment.

(3) In another case, A. P—, a congestive attack started with an alarming hyperpyrexia, 108° F. I put him in a sitsbath and poured cold water over him. His temperature fell to 102° F. He regained consciousness, and lived for 11 years afterwards.

The late Dr. Courtenay always held that this was not a case of general paralysis of the insane at all, but he did not suggest any alternative diagnosis.

In the May number of *The Practitioner* of this year McGrigor reports on no less than 2,000 cases of ordinary syphilis, and he has had very good results by the intravenous injection of concentrated solutions of the following arsenical preparations, *viz.*, salvarsan, neosalvarsan, kharsivan and neo-kharsivan. They are all scar healers, as Erlich originally claimed for his "606."

Undoubtedly the treatment of syphilis has progressed greatly, but the treatment of general paralysis of the insane by salvarsan and neosalvarsan either intravenously or intrathecally has not met with any measure of success.

The toxicity of salvarsan is well known, and some authorities think that it is impossible on account of this toxicity to give a sufficiently large dose to kill the spirochaetes in general paralysis of the insane.

However, Mott states that in one case in which very large doses of salvarsan were administered, the spirochaetes found in the brain *post-mortem* were exceptionally numerous.

Salvarsan to be fatal to the spirochaetes must come in contact with them, and it is very doubtful if it can pass through the choroid plexus into the cerebro-spinal fluid. I fear we cannot place much reliance on the new methods attempted in the treatment of general paralysis of the insane.

Some of these methods (as described earlier in this paper) approach the heroic, but they are certainly justifiable in dealing with an otherwise inexorably fatal disease.

In conclusion, it seems to me that prophylaxis is the only hope, believing as I do that syphilis is a necessary antecedent of general paralysis of the insane. The public are now becoming painfully aware of the horrible ravages of syphilis—especially awful when transmitted to innocent women and children—and in our lifetime the public will demand compulsory notification and compulsory treatment of syphilitics.

The resulting diminution in the number of cases of syphilis will show a corresponding fall in the number of general paralysis of the insane.

The CHAIRMAN said they had all listened with great interest to the valuable communication of Dr. Eustace introducing the discussion. He felt sure that the many points raised by Dr. Eustace as regards the causation and treatment of the disease would be of great interest to all present.

A lengthy discussion then followed upon all of the points referred to in the consideration of the causation, progress, and treatment of general paralysis by salvarsan and salvarsanised serum. It was the general feeling that much disappointment was felt that the results of these modern treatments was not more satisfactory. Salvarsan did more harm than good in many cases, and at most seemed only to render the acute symptoms more easily managed, but failed to markedly influence the degenerative tendency of the disease.

Dr. REDINGTON mentioned treatment by injection in 6 cases by a drug known as "arsesiton"; of these 6 cases 4 died; in the other 2 cases no marked amelioration recurred.

Dr. RAINSFORD spoke of his experience of urotropine, which was favourable, and this drug appeared by the experience of all the Members who had used it as a valuable remedy in preventing secondary infective toxæmias thereby lessening the number of seizures, and generally improving the condition of general paralytics in the later stages of the disease.

Major DAWSON spoke of the danger of administering salvarsan in advanced cases of the disease. From the work done he was led to hope that in the future a cure might yet be found for this hitherto intractable malady. Ordinary mercurial treatment was both useless and injurious. It was remarkable how few general paralytics were found in Irish Asylums. In Limerick there had not been a case for nine years, and Dr. Drapes and others present had almost a similar experience. There seems little or no doubt that this is wholly due to the fact that in most Irish Asylums (those for City populations excepted, such as Dublin, Belfast, and Cork), the large majority of the patients belong to the agricultural class, amongst whom syphilis is a comparatively rare disease.

Others having discussed the many points of interest, the CHAIRMAN said they all owed a debt of gratitude to Dr. Eustace for introducing so ably the discussion which was so freely engaged in. It was to be hoped that with the recent endeavour of the nation to stamp out or control the spread of venereal disease a diminution by the number of cases of general paralysis would occur, and as the treatment of this disease by even the most modern methods had proved disappointing the hope for the future lay in prophylaxis.

It was decided to hold the Spring Meeting of the Division at the Richmond Asylum, by the kind invitation of Dr. J. O'C. Donelan.

Dr. J. O'C. Donelan kindly promised to read a short paper on his "Experiences of a War Hospital" at this meeting.

As the discussion at the present meeting had been so interesting and instructive, it was decided that at the next Autumn Meeting of the Division the subject of "The Alimentary System in Connection with Insanity" should be considered by the Members.

This terminated the proceedings.

SCOTTISH DIVISION.

A MEETING of the Scottish Division of the Medico-Psychological Association was held in the Royal College of Physicians, Queen Street, on Friday, November 17th, 1916.

Present: Drs. Easterbrook, Hotchkis, Carlyle Johnstone, Kerr, T. C. Mackenzie, G. M. Robertson, Ford Robertson, Maxwell Ross, and R. B. Campbell, Divisional Secretary.

Dr. G. M. Robertson occupied the chair.

Before taking up the ordinary business of the meeting the Chairman referred to the recent resignation of Dr. R. B. Mitchell from the Medical Superintendentship of the Midlothian and Peebles District Asylum, and he considered that such an event should not pass without the Division recognising the long and valuable services which Dr. Mitchell had rendered in the interests of lunacy, and at the same time expressing the hope that he would be long spared to enjoy his well-earned retirement. Dr. Carlyle Johnstone, in kindly terms of appreciation, associated himself with the Chairman's remarks. It was unanimously resolved that the Secretary be instructed to send an excerpt of the Minutes to Dr. Mitchell.

The CHAIRMAN stated that since coming to the meeting he had heard of Dr. Turnbull's serious illness, and the members present expressed their great regret to hear such grave news regarding him.

The minutes of the last divisional meeting were read and approved, and the Chairman was authorised to sign them.

Apologies were intimated from Lieut.-Col. Thomson, President of the Association, Drs. Yellowlees, Oswald, McRae, Alexander, Ferguson Watson, and Crichlow.

The Business Committee was appointed, consisting of the nominated member, and the two representative members of the Council, along with Drs. Carlyle Johnstone, Maxwell Ross, and the Divisional Secretary.

Drs. C. C. Easterbrook and L. R. Oswald were nominated by the Division for the position of representative members of Council, and Dr. R. B. Campbell was nominated for the position of Divisional Secretary.

The following two candidates after ballot were admitted to membership of the Association:

(1) Albert Victor McMaster, B.A., M.R.C.S., Eng., Senior Assistant Medical Officer, Fife and Kinross District Asylum. (Proposed by Drs. Ross, Skeen, and Campbell.)

(2) Percy Chisholm, L.R.C.P. & S. Edin., Assistant Medical Officer, Stirling District Asylum, Larbert. (Proposed by Drs. Campbell, Clarkson, and Keay.)

Dr. EASTERBROOK, in the absence of Dr. Cruickshank, read interesting communications by him on:

(1) The Relative Amounts of Grey and White Matter in some Normal and Pathological Brains.

(2) The Water Content of some Normal and Pathological Brains.

Dr. FORD ROBERTSON read a most instructive and interesting paper on "Chronic Infections by the Bacillus of Influenza, and their Importance as Causes of Nervous Disorders."

Dr. MAXWELL ROSS reported an interesting case of "Cyst in the Third Ventricle."

A vote of thanks to the Chairman for presiding concluded the business of the meeting.

No dinner was held after the meeting.

¹ All the papers read at the meeting are published in the current issue of the Journal.

NORTHERN AND MIDLAND DIVISION.

THE AUTUMN MEETING of the Northern and Midland Division was held at the kind invitation of Lieut.-Col. Vincent, at the Wharnccliffe War Hospital, Sheffield, on Thursday, October 26th, 1916. Col. Vincent presided.

The following twenty-two members were present: Drs. M. A. Archdale, J. S. Bolton, A. I. Eades, S. Edgerley, J. A. Ewan, J. W. Geddes, D. Gillespie, R. W. D. Hewson, C. L. Hopkins, W. S. Kay, H. J. Mackenzie, H. D. MacPhail, S. R. Macphail, J. M. Mathieson, G. E. Mould, P. G. Mould, B. Pierce, W. Starkey, R. C. Stewart, J. B. Tighe, W. J. N. Vincent, T. S. Adair (*Hon. Sec.*), also a number of visitors, amongst whom were many of the officers of the Hospital.

A number of apologies for non-attendance were received.

(1) The minutes of the last meeting were read and confirmed.

(2) Drs. McDowall, Pierce, and Street were unanimously elected to form the Divisional Committee for the next twelve months.

(3) Col. VINCENT then gave a short sketch of the formation of the War Hospital. He pointed out what led up to the Asylum being taken over, and described generally the numerous and varied alterations that were necessitated, such as the conversion of rooms into operating theatres and rooms for X-ray work—the lighting of single rooms by gas, etc., increased bath accommodation, and the introduction of special baths for treatment. He described how the existing Asylum staff had been incorporated into the new work, and the numbers of staff, nursing and military, that were then required to work the hospital. After some general remarks on the arrangements for feeding, etc., he mentioned that they had a school of arts and crafts for painting, wood carving, etc., that entertainments were frequently given, and that a committee of ladies looked after comforts for the soldiers.

(4) Major MATHIESON then read an interesting paper in which he brought forward a brief *résumé* of some of the work done in connection with "nervous breakdowns occurring in soldiers on active service." He considered it very difficult to state any one definite cause for these breakdowns, but he thought one writer summed it up neatly in saying they were "the nervous effects of intense emotional strain involving the risk of death." The ætiological factors might be divided into three classes—psychical, physical, and chemical—of which the first is by far the most important. In the histories he had obtained, heredity appeared to play an important rôle as a predisposing agent. The chief physical causes were hard work, trauma, and wounds. The inhalation of gases, such as C.O., formed the main chemical cause. The symptomatology was found to be "extraordinarily varied and variable." After briefly reviewing the symptoms as they affected the various systems of the body, he mentioned that one fairly common symptom noted and incidentally a most troublesome one, was persistent vomiting after and even during meals—this condition might go on for many months. The prognosis tended to be in the direction of a slow recovery hampered by the continuance of the war. The treatment adopted was that of building up the general condition by means of "graduated exercises, tonics, Faradic baths, and massage," coupled with encouragement and sympathy and a removal of the inducing causes. Isolation of the cases, he considered, was certainly contra-indicated; they tended to improve more quickly when a number of similar cases were together.

Several members spoke on the subject afterwards.

(5) In the forenoon batches of the members were shown round the wards, etc., by the medical and surgical staff, and many cases of very great interest were pointed out. Special attention should be called to the dayrooms, which had been converted into operating theatres, and the very complete manner in which they had been equipped; and to a most interesting and valuable demonstration in the X-ray department, where the methods used for locating the exact position of a bullet or other foreign body were shown, and a large number of stereoscopic plates exhibiting bullets, etc., *in situ*.

A most interesting and enjoyable meeting was brought to a close with a hearty vote of thanks to Col. Vincent for his kindness and hospitality, and to the Hospital Staff for the trouble they had taken to make the visit so pleasant and instructive.

SOUTH-EASTERN DIVISION.

THE AUTUMN MEETING of the South-Eastern Division of the Medico-Psychological Association was held at 11, Chandos Street, at 2 p.m. on Wednesday, October 4th, 1916.

The following members were present: Sir George Savage, Drs. Armstrong-Jones, Fletcher Beach, D. Bower, P. E. Campbell, I. Duff, J. H. Earls, A. H. Griffith, E. S. Pasmore, G. E. Shuttleworth, R. H. Steen, and J. Noel Sergeant (Hon. Divisional Secretary).

Dr. David Bower took the Chair.

The minutes of the last meeting were taken as read and confirmed.

The Spring Meeting was fixed for Wednesday, April 4th, 1917, at 11, Chandos Street, London, W.

Dr. Shuttleworth read his paper on "Séguin and his Works" (printed in the October number of the *Journal of Mental Science*), and an interesting discussion followed in which various members took part, including Sir George Savage and Drs. Armstrong Jones, Fletcher Beach, D. Bower, A. H. Griffith, and R. H. Steen.

A hearty vote of thanks to Dr. Shuttleworth was carried by acclamation, and the meeting then terminated.

SOUTH-WESTERN DIVISION.

ANNUAL MEETING, 1916.

THE ANNUAL MEETING of the above Division was held, by the kind permission of Dr. MacBryan, at 17, Belmont, Bath, on Friday, October 27th, 1916.

The following members were present: Drs. Aveline, Baker, Good, Norman Lavers, Nelis, Rutherford, and G. N. Bartlett, Hon. Div. Secretary.

Dr. Nelis was voted to the Chair.

Letters of apology for non-attendance were received from Dr. Macdonald and Dr. MacBryan.

The Minutes of the last Meeting were read and confirmed.

Dr. Norman Lavers (present member) and Dr. Aveline were nominated representative members of Council.

The place of the Spring Meeting (April 27th, 1917), was left in the hands of the Hon. Secretary, the hope being expressed that a visit to a war hospital in the Division could be arranged.

The members present alluded to the inclusion of a son of Dr. MacBryan in the Roll of Honour, and requested the Hon. Secretary to convey to him their deep sympathies in his bereavement.

A discussion on the recently circularised proposals as to the treatment of patients from the Services followed. The opinion of the meeting was to the effect that (1) Service patients should be defined for practical purposes as patients accepted subject to an agreement with, and paid for by, the War Pensions Statutory Committee, with the proviso that they shall be treated under the same general rules and regulations as at present apply to private patients, (2) that the rate of maintenance should be a fixed sum over and above the ordinary pauper rate in force at the time being, the amount to be settled by each asylum.

WATERFORD DISTRICT ASYLUM.

SAVAGE ATTACK ON THE MEDICAL SUPERINTENDENT.

It was with great regret that we heard of the brutal assault which was made on our colleague, Dr. Oakshott, which might have had fatal results. The whole occurrence was most mysterious, and, so far, inexplicable. Dr. Oakshott enjoys a well-deserved popularity in Waterford City and neighbourhood, and it is difficult to even conjecture what motive, except that of mere robbery, which is hardly sufficient to explain all the circumstances, could have actuated the perpetrators of the crime, neither of whom, unfortunately, has as yet been identified, and although the police are said to have strong suspicions with respect to a certain individual, there is not sufficient evidence to warrant an arrest.

Dr. Oakshott is still (end of December) feeling the effects of the outrage, which

occasioned severe bruising of various parts of his body, his hands especially being badly hurt, and had evidently been trampled on when he was on the ground, and his injuries, of course, involved a considerable amount of shock. We offer him and his family our sincere sympathy, and at the same time our congratulations that he has (as we hope) escaped any permanent disablement.

The following account is taken from the *Waterford Standard* :

"Shortly after nine o'clock on Sunday night, November 5th, Dr. J. A. Oakshott, Resident Medical Superintendent of the Waterford District Lunatic Asylum, was the victim of a dastardly attack and robbery within the grounds of the institution. The cowardly deed was committed within only about twenty yards of the male hospital and about one hundred yards from the doctor's own residence. From the information available it appears that Dr. Oakshott, after having completed his round of inspection, was leaving the male hospital on his way home when he was waylaid by two unknown men. The night was bright and moonlit, but the miscreants took advantage of the shade of a rustic arch and some shrubbery to hide their presence. The onset was so sudden and unexpected that the doctor had not time even to call for help, which was only a few yards away, before he was overpowered and almost strangled. After knocking the doctor down the assailants pulled a small canvas bag with a running string at the opening over his head, and by this means gagged and almost choked him. They then bound his legs and arms with a rope, dragged the doctor into the shrubbery, and robbed him of any valuables he had in his possession at the time. In addition to robbing the money they found in the doctor's pockets, they took the ring off his finger and also a gold presentation watch with the owner's name inscribed on it. In the struggle Dr. Oakshott lost consciousness, and his assailants made good their escape.

"About half an hour afterwards, near ten o'clock, Miss Minnie O'Gorman, daughter of Mr. Edward O'Gorman, the land steward, happened to be walking along the path where the robbery took place. Dr. Oakshott had by this time regained consciousness, and hearing some noise in the shrubbery Miss O'Gorman went across the path to investigate, and she found Dr. Oakshott lying on the ground, bound and gagged. She at once ran for Dr. Fitzgerald, the assistant resident medical officer, who despatched a messenger immediately to District Inspector Maxwell and released Dr. Oakshott from his unfortunate predicament. Dr. Oakshott, who is at present confined to bed, stated that he was unable to identify the two men who attacked him. The police are actively investigating the occurrence, but so far no arrests have been made. They found on the ground Dr. Oakshott's glasses broken, his keys, pencil case, lamp which he was carrying at the time, and his cap. All the circumstances point to the fact that the robbery was premeditated, and access to the institution grounds must have been gained at the rear of the building through the farm."

The Asylum Committee at their meeting on November 13th, passed a resolution of regret at the occurrence, and expressed their horror at, and condemnation of, the act, which the Bishop of the Diocese characterised as "an outrage on Christianity and Christian feeling, and opposed to the fundamental laws of humanity."

EXAMINATION FOR NURSING CERTIFICATE.

List of Successful Candidates.

FINAL, NOVEMBER, 1916.

- Brentwood Asylum, Essex.*—I. McFarlane, D. M. Wilson.
Maidstone Asylum.—K. Augur, E. Sutton.
Stafford Asylum.—E. Bill, J. Bradbury, M. Budd, G. Davis, F. Spencer.
West Sussex Asylum.—T. S. Jefferis, N. B. Tobin, C. E. Weaver.
Menston Asylum, Yorks.—E. Acton, A. Baguley, S. Buttler, M. Cochrane, F. Glover,* K. Gould,* R. E. Marsh, A. Nolan, M. Scanlan.
Derby Borough Asylum.—O. E. Coulson, E. Rains.
Hull City Asylum.—A. M. Turnill.
Leicester Borough Asylum.—A. Binge, A. F. Dale, M. Kennelly, E. M. Mulvaney.
Norwich City Asylum.—E. A. Holliday, H. E. Thompson.
Portsmouth Borough Asylum.—B. Couzens, C. A. Craddock, C. F. Guyatt, M. A. Guyatt, E. M. Roome.

- Sunderland Borough Asylum.*—O. M. Hingley, M. A. Yare.
Bethlem Royal Hospital.—I. Sayburn.
Camberwell House.—E. W. Waller.*
Fountain's Temporary Asylum.—C. M. Parker.
St. Andrew's Hospital.—I. P. Bullock, G. W. Panter, I. E. Parker, M. Raban,*
 E. C. Sample,* J. A. Thompson.
St. Luke's Hospital.—E. J. Green, C. McDonagh, K. S. E. Stevens.
The Retreat, York.—J. M. Dagg, J. Haslam, A. Horne, G. Huitson, J. Huitson.
Royal Asylum, Aberdeen.—A. Clark,* E. Glashan, A. Harcus, C. Jack, M. C. Pirie, M. F. Roy, M. Watson.
District Asylum, Aberdeen.—H. Johnstone, C. S. McKellar, A. Robertson, M. A. Robertson, H. G. Shepherd.
District Asylum, Edinburgh.—H. A. Murden, M. M. Tennant.
Craig House, Edinburgh.—C. Davidson, C. A. J. Kirkness, A. Mackintosh, M. Thomson.
Royal Asylum, Edinburgh.—J. Ewing, J. C. Forsyth, M. McGuire.
Gartloch Asylum.—E. E. Blyth, M. Macdonald, J. S. Scott.
Woodilee Asylum.—J. Livingstone, A. F. Smith.
Crichton Royal, Dumfries.—H. Baker, J. A. S. McLeod.
Inverness Asylum.—D. C. Macdonald.
Lanark Asylum.—A. Smith.
Melrose Asylum.—S. H. Thomason, J. Thomson.
Montrose Royal Asylum.—C. Johnson.
Perth District Asylum.—F. B. A. Cuthbert.
Smithston Poorhouse and Asylum, Glasgow.—A. Campbell,* A. B. McLaren.
Stirling District Asylum.—J. McLeod, C. Melville.*
Larbert Institution.—J. Murray.
Portrane Asylum.—J. Watkins.
Richmond Asylum, Dublin.—J. Gleeson, W. Hogan, S. Sally.
Warwick County Asylum.—B. Clarke, C. Edwards, E. Falkiner, W. Hill, S. Judge, M. Jordan, F. Lancaster, A. M. Lowe, F. Riley.

PRELIMINARY, NOVEMBER, 1916.

- Severalls Asylum, Essex.*—F. A. Bourne.
Maidstone Asylum, Kent.—E. Birch, A. Cahill, J. Cahill, B. M. Copeland, A. H. Gale, M. M. Garrahan, H. A. Griffiths, G. V. Hammond, G. A. Hooton, V. Maudsley, B. A. O'Donnell, L. G. Sutton, M. Webb, E. Williams.
Stafford Asylum.—M. Chatterly, J. Woodfin.
Cheddleton Asylum, Staffs.—B. G. Glynn, M. E. Murphy, A. W. Sunderland.
Menston Asylum, Yorks.—E. I. Butcher, F. Davies, M. Hart, H. Lockey, A. McDonald, A. Redfern, M. H. Turnill, B. Wade.
Bethlem Royal Hospital.—E. M. Pentney.
Coton Hill Asylum, Staffs.—A. Price.
The Retreat, York.—N. G. M. Brown, M. S. Carney, B. A. Drew, J. M. Hollis, A. F. Howells, L. Hutchings, D. Thurston, A. Walton, W. A. Willey, M. F. Wilmot.
St. Andrew's Hospital, Northampton.—C. Millard.
Middleton Hall.—J. Bailey, M. Chesher, S. Kirkbright, B. M. Temple.
Fenstanton.—L. M. Worsley.
Hill End Asylum, St. Albans.—M. J. Digham.
Borough Asylum, Derby.—D. J. Froggatt, A. E. Grainger, M. J. Gutteridge, P. Macken.
City Asylum, Norwich.—E. E. Collius, W. W. Money, M. E. Palgrave, F. M. Palmer, E. E. H. Seago, N. B. Tillett.
Royal Asylum, Aberdeen.—M. H. Riddoch, I. Walker, F. Watson.
Royal Asylum, Edinburgh.—M. Brown, L. Cheyne, M. Daly, M. Dower, M. W. Fleming, B. E. Fleming, M. Girvan, A. Glenn, H. Johnston, E. Mutter, I. M. Nicholson, J. M. Watt, J. Williamson.
Craig House, Edinburgh.—J. A. Flett, M. B. MacGregor, M. M. Maclean, G. McHaffie, C. F. McLoughlin, E. Morrison, E. G. Robertson.
District Asylum, Edinburgh.—R. Brownlie.

Garloch Asylum.—E. Crossan, M. B. Douley, M. Findlay, M. S. Laing, M. Macphail, K. A. McKinnon, J. Milne.

Woodilee Asylum.—M. Dodds, A. M. Foster, A. Kelly, J. Mackechnie, A. Mackintosh, A. M. Ross.

Inverness Asylum.—C. C. Galbraith, J. S. Fraser, A. Macklennan, A. McKenzie, J. C. Stickle.

Lunark District Asylum.—A. Chilles, C. M. Cruickshank, J. Inglis, S. Prentice, J. Stratton, E. White.

Larbert Institution.—C. Byden, E. A. Johnston, A. J. Lindsay, M. C. Moffat.

Melrose Asylum.—I. Clark, B. Leslie, J. H. Smith, T. Steenson.

Royal Asylum, Montrose.—E. H. McD. Baillie, J. Burke, I. J. Ferrier, M. Fullerton, M. J. Hamilton, M. S. Logan, H. M. Mason, M. MacKay, C. A. McDonald, S. Smith, M. Sutherland.

James Murray's Royal Asylum, Perth.—M. Cameron, A. Kennedy, M. Mitchell, M. Pirie, E. F. Scott.

Richmond Asylum, Dublin.—P. Hall, M. Glennon, E. McCadden, H. Nugent.

Portrane Asylum.—E. Kelly, J. Rudkins.

Warwick County Asylum.—K. Aitken, E. Canning, E. Newbrook, F. Ward.

EXAMINATION FOR NURSING CERTIFICATE, NOVEMBER, 1916.

FINAL EXAMINATION.

List of Questions.

1. A patient, whilst out with a walking party, falls and fractures his thigh. What symptoms might he exhibit, and what steps would you, as nurse in charge, take to deal with the emergency?
2. How would you render first aid to cases of—(a) Fainting. (b) Bleeding from a varicose vein in the leg. (c) Choking at dinner?
3. What are the chief symptoms of heart disease, and what special points should a nurse attend to in nursing a case of heart disease?
4. How would you deal with a case under your care in which sleeplessness was a prominent symptom?
- (5) What are the usual mental and physical causes of refusing food in insanity? Describe the methods of forcible feeding usually adopted, and suggest a suitable dietary for a patient who persistently refuses food.
6. What signs would lead you to expect that an epileptic patient was going to have a fit? What precautions would you take to prevent the risk of injury: (a) During a fit. (b) In the intervals between the attacks?
7. Describe a case of senile insanity which has been under your own observation. What are the chief risks met with in such a case?
8. To what accidents are patients suffering from general paralysis specially liable, and what precautions should be taken to prevent their occurrence?

PRELIMINARY EXAMINATION, NOVEMBER, 1916.

List of Questions.

1. What is the position of the liver? What are its functions and what are the uses of the bile in digestion?
2. Why is ventilation of a bedroom necessary? State what means you would take to ensure that it is properly carried out.
3. What precautions are taken in asylums to guard against scalds or burns? Should such an accident occur, how is the injury treated?
4. Name and give the position of the principal arteries in the body.
5. How would you render first aid to a case of fractured tibia?
6. State the functions of each of the various organs in the skin.
7. What structures go to the make-up and efficient working of a moveable joint of the body?
8. { Where does the lymph in the thoracic duct come from?
 { What are the functions of lymphatic glands?

OBITUARY.

ADAM ROBERT TURNBULL, M.B., C.M.(EDIN.).

It is with great regret that we record the death, at Colinton, on November 17th, in his 63rd year, of Dr. Adam Robert Turnbull, late Medical Superintendent of the Fife and Kinross District Asylum.

Dr. Turnbull had a conspicuously brilliant course as a student of medicine at the University of Edinburgh. He took a high place in all his classes, gained eleven medals with over 90 *per cent.* of the marks attainable, graduated, in 1875, as M.B. and C.M. with first-class honours, and was awarded the Ettles Scholarship as the most distinguished student of his year. His fellow-students showed their appreciation of his talents and character by electing him Senior President of the Royal Medical Society.

The subsequent career of a "distinguished student" is always an interesting subject for speculation on the part of his friends and contemporaries; but their prognostications are more often wrong than right. With such natural endowments as Turnbull possessed, and so many prizes won in the intellectual Campus Martius, it might have been expected that he would have found his avocation in the prosecution of scientific studies and made a name for himself in the literature of medicine. But his mind was not mainly scientific; he read little when he no longer was required to read, and he wrote less. He was a singularly level-headed man, cautious and judicial, but not bookish. Essentially practical, he delighted in all forms of bodily activity and was never idle: diligent in business and diligent in play, whatever his hands found to do he did with all his might, for he was persuaded that whatever he was doing was the one thing worth being done. Accident directed his footsteps into one of the by-ways of medical practice, and fixed the course of his life in a calling for which, as time proved, he was peculiarly fitted. It is one of the anomalies of the profession of medicine that those physicians who are entrusted with the control of the most delicate and important of all the bodily organs, and have for their cure that faculty which proclaims a man a man, must not look for any popular acclamation of their humane labours. The fame of their good works does not extend beyond the little circle of their associates; their smallest failures are visited with a prompt parochial reprehension; if they acquire a reputation, it is for eccentricity; and the best they can hope for is a sort of notoriety, helped by advertisement. It was not in Turnbull to advertise, and he never sought applause; but, in the cure and treatment of the insane, he found the proper field for the exercise of his gifts, his common sense, his happy pragmatist-philosophy, and his conscientiousness: and the practice of these contained for him its own reward.

After a period spent as Resident Physician in the Royal Infirmary, he was appointed, in 1876, Assistant Physician at the Royal Edinburgh Asylum, Morning-side, under the late Sir Thomas Clouston. Here he remained for five years, an example to everyone of industry, readiness to learn, courtesy, and goodness of heart. There never was an "Assistant" more popular than Turnbull, "little Turnbull" as he was called with a unanimous affection; he was loved by all who came in touch with him, patients and officials alike. The most exacting of patients' kinsfolk, the most critical of parish functionaries, were disarmed by his genial smile, his ready assumption of all blame, his innocent cajolery, the honesty of his desire to righten wrongs. He entered into all the affairs and interests of the establishment with an equal enthusiasm, and played his many parts on the strange and crowded stage of asylum life as if the success of the tragi-comedy depended on his efforts. Whether he was presiding over a meeting of the patients' literary and debating society, or occupying the chairman's seat at a curling supper, or acting as master of ceremonies at the weekly dances; whether he was disseminating cheerfulness and physic for the mind in his frequent visits to the wards, or bringing a case-book up to date, neglected of a less scrupulous colleague, or bowing his head, in seeming consciousness of guilt, under the righteous wrath of "the chief," and taking upon himself the sins of others; whether, with all the glee of youth and the earnestness of age, he threw or "sooped" the curling stone, or smote the cricket ball, or made good play with his racquet, he seemed always to be in his

element, and he always "played the game." Always and everywhere he found something to do, something to enjoy, some one to serve, some one to play the first fiddle while he delightedly played the second. He rejoiced in all sports and pastimes, and was good at most, but cricket was his favourite. The present scribe can see him now, in his mind's eye, as, crouching behind the stumps, in gloves and pads that always looked a size too large, he "kept" wickets as seriously as if he were keeping a frontier fort, and reduced the record of byes to zero; or, armed with a bat whose proportions almost exceeded his own, swiping ball after ball into the remotest bushes of the demesne, while a deprecatory smile approached his ears as his score surely approached the half-century.

He was so modest, so tender of the feelings of others, so absolutely devoid of "side," so respectful of all opinions, however absurd, so deferential to his manifest inferiors, that strangers sometimes doubted his sincerity, and the unrighteous sometimes took advantage of his abnegation. It only needed a more intimate acquaintance to prove the genuineness of this self-effacement, and to show that behind that apparent weakness there was a firmness and determination which, in matters of principle or where injustice was threatened to others, it was not wise to cross. Those who knew him best knew how sensitive he was and how easily wounded in spirit, but he never resented a wrong to himself; there was no animosity in his soul, and it was impossible for him to harbour malice. "The gentlest man I ever met" was the verdict of one who had been associated with him only in business. If he had an enemy, and he had not more than one, it was himself, and he was too often the victim of his own depreciation; but, excessive as it was, his modesty was as sincere as his kindness, as blameless as his geniality and the child-like joy that he took in all wholesome and innocent doings.

After five years of an active and profitable apprenticeship under the most stimulating of chiefs, Turnbull was appointed, in 1881, Superintendent of the Fife and Kinross District Asylum at Springfield, in succession to Dr. Brown. Springfield was at that time in a transition stage. With the great increase in the population of the district it was rapidly being transformed from a quiet little country asylum for 300 patients into one of the largest and busiest institutions for the insane in Scotland. Able predecessors had laid the foundations well, but they were too narrow for the great works that it was now necessary to construct. With his usual earnestness and unwearying industry, and in his usual quiet and unassuming manner, Turnbull set about the business in hand, and when, at last, he was compelled by bodily weakness to abandon his cherished post, it was to leave a hospital for sufferers in the mind second to none in the country, and renowned beyond these shores. Springfield under his care came to be regarded as the model of Scottish District Asylums, and visitors from other lands were directed thither as to the place where Scottish lunacy administration was to be seen at its best. All his energies were devoted to the betterment of the insane, all good old methods to that end he retained and strengthened, and all better new ones he consistently adopted, in spite of difficulties and discouragement. At Springfield the insane were deprived of none of those liberties and social pleasures which they could be trusted to enjoy without detriment to themselves or others; there it was not considered necessary to place a man in an asylum merely because his mental condition differed from the normal; there hospital treatment was provided for the insane sick as elsewhere for the sane; the poor "lunatic" was nursed by trained women with as much care and as much efficiency as a Royal Infirmary could supply, and asylum attendants were taught that their calling was as worthy of honour as that of any other class of nurses. Either as a begetter or as a confirmer of beneficent reforms, Turnbull's name will always be associated with the introduction of hospital methods in the treatment of mental disorders, with the training and education of asylum nurses, and with the extension of the "boarding-out" system. Of greater value and greater effect, perhaps, than any of these was his personal attitude towards his patients. He recognised that the insane were to be treated as individuals and not as types or in classes, as human beings each with his own feelings to be considered, his opinions to be respected, his separate soul, as much as that of any sane man, to be saved. His patients learned to look upon him as their friend, their counsellor, their own private physician, and in his ministering to minds diseased it may confidently be averred that this intimate relation, this personal sympathy and consideration effected as many cures as could

have been brought about by more "scientific" methods or by all the resources of the laboratory, and gave more comfort where they did not cure.

Turnbull held his appointment in Fife for thirty-four years, mostly happy years, for it was his disposition to be happy. He had his troubles and his deprivations, it is true, like other men—even Springfield was not heaven—and he met with not a few rebuffs and undeserved affronts; but nothing could ruffle the native serenity and sweetness of his temper, his patient continuance in well-doing overcame all obstacles, and the malicious found it a poor sport to attack a man who would not defend himself. For several years he acted as Secretary to the Scottish Division of the Medico-Psychological Association of Great Britain and Ireland, an office which involved the expenditure of considerable time and energy, but he could always find time and had the will to do something more. In 1910 that Association conferred upon him the greatest honour at its disposal by electing him President; but, greatly to the regret of all the members, ill-health prevented him from undertaking the duties.

A man of remarkably sound mind, Turnbull had always enjoyed the blessing of sound health. He continued to play cricket as long as he could get down to the ball, and then he took to the gun, and shooting became the chief occupation of his holidays, many of which he spent near his native hills in Northumberland. But, as he drew near his sixtieth year, his health suddenly failed, and it was found that he was suffering from a painful and incurable malady for which little relief could be obtained. He had suffered long before he asked for medical assistance, and he stuck to his post long after it was plain to his friends that he was unfit for active duty. The visiting Commissioner discovered him going about his work as usual, with all his wonted cheerfulness and thoroughness, at a time when any other man would have been lying helplessly in bed. Repeated surgical operations were performed upon him, his holidays were spent in nursing homes, he was seldom free from torturing pains, and never from discomfort; but he was never heard to murmur or complain, and with each small return of strength he went back to his work at the asylum. When the present writer visited him during his periods of sickness, Turnbull's hopefulness and self-forgetfulness were such as to put the ordinary man to shame. He was reluctant to speak of his sufferings, though he seemed to think that he owed his friends an apology for being ill, and he would, as soon as was polite, begin to talk of the concerns of other persons, whose light afflictions he honestly thought were heavier than his.

When at last, in February, 1915, he felt that he could carry on no longer, his good and faithful service was recognised in uncommonly appreciative terms in the official records and the public prints, and he bore away with him into his retirement the affection and the esteem of the whole local community. It had been his desire to spend his declining years among the foothills of the Cheviots, under whose shadow he was born; but his precarious condition and the necessity of his remaining within reach of his medical advisers prevented the fulfilment of this wish, and he very contentedly chose instead to make his new home at Colinton, where in a short space of time he was already making new friends. On sunny days he was still to be seen from time to time in Princes Street, little changed in outward appearance, save for his grey hairs, not at all changed in his old-fashioned courtesy, his youthful outlook on life, his happy submission to whatever might befall.

He lived only for a year and nine months to enjoy his pensioned leisure. Death came suddenly and mercifully to him in the end. A hæmorrhage in the brain deprived him of consciousness, and, though he lingered for some days, his sufferings were over and, we may believe, his spirit was at rest.

No one who knew Adam Robert Turnbull will find anything of exaggeration in these lines (written by one who knew him intimately for nearly forty years); those who knew him best will know how inadequate is this tribute to the memory of a blameless soul, the gentlest of creatures, the kindest of men, and one of the bravest.

J. C. J.

RALPH BROWN, M.D.LOND., B.S., M.R.C.S.ENG., L.R.C.P.LOND.,

Senior Assistant Physician and Deputy Medical Superintendent, Bethlem and Bridewell Royal Hospitals.

Dr. Ralph Brown was one of a large family of sons, all serving their country; he had volunteered for a commission in the R.A.M.C., and the formalities for the granting of this had not quite been completed when his untimely death occurred from a severe attack of typhoid fever. Early in the war his youngest brother was taken prisoner; shortly after another was killed in Flanders, and this bereavement affected him very deeply.

Ralph Brown was educated at Sherborne School, and entered University College, London, in 1899, where he became Prosector of Anatomy, and later gained a gold medal in materia medica and therapeutics. Owing to the fact that the hospital was in the process of being rebuilt, he decided to carry out his clinical work elsewhere, and in 1903 gained the scholarship for third year students at Westminster Hospital. His career there was one of uninterrupted success. He took the conjoint diploma in 1906, and graduated M.B., B.S. at the University of London in 1908, and held in turn the posts of Resident Obstetric Assistant and Junior and Senior House Physician. He then became House Physician to Bethlem Royal Hospital, and decided to specialise in psychological medicine. He was then appointed Resident Medical Officer to Moorcroft Asylum, Hillingdon, but in 1911 he returned to Bethlem as Junior Assistant Physician. With this appointment he became Assistant Medical Officer to King Edward Schools, London and Witley. The latter work always filled him with pleasure and happiness, and often in his few spare hours of leisure he would visit the children and participate in their pastimes. He at one time held the post of Clinical Assistant to the West End Hospital for Diseases of the Nervous System. He was a member of the Medico-Psychological Association of Great Britain and Ireland, and a Fellow of the Royal Society of Medicine. He was also co-editor of the *Asylum Workers' News*. In 1913 he took the M.D. in Psychology and Mental Diseases, and in 1914 was appointed Senior Assistant Physician to Bethlem Royal Hospital, which post he held to the day of his untimely death.

Although of a quiet and retiring disposition, he possessed a keen sense of humour, and his kindness of heart, his sympathetic manner, and his happy way of giving hopeful assurance to distressed patients will always be gratefully remembered by those who came in contact with him. So abundantly had he fulfilled the promise of his earlier years that the future must have held much success in store for him, and his death will not only prove a sad blow to his numerous friends, but a loss to psychological medicine. A memorial service was conducted by the Rev. E. G. O'Donoghue in the Hospital Chapel on October 10th, and attended by many colleagues and friends.

THE DEATH OF THÉODULE RIBOT.

Members of the Medico-Psychological Association will learn with regret that Théodule Ribot, the veteran editor of *La Revue Philosophique*, is dead.

"Those who for nearly half a century," says Gaston Rageot in his article in *L'Illustration* (pp. 23-30, December, 1916)—an article written with the loving sympathy so characteristic of a French writer, and from which most of the particulars mentioned in this brief notice are borrowed—"have been accustomed to see Théodule Ribot at *Le Collège de France*, at the offices of *La Revue Philosophique*, or merely as he walked along *La Rue des Ecoles*, will preserve in their memories the image of that little spare man, of late somewhat worn with age, with his broad forehead, his straight chin, his amiable and keen expression, his whole face illumined with life, with intellectual *finesse*, and with kindly grace."

Ribot all his life protested against being called a philosopher. He claimed only to be a savant, whose speciality was the study of what took place, very often unknown to ourselves, in our own consciousness.

In his psychological work he drew nearer to the physicians and the alienists than to the philosophers, believing that for moral as well as physical science the study of disease was not less useful than that of health.

He was a voluminous writer, and some of his books had an immense circulation.

The number of editions reached by *L'Attention*, *Les Maladies de la Mémoire*, and *Les Maladies de Volonté* were as great as those of the most popular novels.

"Is not loving one's fellows the best way of knowing them?" asks Gaston Rageot. "That was Théodule Ribot's method."

THE LIBRARY.

MEMBERS of the Association are reminded that the Library at 11, Chandos Street, W., is open daily for reading and for the purpose of borrowing books. Books may also be borrowed by post, provided that at the time of application threepence in stamps is forwarded to defray the cost of postage. Arrangements have been made with Messrs. Lewis to enable the Association to obtain books from the lending library belonging to that firm should any desired book not be in the Library. In addition, the Committee is willing to purchase copies of such books as will be of interest to members. Certain medical periodicals are circulated among such members as intimate their desire to be included in the list.

The following gifts have been received, and the Committee desire to thank the donor:

Dr. William A. White.—*Bulletins 2, 3, 4 and 5 of the Government Hospital for the Insane, Washington, D.C.*

The following books have been purchased for the Library:

Instincts of the Herd in Peace and War, by W. Trotter.

Bodily Changes in Pain, Hunger, Fear, and Rage, by Walter B. Cannon.

Members reducing their private libraries are requested to bear in mind the library of the Association.

Applications for books should be addressed to the Resident Librarian, Medico-Psychological Association, 11, Chandos Street, Cavendish Square, W.

Other communications should be addressed to the undersigned at the City of London Mental Hospital, Dartford, Kent.

R. H. STEEN,
Hon. Secretary, Library Committee.

APPOINTMENT.

White, Ernest W., M.B.Lond., M.R.C.P., Emeritus Professor of Psychological Medicine, King's College, London, appointed Hon. Consultant in Mental Diseases in the Western Command with the temporary honorary rank of Major, Royal Army Medical Corps.

NOTICES BY THE REGISTRAR.

Dates of Nursing Examinations.

Preliminary	Monday, May 7th, 1917.
Final	Monday, May 14th, 1917.

Schedules must reach the Registrar *not less than four weeks* prior to the date of Examination. For further particulars apply to Registrar, Dr. Alfred Miller, Hattop Asylum, Warwick.

NOTICES OF MEETINGS.

Quarterly Meetings: Thursday, February 15th, 1917; Tuesday, May 15th, 1917.
The Divisional Meetings are proposed as follows:
South-Eastern Division.—Wednesday, April 4th, 1917.
South-Western Division.—April 27th, 1917.
Northern and Midland Division.—April 26th, 1917, at the County Asylum, Macclesfield.
Scottish Division.—March 16th, 1917.
Irish Division.—April 5th, 1917; July 5th, 1917.

NOTICE TO CONTRIBUTORS.

N.B.—The Editors will be glad to receive contributions of interest, clinical records, etc., from any members who can find time to write (whether these have been read at meetings or not) for publication in the Journal. They will also feel obliged if contributors will send in their papers at as early a date in each quarter as possible.

Writers are requested kindly to bear in mind that, according to LIX(a) of the Articles of Association, "all papers read at the Annual, General, or Divisional Meetings of the Association shall be the property of the Association, unless the author shall have previously obtained the written consent of the Editors to the contrary."

Papers read at Association Meetings should, therefore, not be published in other Journals without such sanction having been previously granted.

THE
JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.]

No. 261 [NEW SERIES]
No. 225.]

APRIL, 1917.

VOL. LXIII.

Part I.—Original Articles.

Zola's Studies in Mental Disease. By J. BARFIELD
ADAMS, L.R.C.P., L.R.C.S., M.P.C.

AS a rule novelists have not been very successful in their delineation of mad people. They usually overdo it; their maniacs are too maniacal, and their melancholics too melancholy. Even when descriptions of milder cases of mental disorder have been attempted, as in those of Miss Flite in *Bleak House*, or Mr. F's aunt in *Little Dorrit*, they have not been altogether satisfactory. Neither have the dramatists been more fortunate. One of the first plays that I ever saw on a London stage was a dramatised version of *Jane Eyre*, and the character of Bertha, the mad woman, as featured by the actress, was a very terrible exhibition. It is only fair to say, however, that in several modern French plays, where a person of unsound mind has been included in the *dramatis personæ*, the character has been a fairly natural study of the disease.

In Emile Zola's Rougon-Macquart series of novels with the enormous number of characters which crowd their pages—characters which represent people in almost every grade of society, and people of almost every type of mind—it is to be expected that we should meet with some who are insane. Zola studied human beings as a naturalist, as a scientist, and consequently his pictures not only of health but also of disease are drawn with a truth which is rarely found in the works of

other novelists. His characters are not manikins, they are flesh and blood. In his analysis of the mind he does not forget the body. In his psychology he fully recognises the part played by cenæsthesia. One of his characters, Pierre Sandoz, in whom one cannot help thinking Zola portrays himself, says, speaking of a novel he is writing, that it is his object "to study man as he is, not as a metaphysical marionette, but as a physiological man, determined by his environment, and acting under the play of all his organs." "Is it not a farce," he asks, "this continued and exclusive study of the functions of the brain, under the pretext that the brain is the noble organ? Thought is the product of the entire body. What becomes of the nobleness of the brain when the stomach is sick?"

If such a method of studying and portraying normal human beings is of importance, it is ten times more so in studying and portraying those in whom the mental equilibrium is disturbed. It is this that gives almost a scientific value to Zola's studies in insanity.

Our author's pictures of mental disease are as interesting, if not more so, to the general practitioner as to the alienist. The insane characters in the Rougon-Macquart novels are rarely seen in the asylum; we are introduced to them, for the most part, in the midst of their everyday surroundings, often with their relatives about them. The general practitioner has one great advantage over the specialist; he can, if he will, study the insane in their natural habitat as the hunter or the traveller studies wild animals. While the alienist, on the other hand, studies his cases under abnormal conditions as a naturalist studies wild animals in a menagerie. One cannot exaggerate the importance of environment. If the normal being reacts to his surroundings, does not the abnormal do so also? And, further, the general practitioner has the opportunity of studying at first hand the relatives of his patient. He can sometimes note the mental or nervous condition, not necessarily diseased, of the mother, a matter often of primary importance. His observation of the behaviour of an aunt or sister may throw a flood of light upon the family history of the case, for trifling mental flaws, mere eccentricities, in spite of a woman's superior powers of dissimulation, more readily reveal themselves in the female than in the male, and such eccentricities may hint at

ancestral blemishes, or suggest the presence of germs, which in more suitable soil would bring forth sinister disease. Finally, if the patient be married the physician may be able to notice the psychic and physical condition of his children.

It will be observed that the value of Zola's studies in insanity varies considerably in the different novels. The descriptions increase in accuracy of detail as the writer proceeds with the series. This corresponds with the greater faithfulness with which he delineates the normal characters, for he did not get into his stride until he wrote *L'Assommoir*. Even as literary productions, *La Fortune des Rougon* or *La Curée* cannot be compared with *Germinal* or *La Bête Humaine*. As psychological studies, of course, there is no comparison.

This is well shown in the first case of insanity which Zola brings before us. The portrait that he has drawn in *La Fortune des Rougon*, of Adélaïde, the mad ancestress of the family, is perhaps more full of detail than the picture of any insane woman to be met with in the works of other novelists, but it is painted in the same lurid colours. The flighty daughter of Père Fouque, who himself died mad, with her innate vice, her epileptic fits, her debaucheries, and slowly oncoming dementia, is drawn from a dramatic rather than a psychological point of view, and merely that her character should fit the part which she plays in the story. There is very little analysis of the breaking up of the woman's mind. But turn to *Le Docteur Pascal*, the novel which terminates the series, and see the same patient in the Asylum of Tulettes in the last stages of dementia. She has arrived at extreme old age. Little by little her muscles have wasted, and she is so helpless that her attendants are obliged to carry her from her bed to her armchair. She is nothing but skin and bone. She has her good and her bad days, as the attendants say, but generally she sits calm and quiet in her chair, with her eyes staring vacantly into empty space. Sometimes tears trickle down her withered cheeks, and she stammers words without meaning or connection, which seems to prove that in the midst of senile exhaustion and the irreparable dullness of dementia the slow induration of the brain is not complete, and that the patient has yet glimmers of intelligence, that she is still haunted by vestiges of ancient memories.

In *La Conquête de Plassans*, one of the earlier stories of the

series, we meet with two cases of insanity which, although described with abundance of detail, are very inferior to the finished studies of disease which are found in the later novels. The cases are those of François Mouret and his wife, Marthe.

François Mouret.—Family history: Father committed suicide. Mother was mentally unstable, and died of phthisis. Maternal grandmother was insane. The patient had three children: the eldest was sane, the second suffered from attacks of delirious insanity, and the third was an imbecile.

Until middle life François Mouret showed no symptoms of insanity. He was a successful tradesman, and was able to retire from business with a comfortable income by the time he was forty years of age. When he is first introduced to us, we see that he is a commonplace, well-to-do *bourgeois*, a *petit rentier*, with all the virtues and all the little foibles of his class. He is fond of his wife and children, and proud of his house and garden. He has a mania for tidiness—the tidiness of a precise old maid. He is perhaps a trifle near in money matters, but not more so than a careful man would be whose income was limited. He is a bit of a gossip, is fond of company, and of jokes—when he is not the victim of them—and although he professes to have given up business, he is not above dealing in oil wine, or any other commodity, when he sees the chance of making a little money.

Retired business men are the keenest of politicians, and François Mouret was no exception to the rule. He was a republican—the time of the story was the days of the Second Empire—and an anticlericalist. In a few years he acquired so much influence among the working-men of Plassans that he was feared by the opposite party.

But there were indications that at the bottom this masterful, little man, this keen politician, this would-be leader of men, was as weak as a child, and there was, moreover, his bad family history to be reckoned with. The hour of stress came with the entrance of Abbé Faujas into his life. This priest—the character is drawn with bold strokes, but is a little wanting in colour—came to Plassans with the mission of converting the city to Imperialism, and in carrying out his plans he incidentally acquired an immense influence over Mouret's weak-minded wife, who fell in love with him.

It was the lighting-up of jealousy in François Mouret's breast

which revealed the innate weakness of the man. At the first suspicion a strong man would have kicked the priest—Faujas lodged with the Mourets—out of the house. François did nothing of the kind. On the contrary, at first he defended the ecclesiastic when the neighbours criticised his conduct, much on the principle that a small boy speaks well of a bully, of whom he stands in hourly dread, hoping by so doing to gain his favour. But Mouret found an outlet for his jealousy in his treatment of his wife. He overwhelmed her with sarcasms, and as a further indication of his displeasure he cut down household expenses to a minimum.

As time went on, the fear which Mouret had conceived of Faujas not only increased as far as the priest was concerned, but extended by degrees to his wife and maidservant, until at last he seemed to live in abject dread of those about him. His character also altered day by day. He who had been so genial, so fond of the society of his fellows, became morose and taciturn. He left off going to his club, and he was no longer to be seen chatting with his friends in the cool of the day beneath the great plane-trees on the Cours de Sauvaire.

There were physical changes in the man. In a few months his hair turned grey. He grew thin, and stooped. There were alterations also in the sphere of the emotions. Mouret's feelings became blunted. Only one affection seemed left to him, and that was his love for his poor imbecile daughter, which love lingered to the end.

The process of mental deterioration continued. The busy man—formerly busy to enthusiasm even about trifles—grew idle. Nothing interested him. He attended to nothing, and went about the house and garden gaping as though he were tired of life. He submitted to insults, he interfered with no one, and he hardly spoke. Finally, he took refuge in an almost empty room on the first floor, where he sat for hours doing nothing, as was proved by the dust which accumulated on the table.

In describing these changes Zola has indicated with no little skill that two passions, hatred and fear, continued to smoulder in the wretched man's mind. The hatred was the natural consequence of jealousy—of jealousy which could not find relief in action. In Mouret's case it was held in check by his unreasonable dread of Abbé Faujas. It seemed as though the priest exercised mesmeric influence over him. But the fear was

probably only the result of primary weakness of character. It was an acknowledgment of another's strength.

As the story proceeds, it is seen that Faujas and his political friends took full advantage of Mouret's mental condition. They feared that his influence with the working men of Plassans would mar their plans, and they resolved to shut him up in an asylum. The man was harmless enough, but his enemies exaggerated his case, and when exaggerations failed they invented histories. They said that he ill-treated his wife, that it was dangerous for him to be at large, etc., etc.

After François Mouret was shut up in the asylum he became maniacal. Probably his case might be described as one of maniacal-depressive insanity, the melancholic phase occurring while he was at home, the phase of excitement after his internment.

Nothing shows so clearly the advance in Zola's power of describing disease as a comparison of the maniac in *La Conquête de Plassans* and the sufferer from delirium tremens in *L'Assommoir*; the one is melodrama, the other is a finished clinical picture.

It was a necessary part of the mechanism of the story that Mouret should escape from the asylum, and by the connivance of an attendant he does so. Naturally he returns home—the asylum at Tulettes was not many miles from Plassans—and in the account which he gives of the thoughts which pass through the madman's brain and of his behaviour during the night walk the novelist rises to a high point of psychological description. Mouret is not in the dream-like condition of an alcoholic. He recognises familiar objects, and has some idea of time. When he sees the signs of a coming storm he regrets not having brought his overcoat and umbrella, and he takes shelter when the rain comes down in torrents. But for all that he is living in the past, in the days when he and his wife loved one another. He is going home. The hour is late, and he fears that the dinner will be cold.

It is nearly midnight when he arrives at his house. The doors are locked and the windows are dark. Everyone appears to have gone to bed. Mouret knocks. No one comes to the door. He calls to his wife. There is no answer. The madman goes round to the garden and enters the house by the cellar door. There have been great changes in his home since he was last there.

He cannot understand them. Suddenly he hears the voices of people talking upstairs. Like a flash the idea of Faujas and all that is connected with that idea comes back to Mouret's mind. The dread, which was so characteristic a feature of the depressive stage of his disease, has disappeared. There is nothing now to hold in check the impulse of vengeance which possesses him. He finds means of setting fire to the house and destroys both himself and his enemy in the conflagration.

Marthe Mouret.—Family history good, with the exception that her paternal grandmother, Adélaïde, was insane. Marthe and her husband, François Mouret, were first cousins, and resembled each other to a remarkable degree. They also bore a marked physical likeness to their insane grandmother.

During her childhood Marthe appears to have been very delicate, and to have suffered from attacks of vertigo, strange ideas, and mental confusion. When she was about twenty years of age she probably passed through a mild attack of melancholia with delusions, one being that her head had been opened and her brain removed. After her marriage she became stronger. The quiet life of a shopkeeper's wife at Marseilles suited her. "I passed there fifteen years," she said, speaking of her past, "which have taught me to be happy in my own home surrounded by my children."

Her life, after she and her husband retired to Plassans, was tranquil enough, but there were signs that even before the arrival of Abbé Faujas she was becoming restless. Her husband's petty meanness and rough jokes irritated her. Her household duties and the care of her children no longer sufficed. She was conscious of a vague, unsatisfied desire. She longed for she knew not what. Yet she could not stand excitement. "I cannot read a novel," she tells us, "without having frightful headaches, and for nights afterwards all the characters dance in my brain. Needlework is the only thing which never fatigues me. I remain at home to avoid the noise of outside, the gossip, the nonsense, which fatigues me." She was haunted by the dread of the approach of some catastrophe, and especially by the fear that she herself would become mad.

Soon after Abbé Faujas came to lodge in her house Marthe fell under his influence. The mental changes which resulted were at first slow and almost imperceptible, but soon they became

more manifest. The priest read the woman's mind as though it were an open book. To satisfy her vague longings he offered her the consolations of religion. She seized the proffered comfort with eagerness, and, carried away by her enthusiasm, she passed through religion to mysticism. She had periods of ecstasy which were marked by hallucinations of sight and hearing. Gradually a new passion revealed itself in the midst of these excited emotions. The woman became enamoured of the priest. At first Madame Mouret was scarcely conscious of the nature of the feeling. She hardly distinguished it from her religion. In the end it became religion itself.

It is only fair to say that Abbé Faujas did nothing to arouse this love for himself. Indeed he repulsed it. He was a hard man who cared nothing for women. One might say that he hated them as unmitigated nuisances—nuisances both in religion and in politics. He was perfectly satisfied with the influence he had acquired over the mind of François Mouret's wife, which was necessary for the success of his mission in Plassans. He did not want her love, which only hampered his designs.

It is unnecessary to unravel the tangled skein of mysticism and eroticism which the novelist exhibits to us as present in the mind of Marthe Mouret. The condition is by no means uncommon, and usually manifests itself at times of physiological stress—at or after puberty in both sexes, and about the climacteric in females, though unmarried women seem liable to it more or less at all ages. This form of mysticism differs from common-sense religion, either of the Roman Catholic or Protestant variety, by its utter want of altruism. These patients are supremely selfish, and are a perfect nuisance in their own homes—points which Zola brings out very clearly in his sketch of the character of Madame Mouret.

As time went on the patient developed cataleptic and hysterical symptoms. Sometimes, in a state of unconsciousness or semi-unconsciousness, she would throw herself on the floor or against the walls or furniture of the room, bruising herself severely. After recovering from these attacks she appeared at first to have no recollection of what had occurred. But this amnesia was only temporary, for there is no doubt that later on she remembered what had taken place.

In comparing the cases of Marthe Mouret and her husband one observes a curious difference in the effect of the menta

disturbance on the character. In the man's case, he, who had been strong and masterful, became chicken-hearted, and gave up all initiative in life; in that of the woman, she, who had been weak and yielding, and to a certain extent a down-trodden household drudge, became self-assertive and bullying.

Madame Mouret was naturally plump, and after she had passed her fortieth year she grew stout. But as the mental malady from which she was suffering developed itself, she became rapidly thin. Presently she began to cough, and other symptoms of tubercular disease of the lungs manifested themselves. It was during this period of wasting that her passion for the priest revealed itself in its true character. Excessive eroticism is not uncommon among the phthisical. Madame Mouret's love for her family was long since dead, and now her modesty died also. The brutal way in which Abbé Faujas repulsed her seemed to crush the life out of the woman. She became a physical and mental wreck, and a little later died of phthisis.

The following four cases form a group by themselves. Although in each the nature of the psychic disturbance is different, yet they are linked together by the fact that the symptoms of mental alienation first showed themselves in adolescence or early manhood.

The first case is that of Silvère Mouret. His family history is the same as that of his brother François, and need not be repeated. Silvère was a delicate child. After his father's suicide, which occurred at Marseilles, he was brought to Plassans. At first he was pushed from pillar to post, but finally he went to live with his grandmother, Adélaïde, in a tumble-down cottage on the outskirts of the city. This was probably the boy's physical salvation, for the wild, outdoor life suited him, and he grew up strong and healthy. He was a serious lad, and was never happier than when he was acquiring information. He received a smattering of education at a school attached to a neighbouring monastery, and later on he was apprenticed to a wheelwright, who took a fancy to the boy. He became a clever workman, but his thirst for general knowledge knew no bounds. On one occasion he borrowed a work on geometry, and he spent weeks without a guide trying to understand the simplest problems. He bought second-hand books on all sorts of subjects, and studied them during the night by the light of a

miserable lamp. A self-taught man is only too likely to get on the wrong track. Nothing, says Zola, is so bad for the mind as such a method of instruction. Silvère "became one of those learned workmen who can hardly sign their names, and who speak of algebra as a person of their acquaintance." More often than not these crumbs of knowledge give an absolutely false idea of great truths.

At this time (1840-48) Europe was seething with revolution. Every man was a politician, especially in France. Every *cabaret* throughout the land was the meeting-place of a club of revolutionary amateurs, where the wildest and most impossible schemes of reform were bandied from mouth to mouth. Silvère seized all these ideas with avidity. At once generous and ignorant, he was fascinated by the crude notions of humanitarian Utopias and of universal happiness which he heard propounded all around him. He passed his nights in reading political pamphlets and abstruse dissertations on social economy, works which often he did not even succeed in understanding, but which he studied with the strange love which demi-savants have for difficult literature. About this time he came under the influence of his uncle, Antoine Macquart, a lazy drunkard, whose constant topic of conversation was the approaching golden age when no one would any longer be obliged to work.

Macquart induced his nephew to become initiated into the secret society of the Montagnards, a powerful association which at that period extended like a network throughout the south of France. From that time Silvère devoted his leisure to furbishing an old musket which he found in his grandmother's cottage, and to dreaming the dreams of the Illuminati. His reveries were of gigantic epics, of Homeric struggles, from which the defenders of liberty came forth as conquerors amid the acclamations of the whole world.

But his enthusiasm was, to say the least of it, unhealthy. "He found himself," says the novelist, "predisposed to the love of Utopia by certain hereditary influences: in his case the nervous troubles of his grandmother turned to chronic enthusiasm, with *élans* to all that was grandiose and impossible. His solitary infancy and his imperfect education had singularly developed these tendencies of his nature."

In the end Silvère died a martyr to his visionary republicanism.

This case occurs in the first novel of the series, and Zola was more intent upon the charming romance, which he weaves about the loves of Silvère and Miette, than in psychological studies. But he has given a sketch, faint, no doubt, but of which the outlines are distinctly visible, of a mental condition which is not uncommon among the young, even among those who are in superior social circumstances and are better educated than Silvère Mouret. It is natural enough for a healthy and generous lad, when he is brought face to face for the first time with the ugly realities of life, to enter heart and soul into any plan which appears to work for the improvement of the condition of the poor and down-trodden, and the healthier the boy the more vigorously and enthusiastically will he enter into the business. But there is such a thing as unhealthy enthusiasm, a weedy sort of overgrowth, specimens of which may be found among the juvenile professors of milk-and-water Communism, Christian Socialism, and the like. The family history of such cases frequently reveals hereditary tendencies to mental disease, and the personal history is not always satisfactory from a moral point of view. Upon analysis, the vaunted altruism of these young men will be found to be only a thin veneer covering a thick bed of egoism and pride. One singular characteristic of such individuals is their fondness for ostentatious self-abasement. It is astonishing what satisfaction they find in doing some trifling and unnecessary act of menial labour. I remember a youth, physically overgrown, mentally backward, and with a very bad family history, who, though he lived in a luxurious home, yet considered that blacking his own boots was an act of righteousness. It will usually be observed that the enthusiasm grows more and more feeble as such an individual arrives at maturity. The veneer of generosity melts away, and the innate selfishness stands revealed in all its ugliness. In after-life such a man is never a success. If he be wealthy, or have much family influence, he may be pitchforked into a high position, but he is no ornament to it, and sinks rather than rises in the social scale. Often, as years go on, he exhibits signs of feeble-mindedness in one form or another. He may be the victim of some phobia or obsession, or of some group of symptoms which may be labelled neurasthenia, hypochondria, or even hysteria, at the discretion of his medical attendant.

The second of this group of four cases is that of Serge

Mouret. He was the younger son of François and Marthe Mouret, and it is unnecessary to add further particulars of his family history.

As a child, Serge was quiet and amiable. He did well at school, being exceedingly industrious. Very early in life his thoughts appear to have turned towards religion, or, rather, mysticism, and when he became a man he entered the priesthood. Physically he was never robust.

During his career as a theological student his industry and devotion were remarkable, but his health does not appear to have been good. Frequently he suffered from hallucinations. Sometimes it seemed to him that the high, vaulted roofs of the halls of the seminary echoed with angelic voices; sometimes he felt himself touched by unseen, gentle hands; at other times he smelt a heavenly perfume which long afterwards, it appeared to him, continued to cling to his garments. He was on several occasions confined to his bed with slight attacks of fever, accompanied with great physical prostration, and one of these attacks was complicated with delirium.

For some days before his ordination, during the ceremony, and for some time after, the nervous tension was so great that the young man appears to have lived in a dream.

After his ordination Serge was placed in charge of the parish church of Artaud, a village some leagues distant from Plassans. It was a desolate country, such as one meets with here and there in Provence. The landscape was shut in by a wall of yellow hills, fringed and flecked with patches of black pine-woods. The land was terribly barren; everywhere the bare rock cropped up. The vines, dry as thistles, pushed out from between the stones. In places, where attempts at cultivation had been made, one saw red fields marked with lines of grey olives or miserable almond-trees, and far away the eye rested on the pale green of a square plot of wheat, a tender note in that scene of arid desolation. The peasants were suited to the soil they cultivated. They were brutalised by ignorance and poverty.

Here, in a presbytery in almost as ruinous a condition as the church itself, Serge Mouret lived with his half-witted sister and a rough but not ill-natured housekeeper. The young priest, filled with the enthusiasm of his mystic creed, did his best. Assisted by a boy, as mischievous as a Paris *gamin*, he

served the altar daily, even when the church was empty, and the sparrows flew in and out through the broken windows. He tried to teach the rudiments of religion to the village children, and he endeavoured to instil morality into peasants sunk in sensuality and drunkenness. But what success could such a man, a seminarist utterly ignorant of life, expect among such people?

One day, after having said mass in the empty church, and having partaken of such a meagre breakfast that he was almost fasting, Serge Mouret walked some leagues across the arid country in the mid-day heat of the sun of Provence. It is possible that on that occasion he suffered from a slight sun-stroke, which may have been a contributory factor in his subsequent illness. The errand of mercy on which he had set out was a failure; an unexpected visit, which he had paid in the course of his journey, had disturbed him mentally, and he returned to the presbytery tired and dispirited a long time after the usual dinner-hour.

In the evening the girls of the village came to dress the church, and particularly the chapel of the Virgin, with garlands, for the morrow was the first of May. After they had gone away Serge Mouret remained for a long time kneeling in devotion before the altar. When at last he rose to his feet he became suddenly conscious of the deathly coldness of the church. He shivered, and his teeth chattered. When he reached his bed-chamber he felt so cold that he lit the fire. The whole house was wrapped in silence, but there was a buzzing in his ears, which finished by becoming what seemed to him to be the sound of whispering voices. These voices increased a feeling of anxiety, of which he had been dimly conscious during the day. It became a presentiment of some unknown trouble, and, true to his usual mode of thought, the young priest sought its origin in some sin which unwittingly he might have committed. He sank into a dreamlike condition. All his old life at the seminary passed vividly before him. He lived it over again. Presently he came to himself. He was shivering no longer. He was burning with fever. He went to the window, and opened it, that he might refresh himself with the coolness of the night air. The moon had risen, and all the plain of Artaud was spread before him, more tragic in the pale moonlight than by day. He tried to

remember when he had first felt ill, but he could not think clearly. The events of the day just past were as dreamlike, and even more distant than his life in the seminary. His face was covered with sweat. Again he was shivering, and yet he felt as though he were on fire. Seeking a refuge from his distress, he threw himself on his knees before a statuette of the Immaculate Conception, clasping his hands and crying: "Holy Virgin, pray for me!"

He shivered again, his teeth chattered, and, overcome by fever, he fell fainting on the floor of his bed-chamber.

The fever and delirium lasted some weeks. The patient's uncle, Dr. Pascal Rougon, of Plassans, attended him during his illness. I have made a study of the character of this clever, but eccentric physician, in a recent paper ⁽¹⁾, and I am certainly not surprised that the treatment he adopted in a case of brain fever was as eccentric as himself. It was successful as far as the patient was concerned, but it was disastrous for the nurse. But that belongs to the story, and has nothing to do with the medical aspect of the case.

When he first came to himself, Serge Mouret felt as though his head were empty. He was in a strange room, but he was not in a condition to notice the unfamiliar surroundings. His eyes wandered aimlessly from corner to corner.

"I have been dreaming. I am dreaming always," he murmured with an air of weariness. "I hear bells, and it is that which fatigues me."

He remembered something about his delirium.

"I feel as though I had arrived after a long voyage," he said, always with the same air of weariness. "But I don't know where I am. I don't even know where I set out from. I had a fever—ah! yes, I remember. It was always that nightmare of crawling along an interminable subterranean passage. The stones fell from the roof of the passage, and I was walled in. I was seized with a rage to force my way through. I worked with my head, my hands, and my feet. I was desperate."

The nurse gently put her hand on his lips to make him keep silence. "No," he said, "it does not fatigue me to talk. I am only whispering. I am thinking aloud, and you can hear me. But it was droll that in the subterranean passage I never had the least idea of going back. All I cared about

was to force my way forward through all obstacles, even if it took me a thousand years. My knees were bleeding. I had struck my forehead against the rock, and I was conscious of the agony of working with all my strength to arrive as soon as possible. To arrive where? I don't know. I don't know."

The next day was wet. The fever returned, and towards evening the patient became delirious. It was again the nightmare of the subterranean passage. The weather seemed to influence the disease, for the nurse observed that Serge was better on fine days and worse on wet ones.

The convalescence was tedious. The patient had the mental and bodily weakness of an infant. He had to learn again to walk, almost to speak. For hours he would play with a comb, or some such object, as a child plays with a toy. Although Serge remembered something of his delirium, he recollected nothing of his life before the commencement of his illness. It was an absolute blank. His memory appeared to be grievously injured. As time went on, the delusions of his delirium faded away, and he could no longer call to mind even the events of the early days of his convalescence. Both doctor and nurse feared that the case would end in dementia. Day by day the patient gained in bodily strength, but there was no mental improvement.

The cure came about suddenly. Serge had been nursed back to health in a lonely country house some miles away from Artaud. One day, after he had regained the full vigour of his body and to a certain extent that of his mind, he climbed to the top of some rising ground, and saw in the distance the village, the church, and his own home. His whole body shook with excitement. He remembered. The past came back to him.

But it is questionable whether the cure was complete. After his illness, Serge was a changed man. The keen edge of his intellect was blunted. At least, on one occasion, there was a return of fever with slight delirium, and at times he was subject to hallucinations of sight and hearing, and even of touch.

Some years later, Serge Mouret left Artaud, and became *curé* of Saint-Eutrope, a better living, both from a pecuniary and social point of view, for it was in the district which produced the best wine of the neighbourhood, and consequently

the peasants were better off. Here he lived in great humility. His reputation for sanctity extended far and wide, and he might have risen to a high position in the Church. But he refused all advancement, and when we last heard of him he was showing signs of commencing phthisis.

The third case is that of Lazare Chanteau. *Family history*: Father, a good-tempered, sluggish man, a martyr to gout. Paternal grandfather started life as a working carpenter at Caen. Later, he became a timber merchant on a large scale. He was always trying to improve his business by venturesome schemes, some of which were successful, but the majority were failures, and when he died his firm was in a very bad way. Mother was the daughter of a ruined yeoman-farmer. Before her marriage she was a school-mistress. She was a strong minded, ambitious woman. She died of heart disease in middle life.

Lazare's boyhood does not appear to have been remarkable. To a certain extent he was the victim of his mother's ambition. She made him work very hard at school, where he possibly over-taxed his powers. At the age of eighteen he passed his *baccalauréat*. At this period he was well-grown. He had a large forehead, and a normal growth of hair on his face. He cared little for physical comforts, was absent-minded, and given to day-dreaming, and had a young man's contempt for money.

Madame Chanteau wished Lazare to study law, but the young man had no predilection for anything but music. At the *lycée* he had been taught the violin, and his master, who predicted a glorious future for his pupil, had given him private lessons in harmony and counterpoint. As soon as he left school, Lazare, full of the idea of being a musical genius, commenced writing a symphony, which, however, he never finished.

A little later he grew tired of music, and determined to become a doctor. He went to Paris to study medicine. His enthusiasm for the art of healing increased to a white heat, and he dreamed of becoming the most celebrated physician of his age. It is to be noted that he always thought of himself as being in the first rank. Presently, his enthusiasm for medicine died down. He grew idle, failed to pass his examination, and blamed his teachers, not himself, for his want of success.

Tired of medicine, Lazare entered the laboratory of a celebrated chemist. Here he conceived the idea of extracting bromides and iodides on a great scale from seaweed—making a gigantic business of it. He set about it immediately, for any delay in putting his plans into execution was veritable torture. But the affair proved a failure, and the young man's love for chemistry became speedily exhausted. And so it went on. Lazare went in for music again, and gave it up. Then he conceived the notion of building a defence against the encroachments of the sea, which was gradually washing away the shore near his home. This failed. He thought of emigrating, of starting a newspaper, of going in for literature, finance, politics, etc., etc. One thing is to be noted, that he grew more quickly tired of his projects as he grew older—he became more quickly mentally fatigued.

Lazare was as changeable in his affections as in his ambitions. He became engaged to his cousin, Pauline, a good-looking, sensible young woman, and, after a few months of violent love, he threw her over, and married a silly girl, who was utterly unfitted to be his wife. The poor young fellow was, as Zola puts it, "*toujours en quête d'un bonheur qui avortait.*"

Although always disappointed in him, yet Lazare's mother never lost the idea that her son was a genius. Again and again she provided him with means, not always by honourable methods, to put into execution his ill-digested plans. How often is the mother the evil genius of such unfortunates! Still, Madame Chanteau was not altogether blind to the condition of her son. More than once the thought crossed her mind that he was like his grandfather, the carpenter, who changed his business, and nearly ruined all by his hair-brained schemes.

So far there was nothing very extraordinary in Lazare's case. He was only one of that multitude of young men who labour under the curse of Reuben: "Unstable as water, thou shalt not excel." But there was a greater flaw yet in his mental make-up. He was obsessed by the fear of death.

One of the peculiar charms of Zola's novels is the skill with which he makes Nature sympathise with the moods of his human characters. When he first draws our attention to this mental affliction of Lazare Chanteau, the background is painted in harmony with the melancholy of the sufferer. The young man and his cousin, Pauline, are returning from a long walk

along the sea-shore. Twilight is deepening into night, and the stars are appearing in ever-increasing numbers in the darkening sky. Pauline stood still for a few minutes looking upwards.

"How beautiful the stars are," she remarked gravely. "You have taught me that each one is a sun, and that there are millions and millions of them."

"I don't like to look at them," said Lazare in a voice choked with emotion. "It makes me afraid."

It was night now, and the sky, almost completely black from the zenith to the immense horizon, glittered with innumerable, twinkling points of light. The tide was coming in with a low, wailing sound like that of the lamentation of a distant crowd weeping in misery.

Pauline stood gazing in silent admiration at the brilliant vault of heaven. Suddenly, mingled with the plaintive moaning of the sea, she heard the sound of sobbing close beside her.

"What is the matter?" she asked, turning to Lazare. "Are you ill?"

The young man did not answer. He had covered his face with his hands so that he should not see. When he had mastered his emotion and could speak, he stammered: "Oh! that I must die one day, must die one day!"

As in the case of obsessions generally, the date when this one originated is uncertain. It was hardly noticeable before Lazare was twenty years of age, but soon afterwards it began to make his life miserable. He could hardly lay his head at night upon the pillow without the idea of death presenting itself to his mind. Insomnia developed itself—insomnia made horrible by the lugubrious images which passed before his fancy. Worn out by fatigue he would fall asleep, only to wake with a start, stammering in the darkness, with clasped hands and eyes full of horror: "My God! my God!" When he was fully awake he was ashamed of this fright. He was a professed atheist, a pessimist, a disciple of Schopenhauer, and he found it the act of an imbecile thus to appeal to a God whom he denied. It was the heredity of human feebleness crying for help.

Even in the daytime a chance word or thought, an unexpected occurrence, or a paragraph in a newspaper would conjure up in his mind the horrible fear of death.

It is to be remarked that Lazare lost this dread at the actual

approach of the King of Terrors. His cousin, Pauline, whom at that time he loved with all the strength of his ill-balanced mind, was seized with a grave disease, and for some days her life hung by a thread, and Lazare was himself astonished at the calmness with which he faced the idea of death. He trembled, it was true, at the thought of losing his sweetheart, his dear companion, but this was another sort of fear, totally different from that which possessed him when he had contemplated the notion of his own annihilation in days gone by.

But the respite was short. Pauline recovered, and hardly was her convalescence established before Lazare fell again under the power of his obsession. One night he awoke with a start, and with eyes dilated with horror. The fear of death had reappeared in his sleep, in a dream probably. "My God! my God! must I die one day?" he cried in abject terror.

The man was ashamed of his affliction, and tried to conceal it from those around him. But he nursed it privately in a thousand little ways. It was not every night or day that the dread overpowered him. Sometimes two or even three nights passed without his being disturbed, and he got into the habit of noting down the dates on an almanac.

Gradually the fear of death, which, though certain, might not occur until some date more or less distant, took the form of the dread of immediately to be expected dissolution. Obsessed with this new phase of the disease, Lazare could not go out of a room, nor close a book, nor make use of any object, without believing that it was the last time he would do so. Thus he contracted the habit of continually saying adieu to the things about him. Little by little these morbid ideas gave rise to others. Unconscious probably of its origin, he became possessed with the notion that by performing certain actions he might delay the advent of the inevitable. Ideas of symmetry intruded themselves into his mania. He felt himself compelled to take three steps to the right, and then three to the left, without any apparent object. He must touch the furniture on both sides of the chimney-piece or door, and he must touch each article an equal number of times. He even appeared to attach a superstitious idea of value to certain numbers. For example, five or seven touches, distributed in a particular fashion, would prevent the adieu from being final; or, in other words, would ward off for the moment the approach

of death. "In spite of his intelligence and of his denial of the supernatural, he practised this imbecile religion with the docility of a brute. It was the revenge of the nervous derangement of the pessimist and the positivist, who declared that he believed only in facts and experience."

The man became a nuisance to his friends.

"What are you wasting your time about?" cried Pauline to him on one occasion. "Three times already you have returned to that cupboard to touch that key. What do you do it for? What a maniac you will be when you are eighty!"

Occasionally his fear of death crystallised into a morbid dread of some special malady, or of some particular form of accident. His mother died of heart disease, and he became convinced that he would die of the same complaint. He was always observing his own symptoms—generally imaginary—with the anxiety of a hypochondriac. "His two years of medical study had not demonstrated to him the equality of all diseases in the presence of death." On the contrary, his superficial knowledge of medicine only aggravated his terror of the malady in question. Later, he was seized with a dread of fire. He was living in Paris at the time, and his *apartment* being on the third floor, he moved down to the first, in order that he might escape more easily in case of fire breaking out in the building.

Physically, as time went on, there was little to be noted in Lazare's case. He stooped somewhat, and seemed older than his years. Sometimes a slight trembling of the muscles of his face was observed—a trembling which, in moments of agitation, communicated itself to the muscles generally of his whole body. He was exceedingly sensitive to perfumes. I have noticed an increased olfactory sensibility in several cases of obsession which have come under my observation. Lazare had one child, and Zola remarks how quickly, when they played together, both father and son became fatigued.

Gradually the man became listless and idle. His ambition seemed dead, or if some phantastic project flitted for a moment across his mind, it had no longer the power to raise even a flicker of enthusiasm. When we last hear of him, he is leading an aimless life on his wife's money.

The fourth and last of this group of cases is that of Claude

Lantier. His family history was bad. Brother, a sexual pervert. Mother, a drunkard. Maternal grandfather and grandmother, both drunkards. Maternal great-grandmother, insane. Claude had one child, who died of hydrocephalus in his ninth year.

Claude Lantier was the eldest child of his parents, his father being eighteen years of age, and his mother little over fourteen when he was born. He was a native of Plassans in Provence, but was taken at an early age to Paris. He was one of those gifted children who, as soon as they can hold a pencil, can draw, and draw well. Some of Claude's child-sketches were brought to the notice of a wealthy old gentleman, an amateur authority on Art, who, enraptured at the idea of playing the part of Maecenas, adopted the boy, and took him back to Plassans to be educated.

At school Claude Lantier did not distinguish himself, but he appears to have escaped the moral infection which is not unknown even in scholastic establishments of the present day, and his boy friends were those who, like himself, were, or thought they were, budding literary or artistic geniuses. The pleasure of these lads was to escape from the dull school-room and spend long days exploring the wild neighbourhood of Plassans. It was in these expeditions that Claude learned to love the beauties of Nature, changing with the ever-changing sunshine; that he acquired that feeling for atmosphere, which, in spite of all their defects, became the charm of his mature works. One of his companions, who afterwards became a distinguished novelist, had always a book in his pocket, and was accustomed to read aloud while Claude worked at his sketches. Thus, at the age of fourteen, these boys fell under the influence of Victor Hugo, and of that writer's ideas, his vast pictures, his "eternal battles of antitheses." Later, Alfred Musset came to fascinate them "with his passion and his tears. A more human world revealed itself, which conquered them by pity, by the eternal cry of misery which they must henceforth hear rising from everything."

One can quite imagine what sort of a young man Claude Lantier was when he went to Paris to study Art in earnest. He had learned all that he knew from Nature herself, and he rebelled against the drudgery of the school. After six months' work, his master told him he would never be able to do any-

thing, and Claude left the *atelier* in disgust. He went then to study the nude in a free studio, where, having paid his twenty francs to the *massier*, he could work after the dictates of his own fancy, and where he was not bothered by the stereotyped advice of a fossilised pedagogue. Here his time was not altogether thrown away. In after years, hanging on the walls of his own studio, were to be seen studies which he had made at that period. They were admirable pieces of work, painted with the breadth of a master. There was a girl's foot, for example, exquisite in its delicacy and truth. There was especially the torso of a woman with flesh like satin, living, palpitating, with the suggestion of the blood which flowed beneath the skin.

Art in France, at the time when Zola introduces Claude Lantier upon his stage, was in more than its usual state of flux and change. The Academicism of David, and later that of Ingres, though it still lingered in influential quarters, had to a great extent been swept away by the rising tide of Romanticism, which found its noblest expression in the work of Delacroix. But Romanticism, before even it could completely gain the ascendant, found itself involved in a struggle with the artists of the Barbizon School, men like Millet, Rousseau, Corot and others, men to whom Realism, work done in the open air, was everything. The students, the radicals of the artistic world, the rising generation in short, embraced the creed of *plein air* with enthusiasm. To no one did it appeal more strongly than to Claude Lantier, brought up as he had been in the vivid sunshine of Provence. Even in Paris he was always obsessed with the beauties of changing light—dawn, sunrise, the splendours of noon and sunset, and the soft tones of twilight. But he carried Realism too far. He became an unbridled Impressionist. Some of his sketches were terrifying, the colour crude and violent, and the shadows indicated by great strokes of the brush. However, glaring as his faults were, he soon found himself at the head of a small band of enthusiastic followers, who hailed him as the coming Master.

In his study of Claude Lantier Zola has presented us with the portrait of a genius who fails. A man's failure may be looked at from two points of view: the purely objective, that is to say, the value of his work, or, if you will, the value that the world puts upon his work; and the subjective or psycho-

logical, that is to say, the mental defects or deficiencies which are the real causes of his want of success.

In the case of Claude, his objective failure, his failure as an artist, was primarily due to his lack of a sense of proportion. His composition was lamentable. He was an artist. His technique was admirable, and he had an exquisite feeling for colour. Taken piecemeal, certain portions, *morceaux*, of his pictures were excellent. A group of figures, a clump of trees, the sunlight as it filtered through the leaves, or fell upon the water, the painting of living flesh, or even of drapery, were charming. But, taken as a whole, his canvases were more than disappointing. Possibly, in addition to faulty composition there may have been something wrong with the perspective, though the novelist does not lay stress on this point. It was the quality of his work in detail which pleased his admirers, who were not only inexperienced students, but even celebrated artists. This may be partly accounted for by the fact that it is the creative faculty, the workman's faculty, which most fully appreciates detail, while it is the critical faculty which, though not underestimating detail, gives the proper value to the *ensemble*. Zola has further emphasised the point that it was only portions of Claude Lantier's work which were really valuable by remarking that it was his first sketches, his studies, not his finished pictures, that were readily bought by picture-dealers, men who are usually keenly alive to the value of the wares in which they trade.

The psychological causes of Claude's failure were more complex. He was a man of great ideas, and they were not only vast, but they were happy. Had his ideas been realised, his pictures would have been masterpieces. But they were not realised. It seemed as though, in spite of his mastery of technique, his hands could not fully work out the conceptions of his brain. One might say that he suffered from a form of motor apraxia. Probably, to a certain extent, this is the case with every artist.

When Claude conceived the idea of a picture he threw himself heart and soul into his preliminary studies, which were admirable in their way, and then with his enthusiasm at a white heat he attacked the canvas. He worked all day from dawn to sunset, and the result of his work was a sketch which was a masterpiece—a sketch in which every stroke of the brush was a

stroke of genius. Then came the inevitable. In working together the details of his picture he spoiled his sketch. It was the irony, as Zola calls it, of a clever man who himself brings misfortune on his handiwork. His faulty composition marred everything. There was no coherence, and what was worse, fascinated by the beauty of an after-thought, he introduced some object which had no connection with the subject of his picture.

It is not to be supposed, however, that Claude was blind to the fact that there were faults in his work ; on the contrary, he was often painfully alive to it. His critical sense was sufficiently developed to warn him that something was wrong, but it was not keen enough to point out the error ; a condition which was intensified by his defective artistic education. From this it resulted that, in spite of his vanity, and in spite of his belief in himself, at times he was plunged into crises of doubt, which were veritable hours of torture.

It is Zola's habit, when he wishes to bring into stronger light a mental trait, to place the character in which he is depicting it beside other personages, some of the very opposite mentality, others in whom the same trait is seen from a different standpoint, or is modified by varying circumstances. Thus, in order to throw into higher relief Claude Lantier's affliction of doubt, he shows us, first, a sculptor who turns out sometimes excellent work, sometimes monstrosities, but who believes that everything touched by his hand is a masterpiece, and who never for a second doubts the excellence of his own genius ; then, a celebrated painter who, having gained fame by his first picture, lives ever after in dread lest his later productions should fall below his own high-water mark.

Step by step, as the story proceeds, Zola traces the decadence of an artist and a man in the case of Claude Lantier. The novelist is true to life when he shows that mental deterioration, while it destroys the good qualities, accentuates the bad, as a wasting disease mars the beauty of the human form and leaves only the ugliness of the skeleton. At first the declension was slow and almost imperceptible. Claude passed through a period which was marked by laziness and day-dreaming. He commenced half a hundred pictures, but finished none. Before he had half painted one his mind was busy with ideas for another, and consequently both were failures. His temper,

which had always been bad, grew worse. His outbursts of passion became more and more violent and more frequent. Whatever love he may have once had for wife and child grew cold; he neglected them both.

As time went on, it became evident that Claude's hand was losing its cunning. His technique no longer redeemed, or at least softened, his errors of composition. His pictures became so bad that those who formerly admired his work turned from them with pain. Here Zola paints a feature of mental deterioration with considerable skill. In progressive forms of psychic disorder the fading of the critical sense in its various manifestations is commonly observed. However, in the early stages of disease it is not altogether lost, but may be aroused, and even aroused to the point of great suffering, by acute emotion. The novelist tells us that as each picture rejected by the Salon came back to Claude, he saw their defects, saw them too late, and in a fury cut the canvases to pieces. The pictures were so bad—one, a painting of his child after death, must have been a terrible affair—that the artist, in his days of comparative health, even with his originally mal-developed critical faculty, could never for a moment have thought of exhibiting them. But his failing mind saw no fault in them, and he sent them in. Then, stung by the pain of rejection, his dying powers of discernment revived, and he saw in all their nakedness his errors of execution. His new crises of doubt were terrible. Sometimes he was sunk in profound despair, sometimes his vanity, the last of human passions to disappear, buoyed him up. His mind was a battle-field, strewn with hundreds of dead ambitions, on which struggled his belief in himself, already wounded unto death, and his growing consciousness of his inability to realise his conceptions.

As his mental deterioration proceeded, Claude developed a sort of superstition, a religious belief in the importance of the medium in which he painted. He would have nothing to do with oil, which he spoke of as a personal enemy. In the place of it he used secret preparations, solutions of amber, of resin, etc., etc. He became fastidious about his palette knife and the shape and texture of his brushes. He invented a theory of complimentary colours which would have astonished Chevreul, and which was fatal to his own originality of notation, so clear, and so vibrating with sunshine.

Later, the poor fellow became the victim of delusions of suspicion. He began to suspect his friends, particularly those who had fallen away from him since the deterioration in his painting. The expression of his face altered. His wife saw something in his eyes which frightened her. Sometimes she saw him in the attitude of listening, as though he heard a voice which was calling to him. She began to be haunted with the idea that her husband was going mad.

One night, when he was dining with some friends, he actually overheard his former admirers depreciating him in no measured terms. It was a mortal blow. All his suspicions were confirmed. After his return home he went out again, telling his wife he was going for a walk. His manner during the evening had been so strange that the poor woman, fearful of his intention, followed him at a distance. He walked down to a bridge over the Seine, and remained for some time leaning on the parapet. The scene before him was fraught with painful memories, for he had used it as a background for one of his fatal pictures, the one in which he struggled more than any other against his failing powers. Once and again he made a movement as though he were about to throw himself into the river, but if he were tempted to commit suicide, for the time he conquered the impulse. When at last he turned to go home, his wife hurried before him, and was in bed by the time he arrived. He appeared to have recovered himself completely. He talked with calmness, and was more affectionate than he had been for a long time. When his wife awoke in the morning she missed him from her side. She was seized with a horrible presentiment, which was only too terribly realised when she hurried into the studio. Claude had hung himself in front of a picture on which he had laboured for years, striving to create a masterpiece, and always failing in the execution.

Cases of alcoholism are numerous in the Rougon-Macquart novels. One of them, which we meet with in *L'Assommoir*, is described with considerable detail. It is that of Coupeau, the husband of Gervaise Macquart. His father met with a fatal accident when he was drunk, but with that exception Coupeau's family history appears to have been good, for all his blood relations mentioned by the novelist were healthy and temperate, and probably his case may be regarded as one of acquired alcoholism.

Coupeau was a plumber by trade, and when he first steps upon Zola's stage he is a hard-working man, leading a respectable life, and expressing sentiments on the drink question which would have done credit to the president of a Total Abstinence Society. For some years after his marriage Coupeau lived happily and soberly with his wife, who bore him one child, of whom he was passionately fond. One day he fell from the roof of a lofty building on which he was working and broke his thigh. It was six months before the man was about again, and then it was observed that a marked change had come over him. Possibly he had contracted lazy habits during his convalescence; possibly also the shock of the accident produced cerebral changes which resulted in weakened self-control. The formerly industrious man was in no hurry to go back to his employment, but was content to live on the earnings of his wife, who had set up as a laundress, and by skill and hard work had acquired an extensive business.

Little by little Coupeau contracted the habit of loafing about and drinking. He did hardly any work, and on several occasions came home drunk.

Zola traces the mental and physical decadence of a drunkard with a realistic pencil. At first, when the man is three parts drunk, his brain seethes with big and happy ideas; later, he becomes quickly fuddled. In the early stages something of his good nature remains, but he is very obstinate, and resists his friends when they try to get him to go home quietly, and his wife when she endeavours to put him to bed. He becomes very emotional. A trifle moves him to tears, and his sobs mingle with his hiccoughs. Later, his temper suffers. When he is drunk he would kill his father or mother in his anger, and when he becomes sober he has forgotten all about it. Gradually he loses all pride and ideas of respectability, and his habits become unclean and beastly. He loses even the sense of shame.

In his description of the case Zola lays stress on one mental change, namely, that hard drinking destroys the passion of jealousy, which is, I think, unusual. He says: "There are some husbands very jealous at twenty years of age, whom at thirty drink renders very complacent on the chapter of conjugal fidelity." I have, on the contrary, frequently noticed that drunkards are exceedingly jealous, even when they have not the slightest grounds for their suspicions.

One of the first physical symptoms that Coupeau complained of was a form of neuralgia of the scalp, which troubled him in the morning when he had slept off his drunkenness. Later, when he became a confirmed alcoholic, he suffered from intolerable itching and tickling sensations, prickings, particularly of the hands and feet, and a strange feeling as though icy cold water were running down his back. Early in the case he suffered from dyspeptic symptoms. In the morning after a drunken bout his tongue was furred, and he had the well-known taste of copper in his mouth. He grew thin. The expression of his face changed, and he had a shifty look in his eyes. He complained of attacks of giddiness, and the trembling of his hands, as time went on, became so great that he could not carry a glass to his lips without spilling its contents. But these symptoms were always cured by a stiff dose of alcohol, which also relieved his profuse expectoration. Age came on apace. He became deaf in one ear, and his sight became defective at a comparatively early age.

The downfall of Coupeau was not one unbroken descent. There were pauses, when the man seemed for the time to recover himself. Once he got a job at Étampes, and was absent from Paris for three months. Away from his companions—companions count for a lot in the temptations of a drunkard—he gave up drink, worked hard, and appeared to be cured by the country air. He returned to Paris “fresh as a rose, and with four hundred francs in his pocket, with which he paid two terms of rent which was owing.” But the improvement was only temporary. In a short time the man had resumed his old habits.

One evening he returned home wet to the skin. In the night he was attacked with cough and fever, “his sides beating like a broken pair of bellows.” In the morning the doctor who was called in diagnosed pneumonia. Coupeau was taken to the hospital. The next day the lung symptoms had disappeared, and the patient was transferred to another ward suffering from an attack of delirium tremens. When he was cured he promised reformation, and for eight days was reasonable. But what says the proverb? “The dog is turned to his own vomit again; and the sow that was washed to her wallowing in the mire.”

In three years Coupeau is said to have had seven attacks of delirium tremens. This, however, is not very remarkable. I

attended a patient for at least twelve such attacks in the same period of time. In the end Coupeau died of this disease. Zola has painted the final scenes in vivid colours. His description of the restlessness, the eternal going to and fro, the trembling of the limbs, the raised temperature, the profuse sweat, the hallucinations of sight and hearing, and withal, the dreamlike condition of the patient, is true to life.

In his terrible novel of *L'Assommoir* Zola preaches one of the most powerful sermons against the sin of drunkenness that it is possible to read, and he drives the lesson home with all his unrivalled powers of description. He hesitates at nothing, however ghastly, however disgusting, that will enforce the moral of his story. In the lurid picture of Coupeau's downfall he shows us a man, who has not only ruined himself by vice, but has dragged down with him his wife and child, killing the one and throwing the other on the street.

In the Rougon-Macquart series of novels there occurs a case of impulsive insanity, which has been worked out with considerable skill. It is one of homicidal impulse complicated with sexual perversion. The story is too long to be given in full, but it possesses several points of special interest which may be briefly referred to.

The family history was bad, and remarkable for the number of alcoholics occurring in the ancestry. The sufferer was Jacques, the younger brother of Claude Lantier, and it will be remembered that in the latter's case the mother and both the grandparents were drunkards. Zola blames, and probably correctly, this alcoholic heredity for Jacques' peculiar mental flaw. He says: "He paid for the others, the fathers and grandfathers, who had drunk, the generations of drunkards from whom he derived his tainted blood, his slow poisoning, his savageness which made him as one of the wolves which eat women in the depths of the forest." In the case of the sufferer himself alcohol aggravated the disease, or lit it up when it was quiescent. Jacques rarely drank. Often he refused even a *petit verre*, having remarked that the least drop of *eau-de-vie* rendered him mad.

The disease made its appearance early, soon after the age of puberty. Jacques was sixteen years old when he was first seized with the overpowering desire to kill. Impulsive insanity often appears early in life. The cases of suicide which

occur among young boys and girls, particularly in Germany, the country *par excellence* for the manifestation of mental disease—suicides which are either motiveless, or for which the assigned motives are either trivial or senseless—are probably of this nature. Pyromaniacs are frequently adolescents. Some years ago I had under observation a boy of twelve who, among other acts of incendiarism, set fire to a hayrick simply for the pleasure it gave him to see things burn.

In describing the crisis of the attack in the case of Jacques Lantier, Zola points out the annihilation, or rather the inhibition, of the sufferer's own will. It was as though another will had taken possession of his body. His hands did not belong to him. He no longer belonged to himself. He obeyed his muscles like a mad beast.

Linked to this inhibition of his own will is the dreamlike condition in which the sufferer lives. It is of the nature of somnambulism. Zola brings this out very graphically in his description of Jacques' journey through the streets of Paris intent on the murder of some woman, friend or stranger, no matter who she be. It is a veritable case of Jack, the Ripper. Jacques does not lose his way, but as he walks on he forgets the connecting links in his perambulations. Chance prevents the satisfying of the horrible craving which appears to become weakened and finally extinguished by sheer physical fatigue. Instinct brings the man back to his lodging as it brings a sick dog back to its kennel. Then occurs a profound sleep, a sleep that reminds one of that which sometimes follows post-epileptic mania. Jacques awakes with the sensations of one recovering from a fainting fit. He remembers an engagement which he had made before the oncome of the crisis of his disease, but of the crisis itself, of his long walk through the streets of Paris, of his thirst for blood, he has only the vaguest recollection.

In the novel Jacques only commits one murder, but, as that crime is the point to which the whole story has been gradually working up, we are provided with ample details of the mental condition of the murderer both before and after the deed. The murder was unpremeditated, and it was only the opportunity, that is to say, the alluring presence of the victim and the proximity of the fatal weapon, which awoke the insane impulse in Jacques' mind. The phrase "beside himself"

accurately describes the man's mental condition immediately before committing the crime. One can hardly say he thought. He was living in a dream of undefined horror. All he was conscious of was the object of his temptation and his own overwhelming thirst for blood. He hardly breathed. A noise like the clamour of a crowd thundered in his ears, and prevented him from hearing. In the intoxication, which had invaded his whole being, his hands seemed no longer to belong to him. But hardly had the fatal blow been struck than a change came over him. He was conscious of an immense feeling of relief, of joy, almost of pride.

One knows that when a man suffering from post-epileptic mania commits a crime, he often shows great skill in making his escape from the scene, and in covering up his tracks. The same ability may be observed in the conduct of the victim of impulsive insanity under similar circumstances. Full use is made of this feature of the disease in the story of Jacques Lantier.

Zola lays great stress on the absence of remorse in impulsive homicide, and in the concluding portion of the novel he again points out the amnesia or semi-amnesia which occurs after the crisis of the disease. After the murder, Jacques resumed his every-day life. He discussed the affair with calmness when it happened to be mentioned in his presence. As far as he was concerned, the crime might have been committed by another individual altogether. Even in giving evidence at the trial of two men wrongly charged with the murder, Jacques was perfectly tranquil. "This cross-examination, which ought to have troubled him profoundly, left him in an absolute lucidity of mind, as though the affair in no way concerned him. He gave his evidence as a stranger, as an innocent man; since committing the crime not a fear had disturbed him, he did not even think of such a thing. With memory abolished, his organs in a state of equilibrium, his health perfect, he stood there in the witness-box, with neither remorse, nor scruples, with only an absolute unconsciousness of his crime."

Among the many degenerates who play their parts in Zola's great tragi-comedy, it is natural that we should find a few imbeciles. The rôles assigned to them are not, of course, important, but, allowing for perspective, their characters are as real and life-like as those of the heroes and heroines of the various dramas.

As in the case of those whom we meet in the world, Zola's imbeciles differ greatly in mental endowments. One of the most intelligent, and at the same time the least vicious, is Désirée Mouret. Her family history is the same as that of her brother, Serge Mouret. The case appears to have been one of congenital imbecility. When the girl is first brought under our notice she is fourteen years of age, tall and strong, but mentally a child of five. She was apparently incapable of learning anything. If one attempted to teach her to sew, she had headaches and giddiness. All she cared about were birds and animals, and the insects and other creeping things she found in the garden. Her laugh was that of an infant, and she was easily moved to tears.

During the next three years there was no improvement. She cared nothing about her clothes, or about personal cleanliness. It was dangerous to leave a box of matches within her reach, for she was as fond of playing with them as a little child would be. She showed herself affectionate to those who were kind to her, but her love had no depth.

About this time she was sent from her home, where she was neglected by everyone, to the country to live with her old nurse. Here she was well fed and cared for, and allowed to amuse herself all day long in the poultry yard. A year or two later she went to live with her brother, Serge Mouret, the parish priest of Artaud. These changes were beneficial. Désirée became happy and contented, and although there was little real mental improvement, physically her development left nothing to be wished for. The picture which the novelist draws of her in her twenty-second year might be that of the antique statue of a young goddess. She had a fresh, fair, and rosy complexion, a graceful figure, and well-formed limbs. But her brain was empty, and she had no serious thoughts of any kind. In short, she was a magnificent animal—an animal endowed with the gift of laughing, for her sonorous laughter resounded from morning to night in the house, in the garden, and especially in the poultry yard, where she reigned supreme. "Without doubt," says Zola, "it was her feebleness of mind which made her love animals so much. She was only at ease in their company. She understood their language better than that of men, and she cared for their wants with maternal tenderness." One might say that her maternal instinct found expression in her care for animals.

But her love for animals was as shallow as her affection for her human friends. She could wring the neck of a fowl or chop off the head of a goose, when the birds were wanted for table, with perfect *sangfroid*, and she stood by perfectly unmoved while the butcher killed a favourite pig. Possibly in this may be seen something analogous to the love of cruelty which one observes in certain degenerates.

Zola tells us no more about the girl, and one is left to speculate as to what became of her in later years.

The case of Charles Saccard is very different. His family history was fairly good, for we have to go back four generations to find a case of insanity among his ancestors. But probably there was a more immediate cause for his imbecility. He was the illegitimate child of a young maidservant, who subsequently, however, had healthy children by a strong and healthy husband. Charles' father was the dissipated and feeble Maxime Saccard, who was little more than seventeen years old at the time of the procreation of his son, and who, there is reason to suppose, was even then a syphilitic, for he died comparatively young of locomotor ataxia.

At the age of fifteen Charles Saccard had the appearance of a boy of eleven or twelve, but intellectually he was only a child of five. He was very handsome, and bore an extraordinary likeness to his ancestress, Adélaïde. With his long, fair, and silky hair, and his large, expressionless eyes, he reminded one of those *rois fainéants* who terminate a royal race. "He had neither heart nor brain," says the novelist, "and was nothing better than a vicious little dog, which rubs itself caressingly against people's legs."

And he was vicious. In spite of his tender age and his poverty of intellect, hereditary vice already revealed itself in the boy. Once the experiment was made of sending him to school, but he learned nothing, and in six months was expelled on account of his disgusting practices.

He was physically very delicate, and suffered from hæmophilia. He bled at the slightest scratch, and the hæmorrhage was with difficulty controlled. Before he had completed his sixteenth year he died of profuse epistaxis.

Another of Zola's imbeciles is the foundling, Marjolin. The child was discovered one morning in a vegetable market, half hidden in a heap of cabbages. He appeared to be between two

and three years of age. He was fat and healthy, but not very precocious, for he could only lisp a few words. The women of the Halles adopted him. He was a handsome little fellow, with auburn hair, and so plump and ruddy that he might have found a corner in one of Rubens' pictures. It was no use sending him to school; if you did so, he only fell ill. So he was allowed to run wild in the great markets, every nook and corner of which were soon well known to him.

Marjolin grew up strong and healthy, but was always very backward. At the age of eighteen physically he was already a man, but he had no intelligence. He lived, as Zola expresses it, only by his senses, one of which, namely that of smell, was remarkably developed. Like many other victims of mental infirmity he was abnormally sensual, being as lecherous as a buck rabbit. In spite of his apparent amiability, at the bottom he was horribly cruel, and nothing gave him greater pleasure than to inflict pain, or to see it inflicted on birds or animals.

When he was about twenty years of age Marjolin met with a severe injury to his head. There was concussion of the brain undoubtedly; possibly there was fracture of the skull—the details given by the novelist are not very clear. When he left the hospital he was as fat and robust as before, but he was far more of an idiot. He laughed at nothing in particular. He stammered and lisped, and many words he was not able to pronounce properly. He was as obedient as a sheep. When anyone asked him a question, he would repeat the speaker's last word monotonously in a sing-song voice. And so, little better than a brute beast, the poor youth passes from the scene.

As is well known, some idiots and imbeciles are fairly good-looking. But they are rare; the majority are ugly, and often deformed and repulsive in appearance. It will have been observed that the three which have been selected from Zola's novels are described as being remarkably handsome. This is due, I think, to the idiosyncrasy of the novelist. Zola was peculiarly susceptible to physical beauty. He worshipped the charm of form and colour as revealed in the human figure. It is exceedingly rare to meet with an ugly person in his novels, and when one does so, it is generally obvious, I think, that the ugliness is employed to throw into higher relief the beauty of

the other characters which happen to be on the stage at the same time. Consequently the writer could not refrain, there being no reason to make them repulsive, from clothing even miserable idiots with physical attractions.

Apart from his studies in actual insanity, in his delineation of normal character Zola has made ample use of the symptoms of mental disturbance which are found among the sane. In several places he has shown the effect of fatigue and of starvation on the mind. In others he has described the delirium of sickness and of approaching death. In his novels are to be found examples of delusions, illusions, and hallucinations, particularly of the latter, probably because they lend themselves more than the others to dramatic treatment. He points out with great justness the part played by fatigue, either physical or emotional, in the production of the phenomenon of hallucination. In one of his most realistic descriptions he employs a hallucination, in the production of which both fatigue and expectancy are factors, to heighten the tone of the picture. A railway-train is rushing through a terrible snowstorm, and the engine-driver, worn out by the long journey, is straining his eyes as he endeavours to make out the expected signals in the dazzling whiteness. Again and again he imagines that he sees the red glare which should warn him of danger in the distance. His hands tremble as he grips the lever. But before his muscles can contract, the illusion fades away, and he realises that he is deceived.

Zola's great charm is his mastery of colour, and consequently his power of describing the concrete, but most of his readers will, I think, admit that he also takes a place in the front rank of psychological novelists.

(1) "Dr. Pascal Rougon: Zola's Study of a Savant," *Edin. Med. Journ.*, January, 1917.

Dreams and their Interpretation, with Special Application to FREUDISM. By Sir ROBERT ARMSTRONG-JONES, M.D., F.R.C.P., F.R.C.S., Lecturer in Psychological Medicine to St. Bartholomew's Hospital, and Consulting Physician in Mental Diseases to Military Forces in London, late Resident Physician and Superintendent of the London County Asylum, Claybury. (By arrangement with the Editor of the *Practitioner*).

IT may seem out of place, whilst we are face to face with so grim a reality as a war for our very existence, and a war which has so deeply affected the life of every individual in this country as well as within the Empire, that we should be discussing the realms of dream-land; but we may claim that the "Bowmen," in the early days of the war, laid particular emphasis upon dreams—for to these of our brave warriors appeared the "Angel of the Mons," and the "unconscious mind" has been drawn, in literature at any rate, into the tragedies of the war.

In regard to mental diseases there has been witnessed, among our soldiers during this war, a marked dissociation of the elements of the mind, and the influence of the emotions upon conduct has been more than confirmed. The attention has been engrossed, and the mind has acted automatically and unconsciously without the direction of the will. Sir William Hamilton stated that consciousness cannot exist independently of some peculiar modification of mind, but some modification of mind (meaning the unconscious) is possible without actual consciousness. This field of the unconscious mind is not, as is claimed for it, the recent discovery of Freudian psychologists. Consciously and "unconsciously" the feeling of all medical men has been how best to win the war, and the Director-General of the Royal Army Medical Corps has been supported in his work with unspeakable patriotism by the whole medical profession; there has been a general undefined feeling that life should be preserved, grief assuaged, and suffering relieved, and an analysis of this "unconscious" feeling has been a favourite study among those who endeavour "to heal the mind." As an instrument in this analysis the study of dreams has been regarded as of utility to unravel its mysteries. It is claimed that the interpretation of dreams may help to *bring out of*

the "unconscious mind" what is perplexing and hidden, and may thus help to restore the balance in the unstable and the neurasthenic who have suffered so extensively from mental shock of various kinds. The laboratory of the mind is open to all, but it must be especially attractive to students of mental conditions who take more than an academic interest in the subject. We are, therefore, justified in seeking for explanations of facts such as dreams which are within the experience of all.

The subject of dreams has interested mankind since the early days of primitive culture, and long before the dawn of history. Many and varied have been the speculations in regard to them, and the philosophers of antiquity entertained great diversities of opinion as to their cause and meaning. Dreams may be said to have a world of their own, and to have only obscure links of connection with any other facts in human experience. The savage regarded the dream-world as similar to, only more remote than, the one he dwelt in. When he fell asleep his second self left his body for unfamiliar haunts, where he met the second self of his dead ancestors. Socrates believed in the divine origin of dreams. Lucretius accounted for them on the principle that ideas or thoughts were material things which could be detached from each other, and be made to strike upon the mind. Porphyry ascribed dreams to the influence of a good demon, who warned the dreamer of the evils the bad demon was preparing for him. Baxter, in his work upon the soul, attributed dreams to the agency of good spirits which descended from their proper sphere, and condescended to weave midnight visions for poor mortals. As sleep has something awe-inspiring and inexplicable, so dreams, viewed from the waking state, have no less strange or perplexing a reality.

Dreams have been defined as "conscious processes during sleep," a definition which implies a self-contradiction, for conscious processes deny sleep, and normal sleep is attended with unconsciousness; but this unconsciousness may indeed be slight, yet it is not infrequently profound and even complete. During deep sleep the senses are unaffected by external, and even by internal impressions, yet it has been asserted that the mind is never at rest during sleep, and that there is always some dreaming. Dreams have also been defined as thoughts, or a series of thoughts, experienced in sleep—*i.e.*, a train of ideas

presenting themselves to the mind during sleep. To-day, according to the followers of Freud, the definition of a dream is "the symbol of an unfulfilled wish," the meaning of the symbol having to be interpreted by an assumed psycho-analytic "code"; and the art of the psycho-analyst lies in the interpretation of these symbols. Because of its symbolic function a dream is looked upon to-day as having its root firmly fixed in the experience of the waking life, whilst its superstructure lies in the unreality of phantasms. It may help to understand the terms "symbol" and "symbolism" if we state that they are only applicable when the dream is interpreted, *i. e.* the dream then becomes the symbol of the meaning elicited. The terms themselves apply to the dream as recorded or the manifest dream, which is always centralised round certain subjects connected with the waking experience, and not, as erroneously believed by some, always and invariably connected with sexual matters. This is an injury to the dreamer, and an unnecessary contravention of the proprieties, and it is against experience to regard all dreams as desires. In other words, the dream, according to Freudian interpretation, always means the gratification of suppressed sexual desires.

The history of dreams is a long and ancient record, and authorities in the past have offered many explanations as to the process and import of dreaming. The Old Testament describes many dreams, also their interpretation. We have the beautiful dream of Jacob's ladder, and that of Joseph, which he related to his brothers, also the dream of Pharaoh and of Pharaoh's servant, of Solomon's choice of wisdom, through which he obtained in addition riches and honour. The dream of Nebuchadnezzar, which, as frequently happens, he himself had forgotten, was with Daniel's help revealed and subsequently interpreted, often the quickest way then to royal favour, and in acknowledgment of which the "King made Daniel a great man." The influence of dreaming upon the conscience is shown by the dream of Job, when he affirmed that "God speaketh once, yea twice; yet man perceiveth it not. In a dream, in a vision of the night when deep sleep falleth upon man; then He openeth the ears of men and sealeth their instruction, that He may withdraw man from his purpose." In the New Testament there is Joseph's dream, both before and after the birth of the Saviour; the dream of the three wise men,

and the dream of Pilate's wife, which were all quoted as messages from the spiritual world. Shakespeare puts into the mouth of Mercutio the cause of dreams: "Which are the idle children of a brain, begot of nothing but a fantasy." Byron, Milton, Robert Louis Stevenson, who stated that the motives for his best romances were inspired by dreams; Coleridge, Moore, and John Bunyan have all dwelt upon this attractive subject, and Bunyan stated that the whole of the *Pilgrim's Progress* was revealed to him in dreams. Certain races, like the North-American Indians, are stated to look upon a dream as a sacred event, being the most ordinary way in which the gods make known their will to man. In the *Journal* of a voyage to North America, Charlevoix relates how an Indian dreamed he had his hand cut off, which occurred the next day. The poor still have their dream-books, and they often pay for the "meaning" of their dreams.

It may help to clear our conception of the working of a dream if we briefly state how the mind works normally in the waking state. All of us are brought up to observe certain conventionalities, and to regard with solicitude certain social laws and amenities, in consequence of which feelings of undue assuredness, aggression, and self-assertiveness are kept under or repressed; and out of regard for social customs certain tendencies or passions are also kept under control, a feeling of self-restraint and inhibition being thus exercised. All of us who are properly brought up look upon ourselves with a certain compulsion in regard to observing the courtesies, ceremonies, and conventions of life, and our conduct is formulated accordingly. These compulsions eventually become automatic restraints, and they tend to keep up the structure and wholesomeness of human society. They constitute the feelings of social obligation and of personal regard for others, and are based upon certain instincts which have emotional representations, such as fear, anger, joy, sorrow, love, hate, and disgust.

When, let us say, an object is presented to one of the senses—for instance, to the sense of sight—all the unconscious feelings of restraint which have been instilled into us in youth, and which in grown-up people act automatically, are applied to the object we have in view, and our conduct or reaction towards it varies accordingly; for our unconscious life is always acting in numberless and unsuspected ways upon our conscious mental

life. Supposing, for example, that we were watching a lady at some social function who was wearing a green carnation : certain rays of light from this object impinge upon the retina ; these are conveyed to the brain, and there stimulate a mental picture, *i.e.*, the outward form, figure, surrounding circumstances, time and place of the person are appreciated as an external object, which, when absent, may be reproduced as an image, a picture, or idea upon the cerebral cortex, so that, in the absence of the object, an impression of the lady can be revived in memory upon the mind, the person being "remembered" with all her attendant associations. The mind recalls the occasion either with pleasure, or perhaps with pain, and in idea the whole previous scene can be re-enacted, even to the recognition of personal charms, gestures, verbal movements, conversation, habits and ways ; these are accompanied by their emotional reactions. All can be revived as representative images, so that the mind is not only able to cognise the object associated with a definite feeling, and with all the voluntary movements, but the image, or memory picture, may also be revived with all the accompaniments belonging to the original presentation. These three factors, *viz.*, cognition, feeling, and will, are the invariable accompaniments of every mental process, whether an object is presented from without, or its picture is experienced from within. The same analogy applies to presentations and representations referring to the organic sensations. In dreams these elements of the mind tend to become dissociated ; the will remains in abeyance, whilst the cognitive elements may be represented alone, or grouped with others which are similar or dissimilar ; the feelings may also be represented to the mind, and may either be painful or pleasurable. It is the will which refuses to act, and it is questionable whether a dream, once initiated, can ever be modified by the will, although some persons state that they are able to modify a dream, and that they have frequently done so.

The recollection of these dissociated elements of a dream when recalled by the memory is often so weird, so striking and so suggestive, that an attempt to interpret their meaning is inevitable, and the phenomena of dreams have thus become objects of conjecture, of curiosity, as well as of vivid interest. In consequence, many persons have endeavoured to read into them some hidden meaning, whilst others regard them with heedless indifference, considering them to be only a confused

and jumbled record of sleep-memories unworthy of serious reflection. Possibly the truth in regard to dreams lies between these two extremes of undue scepticism and a too *facile* credence. It is difficult not to suspect a meaning in some dreams, as in the dream of Mrs. H—, whose husband went to New York on business. She dreamed one night that he was sleeping on the tenth floor of a hotel which took fire, and that he escaped with difficulty. The next morning, feeling very uneasy, she cabled asking how he was, when he replied: "Quite well and safe, but had a narrow escape last night when the hotel was burnt down."

The following, sent to me by Dr. Leonard Guthrie, relates the experience of a credible witness, E. W. M—, a distinguished scientist and F.R.S. In his own words he writes:

"When I lived in Canada the following case occurred: An Englishman and an American clubbed together to try to reach the Klondike goldfield by the overland trail, *i.e.*, by going due north from the prairies instead of following the usual course of crossing by the Canadian-Pacific Railway to Vancouver, then taking steamer up the coast to Seattle, and crossing back over the mountains *viâ* White Horse Pass. After the pair had passed on their journey what the American judged to be the outposts of civilisation, he shot the Englishman while he lay asleep, tried to destroy his body by burning it, rifled his baggage, taking everything of value, and returned. When he was questioned as to what had become of his companion, he replied that he (the American) had become discouraged, and had given up the expedition, but that the Englishman had pushed on. But there was an encampment of Indians close to the spot where the crime had been committed.

"The old chief saw two men come north and encamp; in the night he heard a shot, and saw one man go south. He went to the camp, saw the body, and informed the nearest post of N.W. mounted police. They trailed the murderer, and arrested him before he could escape across the U.S. border. He was brought to Regina. Meanwhile the brother of the murdered man in England had a dream, in which he saw his absent brother lying dead and bloody on the ground. He came down next morning very depressed, told his dream, and announced his intention of going straight out to Canada to see if anything had happened to his brother. He arrived out as the trial of the murderer was

progressing. He identified several articles in the possession of the murderer as the property of his late brother. The murderer was hanged at Regina."

Another dream of a prophetic nature, and relating to the assassination of Perceval, is recorded in the *Book of Days*, i, p. 617. I am further indebted to Dr. Guthrie for calling my attention to it. It was the dream of Mr. John Williams, of Scorrier House, near Redruth, in Cornwall. He died in 1841, and was described in the *Gentleman's Magazine* as a man of the highest integrity. On the night after the assassination, when the facts could not have been known to him by any ordinary means, he dreamt that he was in the Lobby of the House of Commons, although he had never been there in his life. He saw a small man enter dressed in a blue coat and a white waistcoat. Immediately after him entered another man in a brown coat with yellow buttons. The latter drew out a pistol and shot the former, who instantly fell, blood pouring from a wound a little below the left breast. In his dream Mr. Williams heard the report of the pistol, saw the blood flow out and stain the waistcoat, and he noticed the colour of the victim's face change. He further saw the murderer seized and observed his countenance. When asking in the dream who had been shot, he was told—"The Chancellor." Perceval was Prime Minister and Chancellor of the Exchequer at the time. Mr. Williams then awoke and mentioned the matter to his wife, who made light of it. At her suggestion he went to sleep again, but dreamt the same dream a second time, and then a third. After this, between 1 and 2 a.m., he got up and dressed. In the forenoon of the next day he went to Falmouth, and related his dream again to Mr. Tucker, of Tremanton Castle, and his wife. Mr. Tucker replied that the description was like the Chancellor of the Exchequer, Perceval—although Mr. Williams had never seen Perceval nor had anything to do with him. Just then the news of the assassination reached Truro, which was seven miles away. Six weeks after the event Mr. Williams went to London and to the House of Commons. He recognised the Lobby, the exact spot where Perceval fell, and the dress of both men in the dream corresponded precisely with those actually worn at the time. The extraordinary thing about this dream was that a minute account of it was published in the *Times*, another was given to Dr. Abercrombie, whilst Mr. Williams' grandson communicated

an account drawn up from his grandfather's words. All these agreed in every detail with the first narrative of the dream recorded by Mr. Williams.

Whether we regard dreams as in any way prophetic or not, as stated by Andrew Lang, it is remarkable, when we consider the enormous number of dreams, that there are not more than occasional coincidences. The successes only are noted, whilst the failures as to prophecy have been forgotten. It was probably through the effort to elicit some meaning from dream phenomena that the idea of a soul first arose, and that this soul could exist apart from the body and survive its dissolution. The phenomena of dreams, or "visions" as they were called, suggested, as stated, excursions of the soul into some distant regions, which it explored, and reported what it had experienced to the waking soul, so that if the dream were of the dead, the soul was believed to have travelled to the regions of the dead, and, if of the living, that the soul had wandered into the society of other living souls, and had some message of importance to convey to the dreamer, if only it could be properly and adequately interpreted or explained. Thus they were "symbols" of some message to be imparted by a supernatural being, *i.e.*, if the dream could be properly solved. This "symbolical" view has been revived to-day, although the symbols are erroneously interpreted to be those of sexual disturbances. The interpreter of dream messages, or the "seer" as he was called in ancient times, was, naturally, a sacred person, who came to be regarded with considerable importance, if not with prophetic awe and as of divine origin. Thus arose the magician, or the "wise man," whose survival was formerly represented by uncultured and irresponsible fortune-tellers, but who are to-day represented by competent and able psychologists, who, by methodically arranging and sorting the spontaneously uttered thoughts of a person who submits to examination, or by comparing the verbal association of a series of responses, ascertain the workings of the unconscious mind which lies beneath the manifest dream. According to the teachings of certain psychologists, all thoughts and actions are assumed to be coloured by, if, indeed, they do not directly arise out of, the unconscious mind.

The careful study of the mental life, normal and morbid, has been the work of modern science, which has elucidated and solved many of the dream combinations—together with other

products of the imagination—by the acceptance of that intimate union which exists between mind and body. Upon the close relationship between mind and body, it has been found that the chaotic play of images in dreams is able to throw much light upon normal mental processes, and upon the laws which are observable in the working of the mind during the waking state; hence the appropriateness of studying dreams in this new light, and the justification of a claim for those who study dreams to-day, truly to be called “interpreters,” for they investigate upon the solid and substantial ground of science, the intimate and fundamental activities of the human mind in health and disease, without the need of resorting to supernatural agencies which had to be invoked in former days.

The interpretation of dreams by the psycho-analytic method is based upon the theory that in the hidden mentalities or “unconsciousnesses” of our minds are found the explanation, perhaps the secret, at any rate the quite sufficient interpretation, of many abnormal mental occurrences and divergent mental states, such as dreams, lapses of memory, absent-mindedness, obsessions, delusions, and all kinds of intrusions and dominations of semi-repressed thoughts.

It is hardly necessary to state that dreaming is not confined or limited to human beings. We are familiar with the appearance of dogs which jump and bark in their sleep, more especially after active excursions, or following upon hunting expeditions; those who keep canaries have doubtless heard their unexpected pipings whilst asleep on their perches.

In order to understand the nature of dreams it may be desirable to consider the physiology of sleep, and although the exact cause of sleep is not definitely known, the concomitants of sleep are familiar. We know, for instance, that in sleep all the normal activities of the organism are appreciably lowered, and it is not certain that sleep itself is not a state of debility, for there is a lowering of the pulse-rate and of the blood-pressure, there is also a slowing down of respiration. There is, probably in addition, a state of venous engorgement, permitting the products of fatigue to pass by osmosis into the blood-stream or into the lymph-channels during this engorgement, which is favoured by the supine position of the body when at rest, thus giving a better supply of blood to the head, and so predisposing the brain to dreaming. Yet we do not know the inner state of

the organ of mind, *i.e.*, the intimate structure of the cells in the brain cortex during sleep, nor their relation and dependence upon the ductless glands, in particular the pituitary, as has been pointed out during hibernation. In regard to the nerve-cells, therefore, conjecture must take the place of certainty. The brain cortex, normally, is composed of innumerable cells and fibres, the latter forming the connecting links and threads between the cells, their function being to convey sense-impressions from without the body, and then to convey these transformed impressions outwards for the control and proper working of the various organs in the body.

In an average brain the cells or neurons are computed to number 9,000 millions, so a thought, or an idea, or a purpose initiated in one cell, or a group of cells, is immediately linked up with thoughts from scores or hundreds of others by means of these fine connecting fibres. It is believed (Lépine) that the fine fibres—which are called dendrites, from their tree-like appearance—undergo a retraction during sleep, leading to a partial separation of their terminations, thus leaving a space, so to speak, which cuts off nerve-currents and thus induces sleep. This being a theory only, it has naturally evoked another and an opposite explanation of sleep, *viz.*, that sleep accompanies a greater and more extensive prolongation outwards of the fine nerve-processes of the cells (Lugaro), which then touch each other more closely and intimately, thus diffusing rather than concentrating nerve-energy, the effect of such a diffusion being to lower nerve-potential, and so to bring about a general loss of nerve-energy and thus to favour sleep. The whole nervous system presumably participates in this lowering activity of the circulatory and other systems during sleep, yet it is not ascertained whether this lowering is sufficient to interrupt the continuity of the unconscious as well as of the conscious life.

Dreaming, as is well known, can be induced by such agents as opium, alcohol, and tobacco, and this would favour the view that dreaming was a morbid process. It is certainly a process which more often occurs just before or just after the actual state of sleep, and for that reason these dreams are called "hypnagogic." It is general experience that there are more clear as well as more fantastic images just before going to sleep, or just before being thoroughly awakened, than occur during profound sleep. It is doubtless also within the experience of

everyone that the vivid scenes of the day are more clearly impressed upon the mind during the intermediate state between sleeping and waking than during sleep. Indeed, there is much in the basis of observed facts to justify the opinion that dreams occur just before the sleeper awakens, and as he is in the act of entering into consciousness, that they are a part and parcel of the awakening, and merely furnish the material from which the dream is subsequently elaborated, the elaboration only occurring after consciousness has been established. Children often dream before going to sleep of events which occurred the previous day. The *Daisy Chain*, by Charlotte Yonge, when read to a little girl, caused dreams of carriage accidents, and "Peter Pan" caused dreams of flying to the Never Never Land in the case of a clever, impressionable child. Freud asserts that sexual traumata begin early, even in intra-uterine life, and that fear begins during the process of the passing of the child through the pelvis of the mother, and the memory of this "birth fear" is of "unconditioned omnipotence" in after life!

The materials of which dreams are made are chiefly memories of past experiences, although they are often modified by the influence of temperament and environment. Most dreams are buried in the unconscious mind, which is partly the reason that they can be so rarely remembered fully after waking; this is certainly the case with children. It is believed that the age of greatest dreaming, as well as that of the most vivid dreams, is between twenty and twenty-five years. Women sleep more lightly, and dream more than men do; it is certain, at any rate, that more women than men relate their dreams, and women who are accustomed to dream sleep longer. The majority of dreams occur after 6 a.m., although many occur before four o'clock. The time during which a dream is enacted is wonderfully short; a few seconds of time in a dream would be equivalent to days in the waking state, and many dreams may be recorded in support of this statement. The precipitation of images in a dream is so great, and the attention so lacking in precision, that there is nothing to regulate them in time. An analysis of dreams points out that the great majority, 60 *per cent.* of them, relate to sight—thus the ancients were correct in describing them as "visions"—whilst only 5 *per cent.* relate to the sense of hearing; 3 *per cent.* have reference to taste, and only 1.5 *per cent.* to smell. In dreams the two senses, taste

and smell, which are the oldest, most primitive, fixed, and organised of the senses, frequently attach themselves to sight and hearing, which, nevertheless, are easier disturbed because more highly evolutionised, the objects to which taste and smell relate being thus visualised or heard.

The faculties of the mind, to borrow an abstraction, "go to sleep," as it were, in certain orders. We know that we feel fatigue so far as our "judgment" is concerned sooner than we do in regard to our sensory life, we hear sounds during a light sleep and are sensitive to rays of light or to the sense of touch, but because the power of forming a judgment is affected early in sleep there are imperfect associations and images; phantasies and dreams arise, which are the common experience of all. Some power of association and some power of judgment are left in light sleep, but the lessened power of these two "faculties" in dreams reveals the unrestrained, incongruous, and disorderly pictures left on the mind.

It has often been pointed out that insanity and dreams are allied so closely that insanity has been described as a "waking dream," and a dream as a "sleeping insanity." The insane, like dreamers, are under the domination and control of illusions and hallucinations, but they adhere to their dreams or delusions, and no appeal to the senses, to reason, or to the judgment can reconstruct their mind; whilst dreamers, so long as they remain in the dream state, continue to experience their insanity, a reference to a fixed objective standard being impossible during sleep, so that the mind, for the time being, remains unsound. Here, however, the similitude ends, for, upon an appeal to the senses and to reason, the dreamer awakes, whereas the insane person continues in his unreason. It has been stated that dreams may be followed by insanity, and my experience confirms this, although it is doubtful if a dream can ever be the actual cause of insanity, both being probably the product of an already existing mental weakness. A lady under my care, C. W—, dreamt she had, during the night, cut her husband's throat and thrown his body out of the window. She grieved, worried, and became so distressed at her imagined murderous conduct towards her innocent partner that her mind became deranged, and she lapsed temporarily into acute insanity. A man, C. V—, used to dream that he had destroyed St. Bartholomew's Church, and was so alarmed at the notion he could

be guilty of such sacrilege that he feared going to sleep, and he also became insane. Another man, H. K—, after the last air raid, dreamt that his room was being "bombed"; in his dream he saw the explosion, smelt the asphyxiating gas, heard the crackling of the fire, and from that moment his mind seemed to give way. But it is quite open to argument whether in each case the dream was not the first symptom of the mental breakdown caused by fear. It may not always be easy to separate hallucinations from dreams, but it is a fact that insane persons dream more often than do the sane, and the continued presence of hallucinations in them, together with the natural wish to explain hallucinations by some plausible but erroneous factor, causes the insane mind to be one which is readily responsive to slight stimuli. It certainly explains why the insane are light sleepers, and are more frequently disturbed by imagined causes than the sane. The rays of the moon penetrating between the folds of a curtain or along the margins of a window-blind not only disturb sleep by the light they shed, but the rays may also suggest the figures of persons sent to watch them, or to endanger their lives, hence the wakefulness and dreams of the insane; and the general belief is true that these frequently experience exacerbations of their illness during a full moon. It is a fact, known to physicians, that many of our wounded soldiers home from the trenches suffer from dreams of a fearful and horrifying kind, due to the memory of constant explosions, and of the awful effects of exploding shells upon human life. These dreams are accompanied with all the physical symptoms of fear; there is present a lowering of the surface temperature, there is also the blanched face, the anxious expression, and the perspiring skin.

Dreams are closely related to the condition described as somnambulism, which is one of intense abstraction, and nearer to wakefulness than is the dream state. The sleep-walker is guided by the motive which actuated his waking moments, and he sometimes executes performances with a degree of perfection which is not even possible to one in perfect possession of his senses. I have known a nurse get up in the middle of the night, collect all the patients' day attire, and arrange the clothing for about forty patients at the foot of each bed, after which she proceeded to collect all plants and flowers from an adjoining bath-room and place them in the ward, as in the day-

time. She then retired to rest, but upon awakening she had forgotten all the details of the sleep-walking incident.

The state described as "abstraction" or "reverie" is also related to the dream state. In this the attention is so fixed and concentrated upon a train of ideas that, although the eyes are open and sounds are heard, yet no impression is made upon them by external objects. In the condition described as "ecstasy" figures and landscapes may be seen as real; the former are most often seen by religious devotees and sojourners in the cloister. Blake, the artist, was able to concentrate his attention upon his dreams so as to remove all distraction. He could paint pictures without sitters, who were so real to his imagination that he could carry on conversations with them whilst painting their portraits. Among persons whom he thus painted were King Edward I and Queen Catherine of Arragon.

Another state of mental abstraction is the pleasant and extravagant kind called "Castle-building in Spain"; a condition in which imaginary scenes of an agreeable form are constructed and indulged in for the enjoyment or satisfaction anticipated. "Day-dreaming" is another state which is an entertainment that has probably been practised on occasion by each of my audience. "Trance," "lethargy," and "catalepsy"—when the mind is concentrated upon an absorbing but narrow range of ideas—are also related to dreams, and so is the "hypnotic" and other states of partial consciousness, but they cannot be entered into here.

We have referred to the "unconscious mind"; the phrase is so frequently met with that it is used in various senses. Carpenter used it in referencé to certain psychical states which he described as "unconscious cerebration," during which acts were performed without the knowledge of the cognitive self; one forgets, for instance, a line of poetry, but remembers it later when one has ceased, consciously, to think of it. In the course of conversation one may forget a word, and having "waited and seen" the word recurs later without effort, perhaps, when the attention is engaged elsewhere. This tends to show that there are unconscious mental operations going on of whose nature we are ignorant, but the thoughts are there in the unconscious mind all the same, and they seem to be interposed between conscious ideas, and to be dug up, as it were, with them. Possibly every conscious idea arises out of and

dies away into an unconscious mental state, and, according to some, there are three degrees or kinds of thought; firstly, thoughts of which we are conscious, and which, when given attention to, are raised into what is called the "focus" of consciousness; secondly, thoughts which are in the rest of the field of consciousness, which are present, but unnoticed owing to inattention; for instance, in the theatre we are intent upon the evolution of dramatic situations, but are inattentive to the audience or oblivious to the staging. The third depth whence thoughts emerge is the unconscious area which could not attract attention until their position had been raised into the full and clear focus of attention by some association or suggestion.

It is preferable, I think, to limit the term "subconsciousness" to the second of these states in which there is still present a certain limited sensitiveness left to ordinary sense-impression, whilst the "unconscious" state represents the third, *i.e.*, the primitive mind, so to speak, out of which conscious thoughts and intellectual processes rise and grow. The motive force of our acts is believed by some to take its origin in the unconscious mind, whilst the directive and controlling force is in the upper conscious levels which thus regulate the lower.

The technical analysis of dreams assumes that there is a dynamic trend of "desire" in the unconscious mind which is ever seeking for the gratification of personal feelings, passions, and sentiments, as against the controlled thoughts of the conscious mind. Psychologists who urge this trend or tendency in the unconscious mind assert that it is kept back and restrained by some imagined power called the "endo-psyche censor"—a wide-awake critic guarding the dream, and for which there is not the slightest justification—a purely fictitious and artificial ego which is continually struggling to repress the natural impulses and thoughts not acceptable to consciousness, this "censor" exercising a guardianship over sleep, even the deepest sleep. These psychologists describe the unconscious mind as an under-world of painful memories and wishes always seeking to obtrude themselves, and always in health being more or less successfully kept under "like steam in a kettle" by the artificial censor. Surely it is not in accord with experience that we can forget unpleasant and horrible scenes or thoughts. They are not thrust into an unconscious territory. Personal experience knows they are always before one, and it is impossible to "forget"

although we can "forgive" them, nor are these always related to sexual matters. When the passions emerge in the conflict they become the "latent" cause of dreams, obsessions, and longings; if dreams be the result, then the dream as remembered or recorded is the "manifest" dream, and the interpreter immediately attempts to elicit the latent wish of which the manifest dream is the symbol. By this analysis a clue is furnished to the real aim and personality of the dreamer.

Dreams are thus regarded as the resultant of a conflict between the censor and the repressed idea, the dream being the "compromise," and only to be solved by a code, for which an array of symbolism has been invented to serve as a key for its interpretation. If the dream be of the sea, for instance, then, according to the followers of Freud who have initiated this sex meaning, it stands as a symbol for "life," as, in their own words, "life needs the mightiest symbol, because existence depends upon the mighty and profound procreative force." If the dream be of an old house, then it is interpreted to be "the abode of life," and, to use the Freudian expression of the dream analysts, "we find it necessary to predicate a creative, myth-making tendency in the structure of the mind by means of which the currents of life beneath all thought become articulate."

The following from an able series of lectures recently delivered: "Breast-sucking is of sexual import," "constipation is a pleasurable experience," and the desire to retain fæces is sublimated into the desire to retain money, and fæces symbolises money!

The psycho-analyst always finds what he is looking for, and there is not a single object in the universe for which some sexual significance cannot be discovered, even the Zeppelins in the sky have a phallic symbol.

According to Freud, the child when born is a poly-morphic pervert and a universal criminal, and the dominating emotional factor is incestuous love, the Œdipus complex, and that the sublimation and criminal tendency give rise to the surgeon!

This sexual theory is over-emphasised, and the Freudians who urge sex as the basic origin of all dreams, of all obsessions, and of all longings, impulses, and neuroses are "sex-intoxicated," they read into dreams the fantasies of their own auto-suggestions. In life's reality surely there are other primary

and original instincts as well as sex, of which fear, self-preservation, anger, and hunger, and the many relations of the individual to the community are the most common examples. Deluded ideas about food, digestion, warmth, electricity, voices, and enemies are far more common in asylums than sex-delusions. All these run deep in the unconscious mind, and each has suffered far more repression than sex? It is against human experience that all dreams are desires, and it is repulsive that all dreams should be interpreted as relating to sex, and such an explanation has brought these conclusions of what have been called "chimney-sweeping investigations" into deserved disrepute. In the analysis of dreams, the method adopted for exploring the unconscious mind depends upon inferences drawn from what has been described as free or spontaneous association, "word association," and reaction time.

The latter has been much used in America as an auxiliary for the detection of crime by means of an instrument of extremely delicate mechanism, such as Hipp's chronometer, the examination revealing a shortened reaction period to word association if the accused be innocent, whilst the reaction period is longer if the accused be guilty, for he is endeavouring to keep back thoughts suggested to the mind in connection with the words presented.

What is the association of dreams with crime? I have questioned insane criminals about their dreams in connection with specific crimes, and although there is always some reserve about admitting revelations in connection with criminal acts, I find that they dream much as do other people. In this class there is a considerable difficulty in proving their hidden personal secrets, and in overcoming the resistance of the so-called "censor." In these cases the conscious and the unconscious cannot be easily brought together, and a clue as to their desires, impulses, or wishes is extremely difficult to ascertain. Moreover, this class is not an easy one to investigate, many of the criminal classes being mentally defective, although some are only morally so, especially as regards prudential considerations, for they cannot postpone present pleasure for future good. They are easily tempted and easily yield, and they have a diminished emotional as well as intellectual endowment. The "criminal type" is impulsive, and though they may not be insane, they have often a psychopathic inheritance and ten-

dencies. Their psycho-anthropological characters may be summarised as egotistic and anti-social, and they are not easy material for the psychological analyst. The discovery of crime through a dream, when the dreamer has by his own dream given himself away, is unknown to me in real life, and this is supported by the extensive experience of Dr. W. C. Sullivan. Dr. Leonard Guthrie reminds me of the story of the murder of Maria Martin by Corder in 1827, when dreams led to the discovery of the victim's body. As he also points out, there are numerous instances of murders having been discovered and avenged by the appearance of the murdered person's ghost. Shakespeare presents two instances in "Hamlet" and "Macbeth." "The Bells," in which Irving represented the Jew, Polonais, exemplifies a drama in which the murderer is being continually haunted by the dream sound of the sleigh-bells, and in "Tom" Hood's "Dream of Eugene Aram," "the unknown facts of guilty acts are seen in dreams from God." The usher, Eugene Aram, dreamed of the murder he had committed, and which he related long afterwards to the boy—"the horrid thing pursues my soul, it stands before me now"; "that very night two stern-faced men set out from Lynn, and Eugene Aram walked between with gyves upon his wrists." The suggestion here made connects the dream with the murderer's arrest. Hack Tuke relates a remarkable instance of a man dreaming that he had performed an act which rendered him liable to legal consequences, and for which he had been arrested. On awaking he was greatly relieved to find it was only a dream, but in the course of two or three days he committed the act in an insane condition of mind. He was arrested and brought before the court for trial, but was released to the care of his friends. There is no record of psycho-analysis assisting in or leading to the detection of crime, not even crimes relating to sex, for which the Freudians seem to have a peculiar predilection.

It will be admitted that a most puzzling terminology has arisen from the efforts made by this new school of medical psychologists to analyse dreams. If the dreamer fails to recognise the new and strange scenes in which the manifest dream is located, this is owing to its "dramatisation," and if the characters are unrecognisable there is "distortion." Should the chief characters be given a subordinate position there is a "displacement," but not infrequently there occurs a fusion of the characters, which

is "condensation." When the ideas in a dream become detached from their usual association, and are "converted" into some other psychic sphere, then they are being "sublimated" into some obsession or delusion. Hysteria, for instance, is the "conversion" of a "repressed" idea into some motor and sensory discharge, and if only the idea can be disclosed to the sufferer and by him disregarded, the result is claimed as a cure obtained by a "cathartic"—a word which is meant to signify suggestion, auto-hypnosis, or, as more recently hinted by Dr. Wm. Brown, "auto-gnosis." These terms, "depression," "displacement," "condensation," "transference," "intro-" and "pro-jection," "intro-" and "con-version," "sublimation," "determination," "exteriorisation," etc., a jumbled vocabulary of metaphysical abstractions.

I have quoted the above to show the complicated vocabulary invented by some psychologists to explain dreams, which, as Bergson points out, are only states of "relaxed consciousness." In the waking state we are always adapting ourselves to our needs, but in sleep we have ceased to select and choose. The mind in its relaxed state brings together memory associations which were formerly packed away in the "storehouse of the unconscious mind," the reason fills up the gaps, and a confused impression results which is the material of dreams.

As is well known, the brain cortex is restored and refreshed only during sleep, and it is a comfort to know that we dream most of events to which no attention has been paid; were it not so, our sleep would be disturbed and pre-occupied by events that are of importance, and which have been our greatest concern during the day, so that our waking life would be prolonged as a permanent dream into the sleeping life, and the necessary restoration and nutrition of the brain would be impossible.

It is most welcome that the revival of interest in dreams should have awakened the psychologist, the physiologist, and the philosopher; but one realises that progress must be at the expense of some long-held views or traditions. Unfortunately in this instance—if progress can be claimed—it is at the expense of some cherished proprieties, and I venture to think there has been an unnecessary pandering to the lower instincts of innocent men and women on the part of those who describe themselves as psycho-analysts. I believe that in the full

pursuit of this craft, which is on a par with mysticism, occultism, cubism, futurism, etc., there has been a distinct over-stepping of the decencies of sex on the part of some who have worked upon these investigations. The foreign teachers, who have been responsible for employing the "sex-mad methods" and the craze for new excitement, have, so far as this country is concerned, already received the recognition of a posthumous notice of their labours, and it would not be incorrect to state that among psychiatrists—in this country at any rate, thanks mainly to Dr. Mercier—Freudism is dead.

DISCUSSION.

SIR GEORGE SAVAGE said he felt particularly interested in this subject: he had written a book upon *Dreams and their Meaning* and had read many books on the topic. He was himself a perpetual dreamer, and therefore he could speak somewhat authoritatively in several directions.

First, there should come the definition of a dream, and that Sir Armstrong-Jones had not given in his paper. The best definition that he knew of—and it was important to consider this definition—was "mental action taking place during sleep which is more or less recognised on waking." On that the question of whether a dog is dreaming when it jumped or barked in its sleep could not be verified, seeing that we had no means of knowing whether the dog on waking had any recognition that a mental process had been in operation. In regard to what Sir Armstrong-Jones said about mental action always going on, one wanted a definition of mental action. The brain certainly always had blood circulating through it, and so was in a condition to react at any time, hence there was always present the potentiality of mental action.

Another question also which he considered important was the length, or rather the brevity, of dreams. He was in a position to say it was possible to have quite a long and detailed dream in a second. On more than one occasion he had been in a position to actually ascertain how long a dream occupied. On one occasion, of several, he was benighted in the Alps, and there was only one change of position he could obtain, namely, by lodging one foot upon a ledge opposite to where he sat. As soon as he lost consciousness in falling to sleep, his foot came down from its resting-place. Many times the foot was put up, and fell down immediately, gravitation would not permit of it resting there for more than a second or two. During one of these very brief periods he had a detailed dream, the character of which it was unnecessary to relate: the dream seemed to have occupied half an hour. On another occasion, while at his cottage in the country, he said he must go and change into dinner clothes. It was then 25 minutes past the hour, and he decided to sleep until the half-hour. At 27 minutes past the hour he had awakened and started relating a long dream which he had just had. There could be no doubt about it, as the clock was in front of him. He therefore affirmed that dreams could be almost instantaneous.

There also arose the question of the interruption of dreams from outside, by the censor, as one might say. One recognised that the cause of dreams, or the character of their association, might be something physical. He did not doubt that, in a certain number of cases, a sexual or urinary trouble or excitement might cause a person to wake up, hence the immediate precedence of that dream might have such a quality; but that all dreams were associated with sexual functions he did not believe. In passing, he said he wished he had been the father of the epigram which the author attributed to him about insanity being the state of "dreaming awake." It originated with Hughlings Jackson, but he (Sir George) had repeated it so often that he had now been credited with its origination.

The large question of the prophetic aspect of dreams, on which Sir Robert

touched, he must leave on one side. He did not know whether the author referred to that most interesting book on *Dreams and their Meanings* by that universal essayist Sir Horace Hutchinson, who seemed able to write on anything, from dreams to golf.

One felt there was a great deal in the sub-conscious mind, a subject on which one might speak in the absence of Dr. Mercier. In his teaching days he used to employ a simile. One saw a big excavation on the site of what was going to be a house. When the house was completed, the kitchen would be underground, and would be invisible. In our lives, in early years, the kitchens of our mind were filled up. He did not doubt that a person's experience had a great deal to do with his dreams. One of Horace Hutchinson's brilliant suggestions was that dreams were associated with either personal, parental, or ancestral experience; that, in fact, when one was flying in one's dreams it was merely the reminiscence of one's arboreal or simian ancestors.

Dr. ROTHSAY STEWART said he would like to make a few remarks, as the subject of dreams had interested him for many years. Some years ago he was discussing the subject with a friend, and they both tried to arrive at some explanation of dreams. After working at the matter for some time, they produced certain theories. After a little practice he (the speaker) found he could relate every dream he experienced to some event which had previously occurred in his experience, and not more than a day or two before the dream; it may have been in relation to something he had recently read. The theory which he and his friend propounded they found very workable. It assumed a submental stimulus. He never dreamed of anything which had been occupying his waking thoughts for any considerable time, and the reason probably was that those cells were already exhausted by the concentration bestowed on them. But during the day the attention might have been momentarily attracted to some object, or some book, and that might well be projected into the dream. The reason dreams were so incongruous was that the mind was unconscious during sleep, and the inhibitory power present during consciousness was in abeyance. An actual occurrence started the dream, but there was no necessary coherency. He believed his theory would be found workable by others, if they would try to remember events in actual life which had a bearing on the subject of the dream. He quite agreed that the submental stimulus causing a dream acted just before the awakening.

COLONEL SPRINGTHORPE said it had been his' misfortune to have to deal with some hundreds of shell-shock cases; and as a result of that experience he felt no doubt that in 99 *per cent.*—if not, indeed, 100 *per cent.*—of the cases the exciting cause was fright. So far as he was able to see, the sexual element had nothing whatever to do with it, though he questioned the patients a good deal. He was one of those who considered that Freud had made, in this matter, an unutterable mistake; his conclusion was practically an insult to humanity. There were many other things connected with these states of dreaming. Still, if people of predominantly sexual type were selected, there was no doubt that in them the sexual element would be the chief one. Having for many years made a careful study of his own dreams, he agreed with those who said they must be almost instantaneous. When he contrasted his dreams of earlier years with those he had now, he found that the present ones were much more regulated and orthodox: the persons dreamt about behaved themselves a good deal better than did those in earlier years, when his habits were not so fixed and his cerebrum was more easily upset. With regard to the cases of shell-shock, he would like to know whether Sir Robert Armstrong-Jones did not consider that what, for the present, must be called the mental element in cases of shell-shock was much more important than what had to be termed the material. His own view was that terror and fright of the men at the time was a far and away greater cause of their condition than was any molecular concussion or the trinitro-toluin or other explosive used.

Dr. STEWART said that in his long life he had had varied experiences; had travelled a good deal in the latitudes of science, and discussed many things which were nearly allied to psychological medicine. To-day he had listened with great interest to the speeches not only of Sir Robert Armstrong-Jones, but also of those who followed him, because he had never travelled in the regions they had cultivated and become acquainted with, though he had been a naval officer, and had been in charge of insane patients, and therefore had had many opportunities of

collecting facts. Not until recently did it occur to him how much knowledge might be gained concerning the mind by questioning those who were worried by their dreams. The facts he had been collecting during the last two or three years led him to confirm the view of those who [did not believe dreams invariably had a sexual basis.

Apparently, from what had been said, even an elaborate dream occupied only a very short space of time—a few seconds. He would be very glad, if opportunity occurred in the future, to examine that point more fully. Certainly what he had heard to-day had spurred him to greater interest.

Dr. SOUTAR remarked that much of the interest had gone out of this discussion because, so far, no one had taken up a defence of the Freudian idea. Those at this meeting appeared to be agreed that the Freudian explanation of dreams was one which could be ignored, as there was no substantiality about it. British alienists, at all events, did not proceed to examine everything in the light of preconceived ideas. It would be easy for anyone with any ingenuity to discover a sexual basis for anything, for the expression of any thought. It had been said by one of the participants in the discussion that the sexual idea did not prevail in the dreamer. The great desirability, he submitted, was that it should not prevail in the mind of the investigator. However the matter might be regarded, he thought that in this assembly, which was fairly representative of the Association, it might be considered that the sexual interpretation of dreams was not accepted: to his mind such an interpretation was quite contrary to all experience. He did not know anything about the sub-conscious or the sub-mental mind; all he knew was that in certain conditions we were conscious of what was in our minds. Dreams occurred at the moment when the unconscious was merging into the conscious, a stage at which there was not a full operation of discrimination and judgment, as in the fully awakened condition. Hence the dreams remembered were fragments. The transition from the conscious to the unconscious and *vice versa* was gradual, and it was easy to see why the remembered picture was incongruous and scrappy.

One point of particular interest raised in Sir Robert Armstrong-Jones' paper was that in which he mentioned dreams appearing to precede conditions of acute mental disorder. That he (the speaker) had frequently seen. On the other hand, it was exceedingly interesting to find that in not a few instances one found that the first indication of improvement in the patient was an alteration in the character of his dreams. He had frequently noticed, in melancholic cases, that when they began to be happy in their dreams, an alteration for the better had set in in their brain state, and that when this occurred the mental trouble would probably be recovered from. Again and again he had pointed out to patients that if they were able to dream happily, they would also be able to think happily afterwards.

He would not further detain the meeting except to once more congratulate British alienists on the fact that they did not think it necessary to believe that sexuality and immorality and a generally pernicious state of mind was at the foundation of human action.

Dr. ALICE JOHNSON considered that one thing which Freud lost sight of was that the mind was a reservoir of the beautiful things of this world; beautiful scenery, good books, anything one could think of. Most people dreamed about things of beauty, and these beautiful dreams could not be attributed to sex.

Dr. HELEN BOYLE said she had greatly enjoyed the paper, but, as Dr. Soutar said, it was a pity there had not been more divergent views expressed. All speakers were so heartily in favour of the views expressed that there was not enough opposition to make it pugnacious.

One of the points she would allude to was that of forgetting painful things. She was not inclined to accept Sir Armstrong-Jones' idea that we could not forget painful things. She considered that the normal tendency of the human mind was to forget and be glad to forget painful events; ordinary people forgot those things with a rapidity which was phenomenal, and that was a wise, natural, and sensible method to pursue. It was seen in the case of children, and all through life, until the tendency to bury painful things became quite normal. That was her chief objection to the new treatment of cases, for by it one did exactly the opposite of Nature's way. It was a vogue. All through the history of medicine it had turned out that, owing to deficient knowledge, we had pursued measures which Nature taught were wrong, so that a fresh start had to be made along the lines Nature

pointed out. The careful analysing which brought into prominence matters which troubled the mind seemed to be reversing the natural tendency to bury those troubles as deeply as possible. The method of psycho-analysis did, in some cases which had resisted other means, seem to enable the trouble to be buried deeper than had been previously possible, and to that extent it had proved beneficial. But in those cases she attributed it to the suggestion rather than what it had been ascribed to.

She considered that the present investigation of mental attitudes and purely mental ideas as the causation of nervous and mental disease was a very important one indeed, and in that respect thanks were due to the psycho-analysts for what they had done. She believed that the profession had been getting very materialistic about it, and a reversion might yet be seen in that—it was usually noticed in medicine that there were oscillations of opinion—but there was a tendency to regard everything as due to toxins, or to some sort of disease-germ, forgetting the fact that, as far as human knowledge went at present, we had no explanation for many cases which, humanly speaking, appeared to be entirely due to mental attitudes. She herself knew what mental attitudes meant. In the middle of a dinner-party she was suddenly told she would be called upon to speak at the end of it. The result of that intimation was that she was unable to consume any more dinner; if she attempted to do so, she felt that she would probably be sick. That was purely a mental condition, her physical condition had not changed in the least. Many nervous and mental troubles and anxieties, and some paralyses, were due, as far as could be seen, to mental causes, and hence should be treated by mental therapeutics.

She regarded the opening paper as most important and valuable.

Dr. BOYCOTT said that, so far, the analogy of opium in the production of dreams had not been mentioned. There could be no question that those who for sleeplessness or after operations on account of acute pain, had opium, had most vivid dreams. When speaking of the cause of dreams being purely mental, that definite cause should be borne in mind. What he mentioned was entirely analogous to a dream, though not an actual dream. Another point was, that conditions of mind which resembled dreams were frequently met with in insane people, especially epileptics. A short time ago, he saw an epileptic subject suddenly run amuck, his behaviour being the most violent possible, so that a considerable number of people were necessary to hold him. He came round in a short time, and presently he (the speaker) asked the man what had been the matter, and the reply was that he thought a railway engine had come into the ward and he was trying to get out of the way of it. That man was an advanced epileptic, and was constantly having fits; it was that condition which probably caused him to have that dream, as it could be called. An analogous condition was that of night-terrors in children, a condition often attributable to a physical cause, such as intestinal worms or other form of bowel irritation. The actual form of these children's dreams was probably determined by something they had seen, and they awakened in the condition described by Sir Robert Armstrong-Jones, perspiring freely, and much terrified.

MISS BEATRICE EDGELL (University of London) said she had been very interested in Sir Robert Armstrong-Jones' paper. On such a question as this psychologists looked to this Society for a very strong lead, not only in regard to psycho-analysis, but also the Freudian doctrine generally. She was not herself in a position to look at the matter from the medical point of view; but one could not study the mental life and be interested in mental processes without having brought before one the whole theory of sub-consciousness. It had always seemed to her that the way in which one needed to approach that, psychologically, was to ask oneself what facts there were in conscious life which could be confirmed in one's own experience and in that of others, facts which demanded for their explanation any theory of sub-conscious phenomena, which we did not know and could not be conscious of. It was quite legitimate to use it in that way as an explanatory hypothesis; and if the Freudian doctrine had caused people to attend more to this question of the validity of such a hypothesis it would have done good. But she did not think people should run away, as they seemed to, with the idea that Freud was the real originator of the theory of sub-consciousness. But where one seemed to find that theory went to the bad was when the method was perverted, or inverted, as it was in Freud's doctrine of dreams, and in many of the other doctrines too; for the

attempt was made to explain not by referring the conscious to the sub-conscious, but reversing it. People did not take facts as they found them and try to explain them, but took the facts of dream-life and tried to make them fit the prearranged explanation. And from psychological quarters one came across a collection of facts which one could neither refute nor confirm; and discussion was hopeless when it came to the use of such terms as sublimation, transference, repression, and the rest. Nothing seemed to carry any conviction with it, because it was impossible to prove what was wrong in the method.

She would be very interested to hear what was the attitude of the medical men present on the subject.

Dr. R. H. STEEN said he would not like the discussion to close without rising to thank Sir Robert Armstrong-Jones personally for reading this most interesting paper, and for coming forward at a time when he (the speaker) was in a hopeless position in regard to finding a contribution for this meeting's discussion. There was to have been another paper read, but the author of that had been detained in France by his military duties, and in those circumstances Sir Robert very kindly came forward with his paper.

At the risk of incurring the censure of Dr. Soutar, he would like to say that he did not think the meeting had been quite fair to Prof. Freud. All the discussion on Freud's theory of the interpretation of dreams had been by way of emphasis of the Professor's sexual view; but he wished to point out to members that Freud did not regard all dreams as of a sexual nature. Indeed, the first dream Freud gave in full, that of Irma, had nothing to do with sex. He thought it unfair to emphasise so much one point in the psychology of that great man.

He would wish to point to some good features in Freud's *Psychology of Dreams*. The first was the author's enormous industry. Ernest Jones had related that before Freud commenced to write his book he analysed a thousand dreams of his own, and Dr. Jones said that fifty of his followers did the same thing, so that there was an immense mass of material to go upon—namely, fifty or sixty thousand dreams. So, even if the conclusions were wrong, the author tried to get at the truth.

A second thing which Freud had done was to show that dreams were not meaningless. He doubted whether people, until the time Freud wrote his work, could find a meaning in dreams; and certainly Freud had thrown a great deal of light on the whole subject. He had shown that there were two parts in a dream: the manifest content, and the latent content.

With regard to repression, the opener alluded to "the censor," but he was sorry he did not also mention any of the works of the Zürich school. A large book had been written by one of the members of that school, Jung, and it contained no mention of the word "censor." The Zürich school founded their theories on those of Freud, but went beyond them. It was not easy to state clearly what they meant, but an example might be useful. This was taken from *The Dream Problem*, by Maeder, a member of the Zürich school. A young man dreamed that he was in a tunnel, that there was an opening in it, through which he looked. At the other end he saw a valley, and in that valley a man ploughing a field. Freud's interpretation of the dream was characteristic, and rather disgusting. But Maeder's interpretation of it was that the young man felt the need for re-birth, almost the Biblical equivalent of being "born again," and that if he were completely cured he saw a useful life's work in front of him. Those of the Zürich school said that a dream had a prospective value, and that it had not altogether a retrospective or regressive significance, which was the feature which Freud laid most stress on. It seemed to be a very beautiful idea, and he thought more might be heard of it in the future.

With reference to a dream being regarded as the fulfilment of a wish, most children, he believed, dreamed, and their dreams were generally the representations of the fulfilment of wishes. A female patient of his recently, when asked whether she dreamed at night, replied that she dreamed every night. Asked as to the subject of her dreams, she answered, "I dream I am at home again." Surely that would be considered as a dream which was fulfilling a wish.

He had felt that he would like to say those few words in favour of Freud, and so state the other side, though he was not himself a Freudian, for in twenty years' time he believed much of what that Professor had advanced would have been shed

and not heard of again. Still, there were features about his contentions which would well repay reading about and studying, as it was possible they might be useful in the treatment of their patients. And he would not like it to go forth from this meeting that British alienists were not studying the question.

Dr. MONRAD-KROHN hoped, as a non-British alienist, that he might be permitted a few remarks. He wished to express his admiration of Sir Robert Armstrong-Jones' paper, and his objective standpoint towards the theories of the Freudian school. He (the speaker) could not look upon Freudism with so much righteous indignation as some of the speakers in the discussion had done. If it was possible to cure a patient by digging out his sexual complex, one was entitled to employ that means. Freud had underlined stronger than anybody else the fact that there were more determining factors in the mind than we were conscious of. Having said that, however, he hastened to add that he was not aware of ever having seen any proof that the eradication of the sexual complex had done a patient any good. He had read much about Freudism, both the teaching of Freud himself and that of the Zürich school; and, to his mind, it only amounted to a heaping-up of new terms. It was a great pleasure to hear Sir Robert Armstrong-Jones mention a selection of the terms which had been introduced. It was necessary to remember that to invent a new term was not to explain the Freudian symbols. All the speakers had agreed that dreams were dependent on everyone's personal experience, and no two persons had the same experience, if only because the circumstances in which they had lived varied so greatly. How, in the face of that, could Freudism claim a general value for the different experiences? His remarks applied not so much to Freud himself as to his pupils, some of whom, he was told, contemplated the working out of a dictionary. But how could they claim a general value for all these things? The whole Freudian school had given psychologists a stimulus to investigate the sub-conscious mind, and to investigate dreams, but after having been given that stimulus, he feared the subject was left more confused than before.

The PRESIDENT said he felt the hour was now too late for him to attempt to even summarise the discussion, and he would not detain the meeting by expressing his own views on the subject. Sitting there, as an onlooker, he gathered that most of what had been said of Freudism could equally be said of anything, however bad.

Sir ROBERT ARMSTRONG-JONES, in replying on the discussion, said he knew that Sir George Savage had had some vivid dreams, and his descriptions of them were well known to members of the Association. He had also been glad to hear Dr. Lepinska, and he felt much indebted to that lady for having come.

He had also been much interested in Dr. Soutar's remarks about the changed character of dreams in convalescence; he would bear the point in mind.

It was also a pleasure to hear Dr. Springthorpe, of Australia, who had had a most valuable experience of cases of shell-shock, which condition had been divided into four or five types. There was the type which might be caused by the autonomic condition fear, connected, more or less, with the disturbance of the sympathetic. Several explanations had been given in regard to this shell-shock. One was the absolutely destructive molecular change brought about by trinitrotoluen, a pressure of about 7,000 kilo. to the square c.m., yet some of the sufferers from this condition were not hot. A man at Mametz Wood did not see the gun which went off close to him; it imparted a terrific shock to the air in his vicinity. The man managed afterwards to crawl a few feet, and then had to be carried, and he had not walked since. He had no wound, but the cerebro-spinal system was delicately suspended in a bag of fluid, and in it there must be profound molecular concussion. His sympathies went out to the shell-shock cases; he felt that they deserved well of their country. A certain number of men constituted very ready material to fall down, because they were of the neurotic type, and in such cases one found there was a history of insanity, or of epilepsy, or some singularity or oddity or tendency in the family.

There was also a purely functional condition; as Dr. Helen Boyd said, the profession must change their position, and think of mind as a definite entity. When one exerted one's will, one knew it was a something, though it might not be material. Some psychologists would not admit there was anything existing which could not be proved. He understood Dr. Boyle to say that it was not right to

draw an analogy between the conscious and the sub-conscious, or *vice-versâ*, because they were two separate things, and not comparable with each other. Secondly, there was actual molecular shock in the shell-shock cases; and thirdly, hypo-thyroidism. Some of the brains of shell-shock cases had been examined, and the changes found in the nervous system were remarkable.

He commended to members the researches of Cannon in the Harvard University. He put cats into cages, and got dogs to bark at and worry them; then he examined the blood, and found the adrenals increased their secretion; the blood-pressure went up, glycogen was released, and in that way energy was supplied to the muscles ready for waging the imminent combat. One might ask why, with that view, one found a man who had great fear was collapsed. It was necessary to carry the point a little further. When injuries had been received through fear, it became evident that it was not to the advantage of the organism to show combat, the only advantage was to show concealment, and so the organism collapsed, and at that time adrenalism had had its innings. Dr. William Brown had shown that in fright the pressure of the blood and the pulse-rate came down. He had been asked by Major Newton Pitt to see a case in which goitre had developed, and Dr. Helen Boyle's experience supported the view that goitre might occur almost spontaneously, in which case one found hyper-thyroidism. He would like to know whether Dr. Springthorpe would regard fright as the cause of the adrenalism. There was a case of an officer, now in Queen Alexandra Hospital, who was seventeen months in the trenches. Then he was shot in the thigh, and had been in bed seven months, and had undergone nine operations. Though he had been a brave commanding officer, he now wept like a baby, declaring he could not help it. He had never previously felt fear, and the speaker thought the best explanation was that the nerve potential had gone down, the battery was now exhausted. That seemed to be the condition of many of these cases.

Dr. Helen Boyle succeeded in burying painful things. She was, he considered, a super-optimist. He (Sir Robert) had never succeeded in doing so, hence the question of temperament came in. He felt he had a right to speak of Dr. Boyle in the way he did, because he had the privilege of working with her at Claybury Asylum for five years.

In conclusion, Sir Robert expressed the thanks and gratitude which he felt on hearing the President's cordial reference to the honour which had been conferred upon him. He had very warm feelings towards the Association, with which he had been so long connected, and which contained so many of his friends. And the honour was not simply a personal recognition of himself, but of those with whom he had so cordially worked.

Remarks upon the Vegetative Nervous System and the Internal Secretions. (1) By FREDERIC J. FARNELL, M.D., Butler Hospital, Providence, R.I.

IT will not be my desire to enter upon a full discussion of internal secretions; still it will be touched upon sufficiently in an attempt to link some disorders of nervous origin with a condition clearly defined by Eppinger and Hess as vagotonia.

As in all other special fields of medicine nervous and mental traits follow certain tendencies among certain types of people, or even among certain communities, and these tendencies are usually shaped by causes more or less inherent for those people; of this all are aware. That there is plenty of clinical

evidence to warrant such a justification has been pointed out, as a factor in mental disorders, by Meyer, Hoch, and others, who have clearly defined types of personality as quite characteristic in certain mental disturbances.

When one considers the cause of a nervous disorder one must distinguish the case of a person in the best of health suddenly developing a nervous disturbance from one in which a lingering constitutional weakness becomes exaggerated by an intercurrent affection. It is to these tendencies which deal with the fundamental ætiological relationship of a great majority of nervous states that these remarks will refer.

One cannot help while reviewing the study of vagotonia but recognise Sir Grainger Stewart's classification of constitutions and diathesis as falling closely within the group of so-called vagotonics. His classification was somewhat as follows :

(1) *A nervous constitution*, generally with a fair complexion, bright eyes, frequent changes in colour and facial expression, bones and muscles not strong or vigorous, the heart and nerves excitable and unstable.

(2) *The lymphatic constitution*, with great head, irregular fleshy face, slow weak pulse, large hands and feet, and so forth.

(3) *The sanguine constitution*, fair hair, blue eyes, easily flushing face, strong but excitable heart, yet no nervous states.

(4) *The bilious constitution*, with a tendency to obesity, dyspepsia, variable intestinal phenomena, usually diarrhœa, urinary disorders, etc.

How often one comes across a mixture of "lymphatic," "nervous," and "bilious" constitutions, yielding very plainly the "vagotonic disposition" as described by Eppinger and Hess. These people appear for advice because of some rather slight ailment, "indigestion," "constipation," or a fear that high blood-pressure is making itself manifest. They might enumerate many symptoms heretofore called "neurasthenic," and they are looked upon as individuals with nerves, and little attention is paid to them.

Their symptoms are usually spasmodic and episodic. Their faces flush easily, and one often hears them refer to the periods of paleness and blotchiness of their face and neck. Their extremities become cyanotic, with palmar sweating, and occa-

sional complaints of regional areas of sweating. They complain of eructations of gas, regurgitation of food, and a tendency to vomit. Bloating and "a feeling of pressure" are of frequent occurrence. There is intestinal fermentation, rectal pressure and deficient bowel movement. This, through absorption of cleavage products in intestines, causes headaches, feelings of pressure, insomnia, and vertigo. Gross circulatory manifestations appear such as cardiac palpation, intermittent irregular pulse, variations in blood pressure, pulsations of the abdominal vessels.

The emotional life of these individuals is a most important factor in enhancing visceral symptoms, and undoubtedly has led many investigators to lay emphasis on the mental state, such as Freud in his "anxiety neuroses" and others. These patients have a weak affective tone, and do not respond or adjust themselves to the difficulties of everyday life. When these unavoidable experiences occur one must expect a profound visceral reaction, the type depending upon the system least sensitised. That these individuals do not wish to be called "nervous" all are aware, for it is an insult to their pride, and carries with it an assumption of "mental weakness." They carry the old idea that with mental and nervous disturbances the imagination is warped, and since the distress and disturbance are real to them their disorder must be organic and non-nervous. Whether a pain is imaginary or real it matters not, for both must be handled carefully. What the layman calls "nervousness" is often only a slight excess of normal, and very far from the state of pathological nervousness. There can be little doubt but that what has been termed "neurasthenia" has now fallen into the same category as "uric acid diathesis," blood-pressure disease, auto-intoxication, all having become obsolete, and it now behoves the clinician to dig deeper in search for causes and mechanisms.

It might be advisable at this point to refer briefly to the visceral nervous system. Eppinger has called that system which supplies the smooth muscles, cardiac muscle, and glandular tissues the vegetative system, because through it the normal continuation of life and the vital functions are preserved. The "sympathetic nervous system" is that portion of the vegetative system represented by the gangliated cord on either side of the spinal column, with its ganglia and communi-

cating fibres, which might be termed the "thoracic autonomic." The vegetative proper is divided into midbrain, whose segments pass by way of the oculomotor nerve pathways; the bulbar which through the facial, glossopharyngeal, and vagus supplies the glands, vaso-dilators of the head, heart, bronchi, œsophagus, stomach, intestines, and pancreas; and the sacral which supplies the descending colon, sigmoid, bladder, and genitals.

Concerning these different divisions, the mid-brain, bulbar, and sacral are similar in that they are entirely local in their supply; whereas the sympathetic or "thoracic autonomic" not only has its local distribution, but also it sends segments to the same structures as the other system, thus causing the vegetative system to be innervated by both autonomic and sympathetic fibres, and the sympathetic or thoracic autonomic is innervated by only one system. This is of great importance in differentiating disorders, and will be referred to in relations to glandular upsets. As examples of autonomic structure having a double supply one may mention the salivary glands, stomach glands, intestinal muscle-coats, heart, and blood-vessels. Those having a single or sympathetic, smooth muscle of skin, blood-vessels of intestines, and internal generative organs. As an example of the antagonistic action of the two systems one may instance the external genitals. As an example of double innervation of similar stimulating effect, the salivary glands, in those nerves having a vegetative activity the efferent and afferent fibres are interrupted in their course from the cortico-spinal system by preganglionic and postganglionic segments, with a variation in location from the sympathetic cord to the submucosa of the intestines. This latter nerve supply has been called by Langley the "enteric nervous" system governing the entire tract from the esophagus to the rectum. He mentions the fact that the character of their connections to the autonomic system and their control of the gastro-enteric tract is little known, but that they seem to have an action independent of the central nervous system. This has been proven by Cannon in his experiments, and he concludes that when this canal is entirely separated from the central nervous system it has a remarkable power of developing an independent tonic state, that is, it soon recovers its tone. This shows that it supplies the resiliency that causes the state of tension when the canal was filled. This tension is the occasion for the contraction of

viscera which are walled with smooth muscle holding a nerve plexus. That this tonicity is fundamental is accounted for in the failure of efferent motility in atonic states. It is an observation that tonic contraction and rhythmic peristalsis disappear in asthenia and exhaustive states. It agrees with these observations that anxiety, morbid fear, worry, mental distress, and kindred disorders stop gastro-enteric movements and abolish the tonus of the alimentary canal.

There is considerable difference of opinion as to the make-up of the afferent nerves of the vegetative system. Some investigators believe the afferent nerves contain somatic fibres, and yet, if so, why should there be a difference in their functional activity? It is well known that when pain is experienced in the viscera it is usually due to a mechanical cause, and its action upon the body is, as Head terms it, reflex. This has been shown by Sherrington to be due to an elevation in the threshold of the excitability of the arc in the viscera. This difference is also extended centrally in that autonomic afferent fibres have no central connection, whereas somatic fibres have a connection in the brain cortex. Crile has attempted to disconnect this somatic system from the brain cortex by the application of what he calls the "principle of anoci-association," and believes that by so doing he has lessened his post-operative mortality.

Notwithstanding the fact that there is no evident connection between the autonomic system and the brain cortex, there must be some interrelation somewhere. The functions of the sweat-glands, the gastro-intestinal tract, and the blood-vessels are probably not in direct relation to the brain cortex, yet there is no doubt but that they are under the influence of the emotions, and through the sympathetic system. Anger, fear, and shame are expressed by pallor, blushing, sweating, and crying. These impulses must pass by the basal ganglia. Lesions of the caudate and lenticular nuclei, as seen in sclerosis of the basal ganglia and in lenticular degeneration, cause as the most prominent symptoms emotional variations, and in several cases reported (Mills, Oppenheim, Farnell), the cerebral lesions were confined to these ganglia.

It would seem only proper at this moment to refer briefly to the anxiety neuroses. Freud, in his monograph upon the psychoneuroses, states in relation to the merging of the nervous

symptoms into the peculiar affective state of anxiety having as its cause psychic inadequacy for the subjugation of sexual excitement, that the psyche merges into the affect of fear when it perceives itself unable to adjust an externally approaching danger, while it merges into a neurosis of anxiety when it finds itself unable to equalise the endogenously originated sexual excitement. The psyche therefore behaves by, as it were, projecting this excitement externally. The affect and the neurosis corresponding to it stand in close relationship to each other. The first is in relation to an exogenous, and the latter in relation to an analogous endogenous excitement. The affect is a rapidly passing state; the neurosis is chronic because the exogenous excitement acts like a stroke happening but once, while the endogenous acts like a constant force. The nervous system reacts in the neurosis against an inner source of excitement just as it does in the corresponding affect against an analogous external one. The many variations in the form of anxiety as it affects the body viscera are quite a constant and important factor in these neuroses, and it might not be inadvisable to divide this disorder into two groups, the one in which the anxiety neurosis portrays as its dominant factor psychical excitement, and the other the form in which the visceral disorders predominate. In the former the symptoms are relieved by psychological analysis, there being little disturbance in the vegetative system proper, whereas in the latter one might place the primary cause as a constitutional disposition to vagotonia, and consider that consciousness or unconsciousness produce their effect by the inherent weakness of that system. May this not be one of the reasons why Freud's theory has not been fully accepted, and in these latter types pharmaceutical preparations have produced the required results?

In the old disorder grouped as hypochondria and the condition known as cenæsthesia, both being examples of states in which consciousness is acquainted with the harmonious action of the various visceral organs, it might be difficult to decide the exact relation of the disorder to the vegetative nervous system, but there are sufficient reasons to believe that the path of psychic attention passes through the sympathetic system.

The exact location of these higher brain centres is still a matter of dispute, and yet there is evidence that it has a close connection with the chromaffin system.

The most essential parts of the chromaffin system are the nervous or posterior lobe of the hypophysis, the sympathetic ganglia and paraganglia of Kahn, and the nervous elements in the adrenals. This specialised nervous tissue has also been found embedded in the kidney, and even carried down with the ovaries and testicles in their development and descent.

Functionally this system produces in the granules of these cells adrenalin. Exception has been taken to recognising the adrenals as internal secretory organs because (Kahn) the chromaffin cells do not conform to the type of epithelial cells nor their grouping to glandular structure, yet from a physiological viewpoint the internal secretory conclusion is justified. What can be the significance of this intimate association between the glandular and nervous elements?

The production of adrenalin in these cells is now an undisputed fact. It enters the blood-stream *via* the vein directly. This product acts upon certain tissues, and increases the activity of metabolism. These certain tissues upon which adrenalin acts are those which possess only a sympathetic innervation with the point of election a portion of the cell in the neighbourhood of the nerve-ending, although it is generally recognised as having its action upon the nerve-ending.

One must not conclude from these remarks that this is the only function of adrenalin. The tone of the sympathetic nervous system bears a close relation to the tension of the muscle-coats of the heart and vessels, and it has its influence upon the body metabolism, especially in relation to carbohydrates, as well as metabolic processes modifying the albumin and salt-content in the blood.

An important action to be kept in mind regarding adrenalin is that where the nerve influenced is one of stimulation the adrenalin acts as one of stimulation, and where one of inhibition it is inhibitory in action. As an example of the inhibitory effect of adrenalin upon a process of metabolism undoubtedly taking place through the vegetative nervous system is its influence upon the pancreas and the pancreatic secretions. This glandular physiological relationship shows itself in other glandular derangements. Eppinger and Falta have concluded that the adrenal system plus the thyroid act as a balancing mechanism to the antagonistic activity of the pancreas and parathyroids. And yet the thyroid promotes and probably

acts as a regulator of the adrenal system. If adrenalin limits the internal secretory function of the pancreas and one stimulates the autonomic nerve (the vagus), one would expect to reach at some point a balance and adjust the disturbance. Such has turned out not to be the case, as it is now proven that stimulation of the sympathetic far outweighs that of the autonomic. This naturally would cause one to consider the action of the remaining glands of this system, the thyroid and parathyroid. The thyroid working in conjunction with the adrenals would increase the pancreatic disability, but it must be remembered that the thyroid serves a double function, being furnished with both bulbo-autonomic and sympathetic nerves. Having created a disturbance of metabolism in one organ (gland) of sympathetic innervation, one might expect the sympathetic stimulation of another gland (the thyroid). Notwithstanding these deepening suppositions one must look upon the thyroid as a "pace-maker," and hence its double innervation as a means of protection, and one frequently called into play, due to the fact that it contains probably two internal secretory mechanisms.

To illustrate these inter-reactions and decidedly complicated mechanism a case will be cited briefly.

H. C—, a boy, *æ*t. 15, whose family present little of pathological importance except that a brother is a cretin. The patient was born at full term, labour was difficult, and delivery instrumental. He was recognised as a fine baby and weighed 12 lb. There was nothing abnormal noticed about him; he walked at 14 months, and began to talk at about same time. He had no convulsions in infancy. He appeared to develop normally until 4 years of age, when he suddenly stopped growing, physically and mentally. He did not grow fat. He would not play, was cranky and irritable as well as stubborn; wanted to be by himself. Complained of headaches and something (a numbness) in his legs. He wet the bed regularly. He was sick in his stomach, bowels were always costive requiring stiff cathartics. He talked in his sleep, and had night-mare. Had dreamy spells in which he rolled his eyes, and looked dopy in the morning. At the age of 5 years he was diagnosed as a case of cretinism. He was placed on thyroid gland but immediately, even in small doses, it caused sickness, nausea, general uneasiness, and flushing of face. The drug was therefore only given at intervals. The next five

years showed extremely slow development. When seen four and a half years ago by the writer he was in much the same condition as described, and was thought to be a case of pancreatic infantilism, as described by Herter, although the stools were negative. At all events he was given 15 gr. of pancreatin three times a day, and soon showed a clearing of symptoms; his gastro-enteric system improved, he ceased wetting the bed, and he soon gained 15 lb. in weight. He continued to improve in appearance, his conduct was better, he played and entered into boyish pranks, but made slow progress in school. About half a year ago he developed terrific frontal headaches, periodical blanching, and pallor of the skin of face, syncopal attacks with evidence of poor peripheral circulation, weakness, and great fatigue. There was practically no disorder of gastro-intestinal tract. His pulse was 60, compressible, of low tension, and irregular. Blood-pressure was 65. His skin was rough and dry and pigmented. X-ray of skull showed normal sella turcica, while that of chest evinced a very small heart and a shadow over the region of the thymus. His height was 3 ft. 7 $\frac{1}{4}$ in. and weight 69 lb. Are we not now dealing with an adrenal disorder? Is it possible that we are dealing with the condition of status lymphaticus in which the inter-activities of the chromaffin system have laid bare their individual symptom complex? Therapeutic measures have adjusted the troublesome symptoms, and for four months the patient has taken in addition to pancreatin 3 gr. of suprarenal extract, and his cardio-vascular disturbance has been relieved. His headaches ceased. His blood-pressure rose 15 mm. He has grown 1 $\frac{1}{2}$ in. Where a year ago his testes were undescended they are now in the scrotum.

It is noteworthy that in the out-cropping of symptom-complexes in this case there was throughout an inhibition of the sympathetic, and no definite stimulation of the autonomic.

This is quite contrary to some observers who have noted symptoms of vagotonia in lymphatism due to the inferiority of the adrenal system.

To a much less degree than the foregoing one sees frequently cases of apparent hypoplasias of the lymphatic system developing at an early age epileptoid states, and presenting isolated symptoms of vagotonia. It has been a custom at our school clinic to place such children upon thyroid and pancreatin.

Results have been forthcoming in many cases. Calcium metabolism in relation to epilepsy and its allied states has been a source of investigation for some time past. Its relation to tetany and tetanoid convulsions is now fully accepted, as well as being a parathyroid disorder. The parathyroids are antagonistic in their action to the thyroid. Thyroid and pancreatin feeding evidently does something. It cannot be doubted that it is a probable occurrence for an organ to send out chemical stimuli causing stimulation in one case and inhibition in another. The end results will also differ probably by influencing the internal secretion of another organ.

Healey and Anderson, as well as the writer, have observed in juvenile court cases the existence of status lymphaticus, a constitutional inferiority with an accompanying mental inferiority. How many of these abnormal or antisocial traits may bear close relation to internal secretory disorders is difficult to say; such as stealing money to buy sweets indicating a high sugar tolerance?

The next group of disorders, also polyglandular in type, evince a mechanism passing through both the sympathetic and autonomic nervous systems. This disturbance is hyperthyroidism, which probably includes not only the thyroid itself but also the ovary or testes and the pituitary body. It should be again noted that both nervous systems were mentioned as being involved. Allow me to repeat a statement made previously in reference to the chromaffin system, "this specialised tissue has even been carried down with the ovaries or the testes in their development and descent." Is it possible that in those individuals who develop hyperthyroidism, with complete disorganisation of the interactivities of that glandular chain, there is this specialised tissue in the generative organs also? This fact might be cleared up by the histo-pathologist. Or, is it a disorder passing wholly through the nervous mechanism. It is such problems as these that may lead one towards the recognition of a chemical or bio-chemical basis for nerve excitation, as well as, or in addition to, the present recognition of a physical basis.

Hyperthyroidism is a symptom of hypersensibility of the sympathetic system or an irritability of the autonomic system. It seems difficult to attribute all the symptoms one sees in hyperthyroidism to one ætiological cause. From the view point

that the function of the nervous system is for the control and co-ordination of the many and various body activities, one may accept the statement that there may be conditions under which this nervous system can stimulate one or more activities to excess at or about the same time. The question will then arise as to whether these pathological conditions do not arise from the interaction of causes representing the want of a balance between an excessive amount of material thrown out and a lesser amount of material upon which to act.

That the clinical picture of hyper-thyroidism may vary greatly during the course of the disease process seems to bear out the statements just enumerated to a fair degree. For example, a female, *æt.* 37, single, whose family history was negative. Her previous history presented nothing remarkable except that she was always active, happy, not easily upset, had plenty of friends, home conditions the best, etc. The symptom-complex as presented upon the initial examination was as follows: moderate exophthalmus, von Grafe's sign marked, profuse perspiration, flushing of the face, cardiac palpitation, increase in gastric acidity, dyspnoea. These symptoms are what Eppinger and Hess group under the heading of vagotonic. At the end of a few weeks of treatment many of these symptoms were relieved, but there developed a very marked degree of tachycardia, her hair fell out in large quantities, and in the course of time she had several attacks of fever. Notwithstanding these symptoms there was progressive gain in strength and weight. Eppinger and Hess place elevation of temperature in the group of sympathicotonias. Can this be rather an attempt at harmonising antagonistic activities which bear a close relation to the functioning of the tissue; a central control, through the sympathetic system, maybe, rather than an irritability of the sympathetic occasioned by the thyroid secretion?

Some investigators have attempted to show that the symptom-complexes of hyper-thyroidism are constantly parallel in all stages of development and regression, with similar stages in development and regression in the secreting cells of the gland; the hyperactivity being due to a toxic compound containing 60 *per cent.* iodine which is attached in either an alpha or beta position, the former being toxic and the latter non-toxic. From glands removed during the various stages of the

disease the amount of iodine obtained varied with the stage from a little less than normal to 1 in 20, or 1 in 15 less than normal. This cannot be interpreted as a reduced production (iodine compounds (KI) have caused symptoms of hyperthyroidism) but as a greatly increased effusion of the substance into the blood stream. Therefore the clinical picture would vary according to the amount given out, the length of time during which the intoxication occurred, and the constitution of the patient.

If one goes a little further and divides the course of the disease into three stages (for one is bound to meet cases in various stages, or even in a mixture of stages), (1) the stage of autonomic irritability, (2) the stages of sympathetic irritability, (3) the effects of a disordered vegetative function, it is the writer's feeling that both Eppinger and Hess's and Wilson and Kendell's versions can be accepted. Eppinger and Hess have noted clinical cases which they have termed "Basedowoid conditions, which have yielded quickly to atropine. . . These cases might have been merely "vagotonics." Kendell has grouped these cases as "non-hyperplastic toxic goitres," a condition in which the iodine content is diffused in a lessened amount.

This shows to better advantage in typical Graves' disease, a disorder which reacts poorly to atropine in many cases, especially so when the tachycardia and the increased metabolic changes are taking place. It is these cases, termed by the Mayo Clinic as "hyperplastic toxic goitres," that the diffusibility of the iodine is at its greatest, and which, in the writer's small series of cases, have reacted quickly to cytotoxic serum, an antiserum low in the iodine content. Experiments have shown conclusively that iodothyroidin and atropine are not antagonistic.

The third division is that series of cases which have been relieved (through rest, bromides, *etc.*) of those symptoms of vegetative irritability, and show secondary glandular disorders with slow, but gradual, metabolic changes. It has been the custom to feed these patients with nucleo-proteid and adrenal gland with good results.

Falta and Eppinger assume a polyvalency of the thyroid secretion, and regard typical Graves' disease as an outcome of a simultaneous, though probably independent, stimulation of both the sympathetic and autonomic nervous systems. Biedel,

however, suggests that this secretion might be due to a primary affection of the sympathetic nerve, or the nervous areas in which it takes its origin.

This brings us back to the exciting factor in this neurogenic hypothesis; most writers place emotional disturbances first, and many cases might be cited in which emotion was at the root of this disorder, again evincing a connection with higher nerve centres.

In line with these conceptions attempts have been made to connect certain mental states and psychic disorders with over-irritability of the vegetative nervous system. Such a connection has been assumed to exist in depressive states at puberty and the menopause, in traumatic neuroses, in the self-accusatory and depreciative types of dementia præcox. As all are aware, these disorders are maladjustments towards the environment—worry, which is a conflict between hope and fear, conduct disorders, sexual or what not, religious or ethical problems. Sherrington has said: "Environment drives the brain, and the brain drives the various organs of the body." Can it not be that this system, the vegetative nervous system, plays a most important part in adjustment, and acts as the most essential stimulator into action? Attached to this reactivity is its power to influence and direct functional conditions, not evident under ordinary conditions, but aroused when given the chance—constitutional tendencies, disorders of personality, susceptibility.

To quote from Hibbin: "Synoptic man is one who sees the verities of life in their true relations, properly co-ordinated and sub-ordinated, and who in particular pursuits, however absorbing, does not ignore the unity of the whole, nor overlook the universal aspect of even the commonplaces of life."

(¹) Presented before Boston Society of Neurology and Psychiatry, March 20th, 1916.

Renfrew District Asylum as a War Hospital for Mental Invalids: Some Contrasts in Administration. With an Analysis of Cases admitted during the First Year.
By Major R. D. HOTCHKIS, R.A.M.C. (Temp.) Officer in Charge, Dykebar War Hospital, Paisley.

FIRST PART.

I PURPOSE giving first of all a short description of the steps taken in connection with the conversion of this institution into a war hospital, and of the necessary additions to the staff. No structural alterations were required to the buildings, as they were to be used only for mental cases, and the changes therefore required were very slight in comparison to what, for example, took place at Bangour or at other asylums. Most of you will have read the minute and vivid description by the President of our Association, Lieut.-Col. Thomson, when the Norfolk County Asylum was converted into a war hospital for the sick and wounded, but the radical changes described there in the buildings and amongst the staff were quite unnecessary at Dykebar, as it was taken over as a going concern. Consequently we were able to admit soldier patients almost at once when the others had been removed. It happened by good luck that the new nurses' home had just been completed, otherwise it would have been impossible to have accommodated all the female staff. With the exception of four orderlies who are billeted with the married orderlies, and tradesmen, all the others are housed in the institution. The daily routine in the institution is much the same as you are all accustomed to, except that there is here a certain liveliness, as the majority of the patients are young, strong, active men, and a march out here is quite a different thing to the slow and decrepit walking parties formerly in vogue, and in the farm and garden there is displayed energy never seen before. Work, and especially outside work, is encouraged, but of course there is always a certain proportion who cannot be persuaded to do anything.

The first intimation, in the form of a request to the District Board made through the General Board of Control for Scotland, that Dykebar was wanted as a war hospital for mental diseases was given in November, 1915, and after this request had been unanimously agreed to by the District Board, certain financial

questions had to be settled, the details of which I need not enter into.

I had then personally to set about and try to learn the details of the administration of a military hospital, and naturally turned first to the Edinburgh War Hospital at Bangour, as I had in former years great help from Lieut.-Col. Keay, when Dykebar was first opened, the two institutions being built on the villa system. During my visit there Col. Keay kindly explained everything himself, and I take this opportunity of acknowledging the help I received, not only then but afterwards, when the heads of the different departments at Bangour came through to Dykebar and helped to give us a start. I came away from Bangour with my head crammed with figures and my pockets bulging with Army Forms.

I next visited the Moss-side Military Hospital at Maghull, which then contained both neurotic and insane cases, but now I believe is only used for the former. I then went to the Napsbury War Hospital for mental diseases, which is the hospital part, though quite a separate building of the Middlesex County Asylum, near St. Albans. At both of these hospitals I learned a very great deal, and I take this opportunity of acknowledging the courtesy of the commanding officers.

At the same time there had to be carried through the transfer of the parochial patients to other institutions, which involved a considerable amount of work, both to the General Board of Control and to the staff here, and also, I am afraid, to some of my audience to whom they were sent. The more serious cases were transferred to the nearest asylums, namely, Hawkhead and Riccarton, and the new cases from the county are being sent either to Smithston or Riccarton, which was the arrangement before Dykebar was built. By the end of the first week of January, 1916, all the patients had been cleared out, with the exception of twenty-five men who were retained for farm and other outside work, and who are accommodated in the reception block, which is a small building quite separate from the others. The two classes of patients are thus kept separate, though as a matter of fact in outside work the two often fraternise, but the soldier always assumes command. The transfer of the patients was carried out without a hitch, due to the excellent work of the Transport Section of the Red Cross Society, and to the providing by the military authorities of an

ambulance train when parties of about one hundred had to be transferred.

The visits which Miss Macallum, the Matron, and I paid to the other military hospitals enabled us to fix approximately the number of staff required in the various departments, and especially gave us an idea of the kind of cases which we would have, and how they differed, if at all, from the ordinary patients. We had to remember that all the cases admitted would be recent, and that the institution would be filled, not, as formerly, with a much larger proportion of chronic to acute, but with cases whose illness was of recent date, and that many of them would be therefore very acute, and also that the turnover would be much greater.

I will now describe shortly the increase and organisation of the staff in the different departments to meet the new conditions.

Kitchen.—Instead of one cook and one kitchenmaid, a superintendent and assistant superintendent and six kitchenmaids were engaged. We were fortunate in securing as superintendent a lady with first-class qualifications and previous experience in a military hospital. As the patients are encouraged to work in every department there are, as a rule, about six working regularly in the kitchen. Owing to the fact that the military scale of diet is more generous than under ordinary circumstances some additions had to be made to the cooking apparatus of the kitchen.

Laundry.—The laundry had just been enlarged, so no difficulty has been experienced. Owing to the extra work, seven extra laundrymaids were engaged to replace the female patients, and in addition there are as a rule about nine or ten soldier patients who work there.

Store.—There is not much change, except that certain articles of food, as meat, bread and flour are sent from the Army Stores Department at Greenock, the other provisions being obtained under contract as formerly. The ordinary books required by the General Board of Control have still to be kept, but the method of ordering stores, sending back empties, etc., have to be done according to army regulations. The accounts are paid by the Finance Committee of the District Board, who, to meet expenditure, have to send a requisition to the Command Paymaster each month for what is necessary. The accounts have to be approved of by the General Board of Control.

Pack store.—The pack store is a most important part of a military hospital. On admission the clothes of the patients are all cleaned if necessary, mended, and carefully put away, any deficiencies being made up from the pack store, as everything that a soldier requires in the way of clothing has to be kept there—for example, the hospital clothing, service clothing, and civilian clothing for discharged soldiers—and in the inventory a complete history of every article has to be kept with scrupulous exactness. Rigid rules and forms hedge in all that has to do with army clothing, and the disappearance in transit or otherwise of any garment or accessory is the prelude to an endless correspondence. In this hospital the gallery of the ordinary store is used as the pack store, and in addition three or four hundred racks were put up in the tailor's shop for the patients' clothing on admission.

Office.—This corresponds to a regimental orderly room. Under former conditions one clerkess did the work comfortably, now it takes the full time of four, and they sometimes have to work late and on Sundays. Army forms and methods are very complicated, and they give one an idea of the vastness of the organisation controlled by the War Office. When I first had to study them I felt like going back to school without the elasticity of youth.

Nursing staff.—The Matron, as has always been the case in this institution, is over the whole of the nursing staff, both orderlies and nurses. The kitchen and laundry departments are also under her. There was no head attendant to be made sergeant-major, and though it was prophesied that a sergeant-major for purposes of discipline amongst the orderlies, was a necessity, the present system works admirably. There are three assistant matrons, two on day and one on night duty.

The orderlies are composed of three classes according to their engagement.

(1st) The former attendants, eleven in number, all of whom have been enlisted in the R.A.M.C., the charge attendants having been made sergeants and the second charges corporals.

(2nd) Orderlies, twelve in number, engaged by me on behalf of the District Board for the duration of the war and paid by that body. They also are enlisted into the R.A.M.C., and are mostly men over military age or unfit for active service, and amongst them are some experienced asylum attendants. They

do not contribute to the Superannuation Act, and they could be added to at any time if suitable candidates present themselves.

(3rd) Regular R.A.M.C. men, two sergeants, two corporals, two lance-corporals, and twenty-one privates, who were sent from various units, and who could be recalled at any moment. They have the ordinary army pay and allowances and also get *6d.* per day extra as mental attendants if found satisfactory.

As regards female nurses, of whom there are twenty-one, the difficulty at first was to know how many wards could be staffed entirely by them. The present arrangement is that the East hospital, which is divided into two adjoining wards with a total of forty-nine beds, has been put in charge of nurses both by night and day, though an orderly is always there during the day for bathing and shaving the patients, etc. There are a certain number of cases requiring treatment in bed in this ward, and the cases include most varieties of mental disease, many of them being in a convalescent stage, but still requiring a certain amount of observation.

One of the villas consisting of seventy-five beds is also under nurses, and the cases there, are patients not yet ready to be discharged, but who can be allowed a certain amount of liberty. I am quite satisfied with the work done by the nurses in these two buildings.

At the beginning, in addition to the two mentioned, another villa was staffed by nurses, but the patients sent there were more difficult to manage and it did not work so well. Ultimately the charge nurse married one of the patients on his discharge, and as discipline was somewhat relaxed the villa was placed under orderlies. There are no nurses in the north wing of the west hospital as most of the very acute cases are there, but there are two nurses in the south wing. One of the villas is also without nurses, but all the others have either one or two, and their duties are chiefly connected with the kitchen and dining-hall, and they take entire charge of the food. In doing this they have the assistance of several patients for whom they are responsible. The night staff consists of one assistant matron who is responsible for every part of the institution, three nurses, one charge orderly with the rank of sergeant, and ten orderlies.

Medical staff.—My duties as superintendent remain as before,

except that the clerical work is far more than in a civil mental hospital.

There was some difficulty at first in obtaining a medical staff, but thanks to the exertions of Dr. John Macpherson, one of the Commissioners, the services were secured of Dr., now Capt. Buchanan, the Medical Superintendent of Kirklands Asylum. There are also on the staff Capt. A. Ninian Bruce, Lecturer on Neurology at the University of Edinburgh, and Dr. Dawson, Medical Superintendent of Ponoka Asylum, Alberta, Canada. The Pathological Department is in charge of Capt. Bannerman.

SECOND PART.

In this second part of the paper I intend to be very brief, and try to give an analysis of the cases admitted here during one year.

At the outset I am met with the difficulty of classification, for here the personal equation is bound to come in, and it is not possible to follow one which will meet with the approval of everybody.

According to an Army Council instruction, the patients who ought to be sent here are those who in civil life could be certified as insane, but no certificates are necessary, and in actual practice it was found impossible to adhere strictly to this ruling. There is no difference in the admission and discharge of patients into this hospital from any other military hospital. The majority of the patients come from "D" Block, Netley, where they are first sent from overseas, and where, as a rule, they remain for a week or a fortnight, or longer if there is no urgent need for beds, and then they are distributed to the various mental hospitals according as there are vacancies, and also according to their mental condition.

942 cases were admitted from January 24th, 1916, to January 31st, 1917, and of these 111 were non-expeditionary, and were sent here according to official instructions, first for diagnosis, and then for final disposal. This leaves 831 cases who had served with one or other of the expeditionary forces in France, the various campaigns in the Mediterranean, in Mesopotamia, and in East Africa, and as these cases are naturally much the more interesting I propose to confine my remarks to

them. In this class there are included 5 German prisoners of war.

In the analysis of the cases now to be given the order taken is mostly according to the numbers admitted in each group.

Manic-depressive.—188 cases, 21 *per cent.* This class is naturally a large one, and includes all those cases which would formerly have been called mania or melancholia. There are also included 7 cases of stupor. One of the characteristics was that a great many had had previous attacks, and in view of this it has been our custom to discharge such from the army, and not send them back to duty, or even to a labour battalion. In 31 excitement was the most prominent symptom, and in 133 depression. 17 were of the mixed type. The comparative smallness of the number of excited cases may be accounted for by the fact that a considerable proportion which, by some, would have been put into this class, have been included in the Confusional group, as the symptoms of confusion and disorientation were much more prominent and constant than the excitement. Considering this group as a whole there is nothing to distinguish the cases from those found in a civil mental hospital, except that—and this, of course, refers more or less to all groups—their delusions and hallucinations, and consequently their conduct, are coloured by their experiences in the field.

Alcoholic insanity.—152 cases, 18 *per cent.* This group includes all the varieties of symptoms found in this form of mental disease, and in all the cases a reliable history of chronic alcoholism or bouts of drinking was obtained, and care was taken to exclude cases of mental deficiency in which the tendency to alcoholism was one of the symptoms. There were many cases of delirium tremens, the most common history being that the patients had been home on leave from the Front, and had been having, as they put it, “a high old time,” but on returning to France they showed more susceptibility to the horrors of war, and often, after a few days, had to be sent back suffering from very well-marked delirium tremens. There seem to be two types of this class according to their history—one who broke down as soon as the supply of alcohol was cut off on going aboard the leave boat, the other who showed no signs till again in the firing zone. Those in this latter class were affected by shell fire, etc., in a way not previously felt by

them, and they rapidly became nervous, sleepless, and developed hallucinations.

In sharp contrast to these cases of delirium tremens were the chronic delusional cases, many of whom were comparatively elderly men who had been stationed at the base and thus had more opportunity for drinking. Between these two classes were those who showed various symptoms, as confusion, depression, subacute excitement, and, in practically all cases, hallucinations. The history of many of these cases suggested that though alcoholism was a prominent feature in predisposing to a mental breakdown, of still greater importance was the strain and stress of the campaign, and had it not been for this the breakdown would either never have occurred, or would have been postponed. Of the cases of cut throats admitted here, of whom there were 45, 18 were alcoholics.

Mental deficiency.—151 cases, 18 per cent. This is a large class, and includes all degrees of weak-mindedness, from the high to the medium grade. It has always been a wonder to me how some of them passed the recruiting officers, but the worst types got in during the first rush of recruits under the voluntary system. For practical purposes they are divided into two classes—the vicious or moral imbeciles, and the ordinary defectives.

Of the first class there were 37, most of whom were habitual criminals and could not have been certified as insane, and were sent to Dykebar because they were giving trouble at other hospitals. The rest, namely 114, were simple defectives, but most of them had been able to earn their own livelihood. They apparently learned their drill in a passable way, but when exposed to the searching test of actual fighting they gave way under the strain, and became not only useless, but often positively dangerous to their comrades: for example, in several cases while in the trenches comrades had to be told off to see that they did not load their rifles, as they would have been more dangerous to their own regiment than the foe. Another man, when on sentry duty, on being asked by his officer what he would do if the enemy appeared, replied that he would present arms and say, "Pass friend, all is well." Needless to say, he was soon sent down the line. Many of these cases had an added confusional element, which cleared up rapidly under appropriate treatment. A few suffered from attacks of acute

excitement or depression, and they took longer to get well than the confusional cases. They all ultimately recovered from their acute attacks.

Confusional insanity.—134 cases, 16 per cent. Of these 27 were of the acute type, that is, the signs of confusion were very intense and were often accompanied by considerable excitement. In the others confusion of a varying intensity was the most marked mental symptom. There was in many of the cases in addition a hypersensitiveness to their environment and consequent irritability, with the result that they often got into trouble. In all these cases the reflexes were increased and general muscular tremors were often present. Twenty-two of the cases exhibited hysterical symptoms, as fits, anæsthesia, paresis, aphonia, etc. The vast majority of these cases occurred on active service, the chief factors being exposure to high-explosive shell fire, the fact of being buried, and in some cases of all their comrades being killed, wounds, recent attacks of enteric, dysentery, and malaria. In the majority of cases their appearance, etc., suggested either a neuropathic or psychopathic disposition and in these cases in which a history was obtained of their life previous to enlistment, and of their family, this was confirmed.

Dementia præcox.—118 cases, 14 per cent. Of these 11 were of the catatonic and 14 of the paranoid forms, the remaining 93 being cases of simple dementia præcox. The above numbers are probably too low as the diagnosis was not made until the patients had been here for some time, and there are a number of cases recently admitted who were classed provisionally under manic-depressive insanity, but who will probably ultimately prove to be cases of dementia præcox. The interesting question in connection with these cases is, had there been no war how many would have carried on without a mental breakdown? This is a question almost impossible to answer, but the history of some of these cases shows that a very slight stress was sufficient to develop their illness, and that the first symptoms manifested themselves shortly after leaving this country and before they had actually been in the fighting line.

Paranoia.—44 cases, 5 per cent. From the history of many of these cases, the delusions had evidently been present before enlistment, and the strain of the campaign apparently accentuated

them, and affected the conduct of the patients to such an extent that they had to be sent home. Many of the cases were between the ages of 35 and 40, and some over the latter age, but it is worth while noting that though insane for years they were able not only to carry on in civil life, but were capable for some time of undergoing the discipline of ordinary military service, and the hardships of actual fighting.

General paralysis.—22 cases, 2 per cent. In the cases, about 12 in number, where a complete examination was made of the blood and cerebro-spinal fluid, the Wassermann reaction in both fluids was found to be positive, and in the cerebro-spinal fluid the globulin tests and Lange's colloidal gold test were positive, and a lymphocytosis of varying amount was found to be present.

Clinically all the cases were of the ordinary type, and two had marked tabetic symptoms.

An interesting point is whether the stress of the campaign, as would have been expected, accelerated the progress of the disease, and regarding this there have been here two cases which are of interest. One who had an attack of melancholia which almost necessitated his discharge from the army, but who apparently recovered and afterwards did nine months of hard active service before he was invalided home. On admission here the signs of general paralysis were distinct, but not advanced. The other case—a reservist—was invalided out of the army some months after the outbreak of war for mania and epilepsy, which in view of his later history were undoubtedly signs of general paralysis. A few weeks later he re-enlisted and did nine months trench fighting in France before he was sent home on account of delusional symptoms. On admission here he was in an advanced stage. One or two other cases tend to confirm the view that in many cases at any rate the strain of active service does not very materially affect the progress of the disease.

As regards the effect of the campaign as an exciting cause, the data at my disposal, especially as regards the condition of the patients before and on enlistment are insufficient to justify any positive opinion.

Organic Brain Conditions other than General Paralysis.

Five cases: (1) Tuberculous meningitis; (2) Hemiplegia; (3) Gross destruction of brain tissue due to a kick from a

mule in left parietal region; (4) Cerebral abscess in the left temporo-sphenoidal lobe following gunshot wound; (5) Syphilitic meningitis.

It is noteworthy how very few cases have been admitted here with mental symptoms associated with head injury.

Epileptics.—7 cases. With one exception, which was a case of traumatic epilepsy, all the cases had suffered from epileptic fits before enlistment, but of course this fact had been concealed. They were not, however, discharged from the army when it became known, and it was only when marked mental symptoms made their appearance that they were invalided. The mental symptoms were chiefly confusion, and 3 of them had attempted suicide, but had no recollection of the fact. One case was exceedingly irritable and dangerous, and ultimately had to be sent to an asylum, but the other 6, after a period of rest, were able to be sent home.

Secondary dementia.—7 cases. These were cases who were transferred from other hospitals where they had been for many months, and dementia was established before being transferred here.

Not insane.—4 cases. All of them had given trouble at other hospitals, and were promptly diagnosed as mental and sent to Dykebar. Their residence here was, however, very short. One was a malingerer, in appearance a degenerate and alcoholic, who, on being apprehended for desertion, pretended that he could not speak, and was sent here as a case of mental stupor. He was anaesthetised with ether three times, and each time was wakened during the stage of excitement when he was shouting. As soon as he realised that he was speaking he again became silent. A few days later, on being again prepared for a further dose of ether, he suddenly spoke and said that he had recovered. He was returned to his unit as a malingerer.

Mental instability.—In official returns the names of diseases must follow strictly the nomenclature drawn up by the Royal College of Physicians of London, and not only the name but the number opposite the disease must also be given. In February, 1916, the names of certain mental disabilities not included in the official nomenclature were authorised by the War Office to be used only in the special hospitals for mental disease, and amongst them is the term "mental instability." This term has not been introduced in the above analysis, but it

is extensively used here when patients are invalided from the army ; for example, cases who have recovered, but whose past histories show one or more previous attacks and who therefore should return to civil life, are described in invaliding documents as suffering from mental instability. It is a term which has supplied a distinct want.

Discharges.—Any conclusions based on the discharges for the year must necessarily be premature, and it will not be till the final reckoning, when all the patients have left, that reliable deductions can be made. The present figures, however, are not without some interest, and may be summarised as follows :

During the year 500 expeditionary cases were discharged. Of those, 139, or 16 *per cent.* of the total admissions, were sent to asylums ; 155, or 18 *per cent.*, returned to duty ; 40, or 4 *per cent.*, were discharged as recovered, and 111, or 13 *per cent.*, as relieved to the care of their friends ; 5 as recovered and 37 as relieved were transferred to other hospitals for further treatment of their bodily condition ; 11 died, and 2 escaped.

When Dykebar was first opened 60 cases were sent from the Moss-side Military Hospital at Maghull, and as that hospital was in future only to admit non-certifiable cases, those sent here were cases who had been under treatment for not less than six months, and some of them had been there for over one year. Their chronic nature was emphasised by the fact that of the 60 only 2 became well enough to return to duty, while 39, or 63 *per cent.*, had to be sent to asylums. The others, with the exception of 6, were discharged as relieved. If, however, these were deducted from the total admissions—and I think it quite a legitimate deduction—our percentages would be as follows : 20 to duty, 13 to asylums, 12 as relieved to the care of their friends, and 4 as relieved to other hospitals.

In conclusion, it gives me pleasure to acknowledge the help I have received from Capt. Buchanan in this second part of the paper. It is in reality a joint production.

Clinical Notes and Cases.

A Case of Cerebral Tumour, with Tumour of Skull.

By JOHN TATTERSALL, M.D., B.S.Lond., M.R.C.P.
Lond., Medical Officer, Hanwell Asylum.

THE case I here record presents many features of interest, not so much from a psychological point of view as on account of the absence of local physical signs considering the size and position of tumour.

Other points of interest are the duration of the tumour of the brain, and the presence of a tumour of the skull over the position of the cerebral tumour.

History of case.—Male, age on admission 25. Three years before admission, whilst doing his milk-round, he was knocked down by a runaway horse. He was stunned, but did not lose consciousness, and he continued on his round. After a few days sight began to fail and eventually he became blind. In the same month he was taken into a London hospital—where no operative proceedings were done. He was discharged, and was subsequently admitted into another London hospital, and again nothing was done. Apparently this was due to the absence of localising signs. He states that at the first London hospital he was told he had optic neuritis. Two years after this he was admitted into an asylum, and a month afterwards transferred to this asylum. He states that headaches and vomiting started seven years before admission, but his statements were considered unreliable.

Examination on Admission.

Mentally.—He had had delusions, which were not present on admission. He was generally simple and childish, and his memory was very defective as regards dates and events.

There was mild elation, and in this state he remained until his death.

His physical condition was excellent.

Nervous condition.—He complained of weakness of left arm and leg, but there was no definite evidence of this. His grasp was excellent, and there was no spasticity, no marked knee-jerk, no ankle clonus, and no extensor response. Gait showed tendency to walk to the right—same side as the tumour.

Ocular condition.—He was blind, and ophthalmic examination showed double optic atrophy secondary to optic neuritis. Nystagmus was present on turning eyes to right. There was conjugate deviation of eyes to right, and he also held his head to the right. Hearing was excellent. Knee-jerks were present, but before his death the left knee-jerk disappeared. Cranial nerves were normal.

There was no anæsthesia to touch, pain, or heat. Sphincters were normal.

Wassermann's reaction to the blood was negative.

Course of case.—During his stay in the asylum he had the general signs of tumour, namely, optic neuritis, headache, and vomiting; but the latter two symptoms were never very marked till near the end. He used to take a keen interest in the various entertainments, and in fact used to join in the dances. Just over a year after admission a slight swelling was noticed on the right side of the skull, but the patient stated that it was nothing, and that he had been hit there. The swelling gradually got larger until it was the size as shown in photograph.

Three years after admission here he was taken as in-patient into St. Mary's Hospital, and while there was allowed home for Christmas for a few days. On the day after his return he died suddenly.

Post-mortem Notes.

Extract.—Bony tumour present on skull chiefly in temporal region.

Skull.—On the right side extending beyond the limits of the temporal bone for some distance from the base half way to vertex the bone presented a very unusual appearance. There was a somewhat flattened fusiform osseous plaque consisting of cancellous growth of bone from both surfaces, not adherent to dura mater. On the external surface it infiltrated the various tissues.

Brain.—There was some hydrocephalus on left side. The dura mater was adherent over a small area in right parietal region.

Right cerebral hemisphere showed an extremely necrotic growth, $3\frac{1}{2}$ in. in length, situated in midpart of hemisphere, thus sparing frontal and occipital lobes; fusiform in shape and its centre occupying the whole width of the hemisphere, encroaching on the lateral ventricles.

Microscopically, the tumour showed endothelioma.

The points of interest in this case are the duration of the growth, which was ten years. The absence of localising signs, which was remarkable considering the great size of tumour and its position just below the parietal cortex. All the fibres of the corona radiata must have been cut off, yet there was no direct evidence of monoplegia or hemiplegia.

Conjugate deviation of the eyes to the right which was present should have suggested the side of the lesion, that is, a right-sided lesion, because in the case of a destructive lesion of the right cortex or right subcortical region the patient looks towards the right, that is, towards the lesion.

Most of the signs which were present, however, suggested a cerebellar lesion.

The tumour of skull was not adherent to the dura mater, but the dura mater was adherent to the brain over a small area. The tumour of skull and tumour of brain were not in direct

contact, but microscopically they showed the same growth, namely, endothelioma, which is a most unusual condition.

I am indebted to the Medical Superintendent, Dr. Baily, for permission to publish this case. Also I am indebted to Dr. Spilsbury and Dr. Kettle, of St. Mary's Hospital, London, for the pathological notes.

Skiagram No. 1 shows the tumour from the right. Side view.

Skiagram No. 2 shows the tumour on the right, being a front view.

Photographs show the tumour on the right, with conjugate deviation of the eyes to right, and patient holding head to the right.

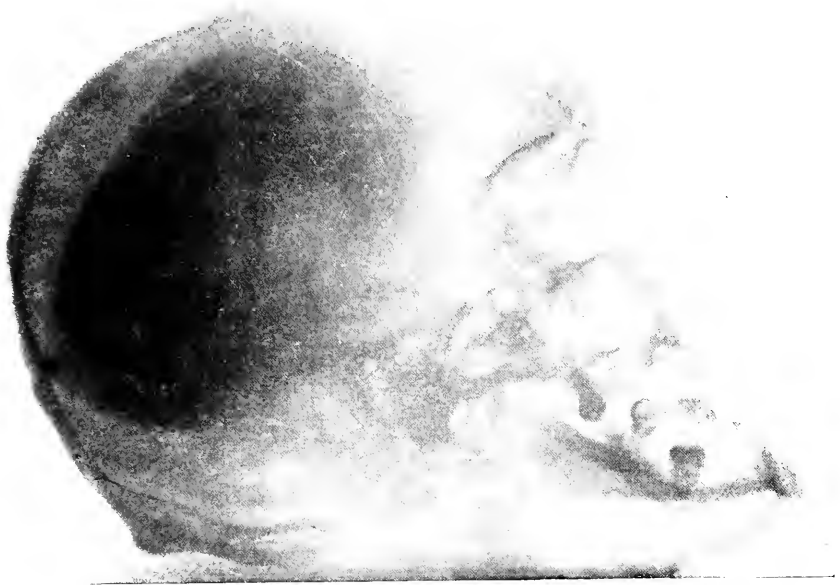
Notes on a Case of Cyst in the Third Ventricle. By D. MAXWELL ROSS, M.B., Ch.B., Royal Asylum, Edinburgh.

CEREBRAL tumours do not occur with great frequency in asylum practice; for example, in going through the register of deaths of the Royal Edinburgh Asylum for a period of fifty-eight years, I only found fifty-five cases in which cerebral tumour was mentioned in the death certificate. When they do occur they are always of interest to us, and the case at present under consideration is especially so, owing to its uncommon site and character.

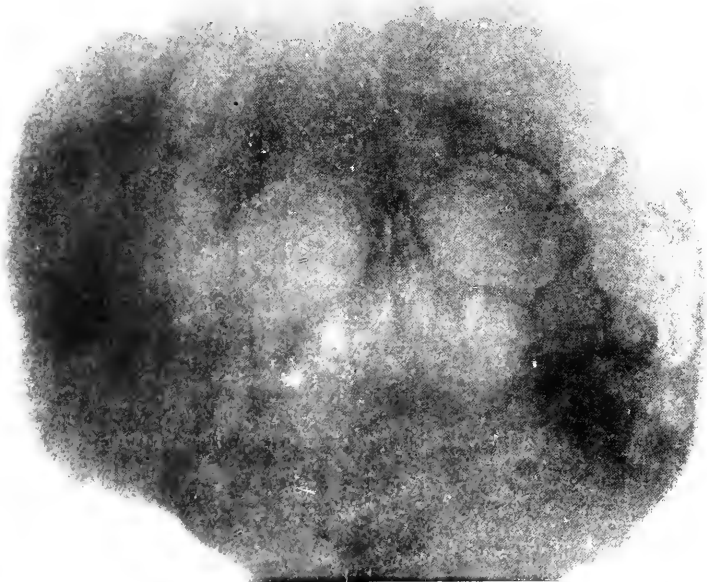
The patient, a single woman, æt. 55, with no known hereditary predisposition, was admitted to the hospital on July 25th, 1916. Her illness appears to have had as its starting-point an episode which occurred when she was in South Africa some three or four years ago. She formed an attachment with a married man of such a character that a quarrel with his wife took place. After this she developed symptoms apparently of a hysterical type for which she was under treatment for some time before she was brought home two years ago.

During the two years between her return to this country and her admission to hospital her symptoms, though they varied from time to time in degree, did not present any material change in character. Physically she had difficulty in walking and in writing. The former varied very much; sometimes she would manage to walk one or two hundred yards well and with little assistance, while at other times she could not walk at all without support from her nurse. The latter became progressively worse, till finally she could not write at all. In addition she had incontinence of urine, and on a few occasions attacks which were considered purely syncopal; no doctor ever saw her in one of these, but after her death we were told that a nurse had once remarked that she thought them of cerebral origin.

Mentally she suffered from a general impairment, and an indifference associated with an amnesia of apparently a retrograde type. On the impairment was implanted a slight euphoria which left her placid and



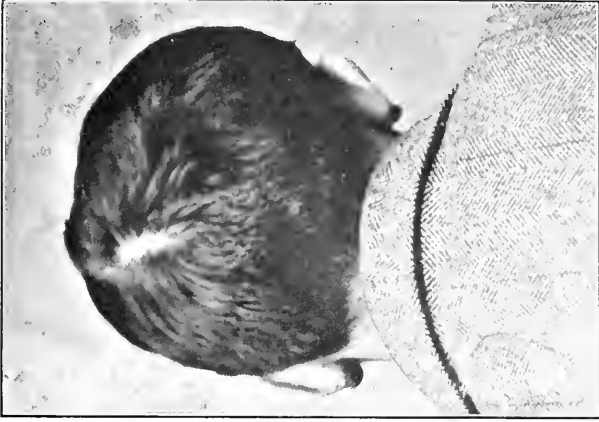
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To illustrate paper by Dr. JOHN TATTERSALL.





To illustrate paper by Dr. JOHN TATTERSALL.

cheerful even in the most displeasing circumstances; in fact, as her nurse said, "Nothing upset her."

On admission she was found to be cheerful, without being exalted, quite delighted with her new surroundings, but showing her mental torpor by utter lack of curiosity in them. Her memory was defective but, owing to her indifference and utterly careless answers to questions, it was difficult to estimate the degree of defect both of memory and of general intellectuality. To many of the questions which she at first answered incorrectly and foolishly she would, if pressed, subsequently give quite a correct reply.

The physical examination was negative except for the findings in the nervous system, and here, although she made no difficulties, and, indeed, was rather amused by the whole business, it was often unsatisfactory owing to her utter carelessness in her responses and want of interest in what was being done.

As there were no obvious ocular symptoms whatsoever, no ophthalmoscopic examination was made—a fact we afterwards much regretted.

The tongue was protruded in the middle line and showed slight fibrillary tremors, there were no tremors of the outstretched hands, and she grasped without difficulty objects held before her. On applying the finger to nose test a very slight tendency to intention tremor was observed on both sides, but especially on the left.

The lower limbs were moved freely as she lay in bed, and the various co-ordination tests, though performed with some uncertainty, were on the whole quite well done. When an attempt was made to stand she swayed and had to be supported on both sides, and on attempting to walk she presented a marked degree of cerebellar ataxia.

There was little weakness in the upper limbs, but some was noted in the lower, particularly in the adductor group of muscles.

The localisation of light touch and appreciation of the head and point of a pin were correct and reasonably prompt everywhere except in the lower two-thirds of both legs and the feet, especially the left, where there was some inaccuracy and retardation of her responses.

Of the organic reflexes only the urinary was affected. The abdominal reflexes were brisk, as were also the tendon responses in both arms and legs, the knee and ankle-jerks being somewhat increased especially on the left side. The plantar reflexes were repeatedly examined before admission, and only once were thought to be extensor. After admission they were found at first to be extensor, at a later date flexor, and again a few days later extensor.

The picture was a difficult one to interpret, and the only definite conclusion arrived at was that the symptoms were due to an organic intracranial lesion, and not functional. With this view Dr. Edwin Bramwell, who saw her in consultation, concurred.

There was no change in her condition till August 29th, when she had a fainting attack, which, judging by the nurse's description, was of a purely syncopal character. After this she

was put to bed and at once improved in general appearance. On September 4th she looked remarkably well, but said in the evening that she felt confused and, to use her own words, that "things did not fit together properly in her head." At 7 o'clock next morning she was found dead in bed, lying on her back in a natural and peaceful attitude. She had been last seen at 4 a.m. by the patrol nurse, who stated that she appeared quite as usual.

A *post-mortem* was performed, the only finding of interest in it, apart from the examination of the brain, being some fatty infiltration of the heart. On removing the calvarium, the dura appeared a little congested but nowhere adherent. There was distinct excess of cerebro-spinal fluid, and a little congestion of the pia.

There was no basal arterio-sclerosis and no abnormality of the sella turcica. The brain itself weighed 42 oz., it was of normal softness, and no nodules or areas of hardening could be felt.

Dr. Ford Robertson very kindly undertook the thorough examination of the specimen, and on cutting serial horizontal sections found a cyst situated in the anterior part of the third ventricle, and arising apparently as a simple retention cyst from the connective tissue of the velum interpositum. It was oval in shape and its surface smooth. The wall was thin but tough, and evidently composed of dense fibrous tissue. There was one large cyst with a group of small loculi at the anterior pole, and the contents were of a transparent firm gelatinous consistency. In size it measured $\frac{7}{10}$ of an inch in breadth, $\frac{8}{9}$ in depth, and $\frac{9}{10}$ antero-posteriorly.

The neighbouring tissues had been softened and pressed aside. The centre of the body of the corpus callosum showed a distinct area of softening, the body and adjacent portion of the anterior pillars of the fornix had practically disappeared, while the foramina of Munro were gone, but were represented by the anterior ends of the choroid plexuses of the lateral ventricle, which curved forwards and downwards on the sides of the anterior portion of the cyst. Thus, there was unusually free communication between the third and lateral ventricles.

No other gross lesions were found, and microscopic examination of sections from the ascending frontal convolutions on both sides showed no distinct abnormalities.

The most interesting paper on tumours of the third ventricle is that of Weisenburg who, in 1910, collected from the literature a series of thirty cases, and, as a result of his analysis of them, describes a fairly typical symptom-complex. He says that there are present, firstly, the characteristic signs of increased intracranial pressure—headache, vomiting, giddiness, and optic neuritis: and, secondly, almost constantly cerebellar ataxia associated with a paresis without a definite paralysis, but usually with spasticity, the tendon reflexes being commonly increased, though they may be normal or diminished.

There is, he says, a general impression that mental symptoms are characteristic of neoplasms in this region, and he describes these symptoms as consisting of drowsiness, apathy, dull mentality, and often greater impairment. In the majority of his own cases these were the symptoms present, but in addition three were at one time diagnosed as cases of general paralysis, one presented the mental symptoms of Korsakoff's syndrome, one of mania but with drowsiness and suicidal tendencies, one was normal, and in five the mental state was not noted. He concludes that there are no really specific mental symptoms, and that the presence of those which do occur is due to compression of the cortex against the skull, this compression being caused by internal hydrocephalus.

If the case at present under consideration be analysed, it will be seen that in the secondary physical symptoms and in the mental symptoms it corresponds reasonably closely to those described by Weisenburg, but it is unusual in that there were none of the general physical symptoms of increased intracranial pressure, and that in spite of the absence of these, the mental symptoms, which he attributed not to the local lesion at all but to practically the same cause as the general physical ones, were well marked.

The mental symptoms of brain tumours consist in the first place in a general enfeeblement, which Ballet well describes as a return to childishness, but without the vivacity and curiosity of the child, and to which he applies the special term "puerilism." It may exist alone, or be accompanied by depressive or expansive emotional states. In addition there may be episodes of confusion, of hallucinosis, of delusion, of automatism, and there are cases in which the symptoms resemble those of general paralysis, while others present the picture of hysterical

and neurasthenic states, and are correspondingly difficult of diagnosis.

According to Byrom Bramwell mental symptoms have little localising value in brain tumours, although they are most frequently to be observed in those of the frontal lobe, and may be of some assistance in such cases. Ballet, on the other hand, thinks that a careful study of them may be of considerable value. According to him they occur in the great majority of cases and form early symptoms which, however, often pass unnoticed, or are masked by the more striking physical ones.

In our case increased intracranial pressure, the one great cause of symptoms, was apparently absent, and also, owing to the nature of the lesion, one could exclude the second supposed cause of mental symptoms, namely, the action of toxins secreted by the growth. The question, therefore, arises whether the mental changes can be entirely explained by the mere destructive contact pressure of the cyst on the surrounding tissues. By its position it caused pressure on the optic thalamus, destruction of the anterior fornix, pressure, and a definite area of softening in the body of the corpus callosum.

In tumours of the corpus callosum Francis noted apathy as specially characteristic; Dercum described as mental symptoms somnolence, confusion, fatigue, and marked general mental loss, while Starr says there is a disturbance of intelligence chiefly in the form of dementia, but often comparable to hysteria. Ballet, describing the matter more fully, believes mental symptoms occupy a considerable and constant place, that they occur early, and consist of a clouding, torpor, indifference, confusion, and amnesia. There is also difficulty in associating ideas and a chaos of thought. He quotes Seglas and Lande as stating that confused, hallucinated, melancholy, or excited states may occur, but are commonly associated with tumours of the posterior part of the organ.

If the symptoms presented by our case be compared with those just described, it is clear that the lesion of the corpus callosum which actually did exist would be, of itself, sufficient to cause the mental state which was present.

Indeed, Ballet's description of a characteristic trouble in associating ideas and a chaos of thought recalled very forcibly

the remark made by the patient a few hours before her death that "things did not fit properly together in her head."

The case proved during life a puzzling one; the physical symptoms were not of a definite focal character, and the mental, though characteristic of organic brain disease, were, in the absence of any of the signs of increased intracranial pressure, difficult to explain. Indeed, the whole picture, and most notably the mental symptoms, suggested a diagnosis of disseminated sclerosis. From this point of view it is interesting to note that Cooke is quoted by Starr as having pointed out that tumour of the optic thalamus may cause a tremor quite similar to that of multiple sclerosis, and in our case, though there was no actual lesion of the thalamus, it was subject to direct pressure by the cyst.

Taking into regard the description given of the reported cases of tumour of the third ventricle this one, except for the fact that the classic symptoms resulting from increased intracranial pressure were absent, falls readily into line with its fellows in presenting a symptom complex which is fairly characteristic of the site of the lesion.

Apart from this, it is of interest because of its unusual pathological character, and because it may be cited as a case refuting the views of Weisenburg and others that the mental symptoms are always due to a general pressure on the whole cortex, or to the action of toxines secreted by the neoplasm, and not to the direct action of the lesion on the surrounding nervous tissues.

In conclusion, I wish to thank Dr. G. M. Robertson, Physician Superintendent of the Royal Edinburgh Mental Hospital, for his kind permission to report this case.

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A Case of Systematised Delirium of Persecution with Psycho-sensory Hallucinations. By R. M. TOLEDO, M.D., Assistant Physician, Government Lunatic Asylum, Malta.

Cases of systematised delirium of persecution (Tardive paranoia) are common. The case however forming the subject of this paper is particularly interesting on account of the nature of the "persecution" and of the "persecutors" referred to by the patient.

As it is well known, the chronic delirium of persecution appears rather late in life (at age 35-45).

There is a stage of prodromata of a hypochondriacal character called by the authors "Stage of apprehensiveness or incubation period."

A second stage, referred to by Magnan as the period of "insane misinterpretations."

A third stage of "delirium proper" (stereotyped delirium), with or without hallucinations. These hallucinations may be sensory or simply psychical (Baillarger's pseudo-hallucinations).

A fourth stage called the metabolic stage, in which "ideas of pride," with a sort of pseudo-scientific delirium, supervene.

A terminal stage of dementia. This is rare in "true paranoia"; with advancing age, however, the stereotyped delirium loses much of its brightness and organisation.

HISTORY OF THE CASE.

The patient is a gentleman, æt 38, liberally educated and of fine physique, without any somatic stigmata of degeneration except that his temporal arteries are already tortuous and thickened. No history of syphilis. The patient was a little given to the abuse of alcohol, and he suffered once from biliary colic.

At the age of 36, he noticed that he was getting gradually mentally and physically fatigued, and unable to cope with his work as broker in the cotton business in Egypt. He became sleepless, dull and irritable, lost weight, and complained much of abnormal "internal" sensations. A doctor told him that he had neurasthenia, and recommended him to proceed to Europe for change.

Just before leaving for Naples he "heard" an Arab calling him "Kelb" ("Dog" in Arabic). The patient admits that he was a little upset, the more so that, at that moment, he felt some very funny sensations in his inside. A stay of a few weeks in a sanatorium for "nervous

diseases" in Italy "cured" him, as he says, and he was able to return home and to resume work.

After a lapse of a few months of "good health" he felt dull again, and he could not explain why his friends "avoided" him, and his relatives "worried" him. The Arabs called him "bad names" and he felt now as if "something was crawling in his abdomen," and a sort of gnawing pain. People in the street looked angrily at him, and others would say "poor fellow." He read medical books to pass the time as he says, including a book on "Embryology."

One night he felt a feminine voice saying something "in his abdomen," the next night a "masculine" one, and then on succeeding nights "laughters, shrieks, and regular dialogues." "Teeth" bit his organs and gnawed his ribs.

These sensations put the patient (as he says) on the right track, and soon after he found out that he was the victim of an *unique phenomenon*.

It is thus that the patient explains his morbid sensations and hallucinations.

"On my conception, three ovules were impregnated, and under normal conditions my mother would have given birth to triplets. She gave, however, birth to me alone, and by a sort of *an embryonic aberration* (patient's own words) the two other fecundated ovules developed into two ape-like beings living parasitically in my inside. One of them is a male being and the other a female one. They hate me, and they have been the source of all my internal sufferings and troubles for the last two years. They insult passers-by, by *words* and *sounds*, causing people to look angrily at me, as they believe that I am addressing them. Others pity me as a 'madman.'

Labouring under this delusional idea, which naturally left the patient without a moment's peace, he tried to get rid of these two ape-like living beings by asking hundreds of surgeons, in his own country and abroad, to operate on him.

A surgeon, thinking he might benefit the patient, incised the skin (under chloroform) on both sides of the abdomen, and sutured the wounds. He then tried to persuade the patient that he had explored his abdomen, but found nothing. The patient thinks now that the surgeon is an "ally" of his two internal enemies for "political reasons."

The patient believes that by means of "special nerve-organs" these two parasites have learned all the languages (four) which he studied, and alleges that, in every town he visits, he must patiently assist at dialogues between his "inside couple" and "invisible people," the subjects being "diplomatic questions of the highest importance." He complains that he was even deprived of his sexual energies, which his "would-be brother and sister" had turned to their sole advantage. . . . He has strong suspicions that an "offspring" was born to

them lately, and that this would soon start, like the parents, to "suck his blood" and "gnaw his ribs."

The patient is quite sensible on matters having no relation to this morbid idea of his, and one would not think that he was speaking to a mentally-afflicted person were it not that occasionally he starts giving blows on his abdomen to keep (as he says) his enemies quiet, alleging that they do hate him, speaking to anybody, and they try to disturb him by "shrieks, laughs, and running about."

The patient refers to magnetic waves not yet known to Marconi, originating in the ape's body, and flashing out in the atmosphere *viâ* the patient's head, causing him agonising headache, and all sorts of suffering to humanity. He told the writer that he has spent so far £1,700 in visiting cities in search of a surgeon who would undertake the task of *releasing him* from his enemies. He has visited Malta for such purpose and has written to the authorities describing his case as one requiring an "urgent" abdominal operation.

He hopes to visit America, *if Europe fails to help him in overpowering these two members of an atavistic race.*

Unfortunately this poor patient, who is much in need of care in a mental hospital, has been left at large, as his relatives consider him as a "neurasthenic."

Part II.—Reviews.

Herbert Spencer. By HUGH ELLIOT. "Makers of the Nineteenth Century Series." Pp. 330. Demy 8vo. London: Constable & Co., Ltd., 1917. Price 6s. net.

Mr. Hugh Elliot, to whom was entrusted the account of Herbert Spencer in the *Dictionary of National Biography*, has here re-written that account in a freer and much enlarged shape, and from a more mature, critical, and yet discriminating standpoint. He tells us how, when on active service in the Boer War, he read through the whole of Spencer's works on the South African veldt. He became a dogmatic disciple. In the years that followed, as a student of biology, he was able to see that many of Spencer's facts and theories would not bear examination, while, as a student of English politics, he realised that Spencer's doctrines seemed hopeless. His discipleship tended to apathy. But, during the present war, he has again read Spencer's works through. In the light of the war and of that reading he has reached a fresh and more judicial outlook. He sees that there was much that was

extreme in Spencer's social and political doctrines, much, indeed, that Spencer himself would have modified had he lived later; he sees, also, that there is much in Spencer's scientific doctrines that can no longer be maintained, and need not be maintained, if, like Spencer himself, we reject authority. Yet, when all deductions are made, he finds that Spencer's greatness as a thinker and value as a teacher remain unimpaired, being, indeed, especially necessary for our guidance in the critical times we are now passing through.

The book consists of thirteen chapters, in which Spencer's life and character are first dealt with, then the philosophic and social writings in general; seven chapters are devoted to Sociology, Ethics, Metaphysics and Religion, Evolution, Biology, Psychology, and Education; a concluding chapter sums up the author's estimate of Spencer's place in English thought, and an Appendix contains a Bibliography and a Chronological Table.

In sketching Spencer's life-history, Mr. Elliot attaches due weight to the paternal heredity. Spencer was, indeed, the true son of his father, the Derby schoolmaster, a highly developed example of a special type of Englishman, of aggressive independence, much ability and originality, unbending discipline, keenly interested in science and politics, and with severe religious opinions, which drew him from Methodism to the Quakers. It was precisely the temperament which, with genius super-added, produced the synthetic philosopher of evolution. There were, however, other elements. Mr. Elliot is inclined to attach no significance to the maternal heredity, as the mother was of "very ordinary character"; Spencer himself, who considered that she had always been under-valued, was inclined to think otherwise. The interesting fact about her is that she was of Huguenot descent. It is difficult not to believe that this heredity was significant. The Huguenot element came in to reinforce the paternal rebelliousness to authority. It is possible one may even go further. The Huguenot element in English men of genius has often been found potent even in minute doses. Bearing other cases in mind, one may well find in this French strain an explanation, not only of Spencer's relentless and un-English logical consistency, but of the charm of his literary style, which came to him by nature and without deliberate cultivation. Mr. Elliot seems scarcely to do justice to the qualities of Spencer's style. No doubt this is not easy for one who works through the whole series of great volumes, since the larger part of them, written down or dictated during the prolonged decay of Spencer's vitality, display a very monotonous manner. But in the earlier and better written volumes, notably in *First Principles* and *The Study of Sociology*, we have to recognise that Spencer shows himself incomparably the finest artist of the highly distinguished group of writers in philosophy and science with which he was associated. And it is to be noted that his style is invariably the embodiment of his thought, never its mere ornament, and he is a fine artist simply because he is a fine thinker. Certainly this quality contributed mightily to the immense diffusion of his work throughout the world.

The chapters devoted to summarising the synthetic philosophy are necessarily very condensed and often bald, though always very clear. While attaching the greatest value to Spencer's social doctrines,

Mr. Elliot regards *The Principles of Psychology* as the most important division of the work. He frankly admits and points out its defects and deficiencies. Yet when all deductions are made, the magnitude and brilliance of its conceptions remain unimpaired; they are all the more remarkable when we remember that Spencer had no acquaintance with the work of his predecessors, and very little with that of his contemporaries. It is unquestionably, Mr. Elliot declares, an epoch-making book, and if only Spencer had based its evolutionary doctrine on natural selection rather than on the inheritance of acquired characters, it would probably have been the most remarkable philosophic production of its century. As it is, it remains of the first importance, "and even now is far better worth reading than the great majority of text-books which have been produced since."

Mr. Elliot's monograph reflects the activity of a vigorous, alert, and searching mind, keenly interested in the problems of science and society. He writes fluently, sometimes, it would seem, with an eager speed, which once or twice causes the thread of the argument to be momentarily lost, but on the whole the reader is glad to keep up with so vivid and accomplished a guide. Some of us have almost forgotten, and others never knew, how much Herbert Spencer stood for thirty years ago. This book will perform a valuable function by showing that, even in the crisis of to-day, we may still derive light and support and inspiration from one of the greatest of English thinkers.

HAVELOCK ELLIS.

A Study in the Philosophy of Bergson. By GUSTAVUS WATTS CUNNINGHAM, A.M., Ph.D. New York and London: Longmans, Green & Co.

The attitude that the author of this book assumes towards Bergson is that of the candid friend: he admires the philosopher, but he is not blind to his faults. Like many other people, he finds that the work of the brilliant Frenchman bristles with contradictions, and he attempts, one cannot say very successfully, to reconcile some of them.

In the preface the author warns us against any misconception of the object of the book. It is a critique, he says, and not a summary. "Consequently the writer"—the professor has a *penchant* for speaking in the third person—"has not hesitated to pass by many interesting phases of Bergson's thought and to confine his attention to what he regards as his author's basic doctrine." It is only fair to say that within the limits thus marked out the writer strictly confines himself. He argues closely, keeps his point well in view, and rarely allows himself to wander down even the most alluring of by-paths.

The chief subjects dealt with in the book are Bergson's views on Intuition and Intelligence, and on the problem of Duration.

To Prof. Cunningham it appears that Bergson's distinction between or separation of Intuition and Intelligence is more apparent than real, and he quotes largely from the philosopher's writings in support of his argument. It is questionable, however, if he has succeeded in proving his point. The most essential plank in Bergson's platform is that Intelligence is only capable of understanding things material and spatial, that is to say, that Intelligence is only capable of comprehending

matter. It cannot "deal with time and motion except on condition of first eliminating the essential and qualitative element of time—duration, and of motion—mobility." The idea seems to be that Intelligence, in order to examine anything, seizes it and holds it motionless and inert. Consequently there is need of another power—Intuition—to be able to understand reality, duration, and motion. This the professor admits to be Bergson's explicit view, but he finds another and implicit view in the French philosopher's writings, in which the relationship between Intelligence and Intuition is conceived "not as that of antagonism, but rather as that of subsumption." "Intuition involves intellectual activity and transcends it, if at all, only as a more comprehensive and concrete form of the same sort of knowledge." The writer does not appear to see the importance of the words "if at all," or if he does see it, he lays no stress upon it.

What Prof. Cunningham calls Bergson's explicit and implicit views are only two of the contradictory points of the philosopher's doctrine, though perhaps they are the most glaring, and his efforts at reconciling them—and one grows weary of what is little better than reiteration—only emphasise the contradiction.

The part of the book, which is devoted to the consideration of the problem of Duration, is the most successful, partly because the author is more dogmatic than he is elsewhere, and has no hesitation in pointing out what appears to him to be a fallacy.

From the consideration of Bergson's doctrine of Duration a theory of Creative Finalism is evolved, which the author elaborates with great detail in the sixth chapter.

The last chapter with its general summary of the subjects discussed in the volume is probably the best.

The style of the book is rather rugged, and occasionally jars on the ear, and the author has an irritating habit of commencing not only sentences but even paragraphs with the conjunction, *and*.

Although the book is not a very important addition to the literature which has grown up around Bergson's philosophy, it has one merit, and that is that it makes one think.

J. BARFIELD ADAMS.

The Dream Problem. By Dr. A. E. MAEDER. Authorised Translation by Drs. FRANK MEAD HALLOCK and SMITH ELY JELLIFFE. "Nervous and Mental Disease Monograph Series, No. 22."

The members of the Zürich School of psychoanalysts differ in many important respects from the orthodox Freudians. They give all due credit to Freud for what he has done and acknowledge that much of their inspiration has been derived from him, but they claim to have made advances. The Viennese school looks to the past the Zürich school to the future. The former tries by analysis to find out the cause of the disease, the latter to discover what is the aim of the disease. In this small monograph the same principle is applied to the study of dreams. The author says that "the axiom of the dream as a wish fulfilment is too indefinite and especially too one-sided, for it actually fails to embrace the important teleological side of the unconscious function." Maeder, moreover, thinks that sufficient attention

has not been paid to the manifest dream content. "I place great importance on the choice of the pictures and expressions in the manifest dream content, since the dream renders an autosymbolic presentation of the psychological situation of the unconscious. An energetic, purposeful, and well-adapted conduct in the dream, points to a mature and successful adjustment of the dreamer towards the matter in hand. For instance, in a dream there occurred the violent ejection from a church of a talkative, vain, and uncongenial traveller, whereby is pictured the serious efforts of the dreamer to overcome the characteristics of his own ego as caricatured in the travelling man."

Several dreams and their interpretation in the manner of Freud and in that of the author are given at length as examples. The interpretation of Freud indicates the fulfilment of a wish, the expression of the pleasure-principle. The interpretation of Maeder describes the adjustment to reality, and he thinks that the analyst of the future should attach most importance to the latter.

R. H. STEEN.

Downward Paths: An Inquiry into the Causes which Contribute to the Making of the Prostitute. With a Foreword by A. MAUDE ROYDEN. Pp. 200. London: Bell & Sons, 1916. Price 2s. 6d. net.

The problem of prostitution is again arousing interest among us, and this little book will be found a valuable contribution to the study of that problem. It is remarkable as being perhaps the first sociological investigation in this field made in England by women, medical and others (who remain anonymous), and it is probably to that fact that we must attribute its freshness of outlook, notably its intelligent and sympathetic appreciation of the difficulties which tempt women into "downward paths." The authors, as Miss Royden puts it, "are not Pharisees writing about Publicans, but human beings seeking to understand and enter into fellowship with the outcasts of their sex"; in this endeavour they have adopted an attitude of "intellectual detachment," not deciding beforehand what their investigation was to discover. The same point of view is brought out still more clearly in the first chapter where we are told that the prostitute is here approached not as a plague to be avoided or a lost soul to be saved, but as "a disaster to be prevented." In working for the decrease of prostitution they believe it is necessary to face deliberately "the drastic rearrangement of cherished social institutions," for, as they believe, they have here shown that "prostitution is not so much an institution in itself as the rubbish-heap necessitated by the way in which other much respected institutions are built." In carrying out their investigation in this admirably broad and philosophic spirit, the writers are mainly concerned with the motives which lead women to take up prostitution.

The material dealt with may be regarded as not extensive nor completely representative, since a large number of the cases came into the hands of social workers and are to be regarded as unsuccessful prostitutes. The total number dealt with is 830, but concerning a considerable proportion of these the information obtained was defective. Thus of only 370 were the home conditions in which the prostitutes were reared definitely ascertained, about one-half coming from bad

homes, and only one-fourth from good homes; considerable importance is attached to bad housing and overcrowding as a predisposing factor of prostitution. "Deliberate choice is found to be the cause in a large proportion of cases; when vanity, love of pleasure, adventurousness, laziness, fondness for sweets, are added to strong sexual inclinations, 40 *per cent.*, among 669 cases "owe their position to their own tastes and temperament." As more than half of these girls were under eighteen at the time of their first lapse, and sixteen was by far the most dangerous age, the authors rightly regard the period of adolescence as of great importance. The chapter in which the special needs and perils of girls in this stage are sensibly and sympathetically discussed is perhaps the best in the book. As regards specific sexual desire, sixteen was found to be the age at which it is most common, then eighteen; after that it is not prominent except among married woman and widows; the proportion of cases in which there is strong sexual appetite after the habit of prostitution is established is estimated as, at most, one-sixth. Gain rarely appears as a motive before the age of twenty; it is very seldom the cause of the first step. It is also to be remembered that this "first step" only in a very small proportion of cases ever leads to prostitution. The classes which regard pre-marital unchastity with shame "form a much smaller part of the English nation than they realise." It is also to be remembered that seduction is a far less important factor than was once commonly asserted. Heartless cases of fraud do certainly occur, but more often the girl is as responsible as the man, and of ten girls who definitely stated they were seduced under promise of marriage seven were feeble-minded; "consciously or unconsciously women are indeed often the tempters, and when once within the zone of temptation it may be doubted whether women are the weaker sex."

The authors are quite alive to the influence of the hereditary factors of prostitution. Thus they point out that even the fact that a girl has relatives who are willing to act as procurers towards her, as found in many of the cases, is itself often a sign that she comes of a corrupt stock. A chapter is devoted to the feeble-minded. Two classes are recognised as almost inevitably destined to prostitution: (1) Those unable to resist their own strong inner impulses; and (2) those who have no strong impulses of their own, but are unable to resist external influences; numerous cases are described belonging to each group. The authors do not, however, consider that it is possible to estimate the proportion of the feeble-minded among prostitutes, partly because the more successful and capable rarely come under investigation, and partly because many investigators regard any unconventional manifestation of sex in an unmarried woman as in itself "moral imbecility." It would appear from the statistical tables that the authors are inclined to regard 255 of their cases as "mentally deficient."

A chapter is devoted to the economic factor of prostitution, and the reasons why domestic service produces so many prostitutes (nearly 300, or more than a third of the cases here studied) are well discussed.

The authors are critical of any simple and summary methods of remedying prostitution. Thus they state that it is futile to suppose that prostitution would be checked by exterminating the procurer; "were every procurer flogged to death the vast majority of their victims would

still fall, perhaps a little more clumsily for lack of their intermediary offices, into prostitution." Nor have they too much faith in an excessive care of girls and the destruction of their responsibility; "life is made up of risks, and perhaps none is greater than the risk of too carefully seeking to avoid all." But they are firmly convinced that many of the factors that make the prostitute, and probably her customer also, are definitely remediable. Such are a housing system which encourages the pollution of children in their homes, an educational system which denies the girl all knowledge that might equip her for the struggle between her deepest instincts and the outside world, an industrial system which condemns her to monotonous toil during an excessive period, without adequately nourishing food or leisure for mental development, or even healthy amusement, and a social tradition of the subservience of women to men which still further accentuates the tendency of the weak to drift into temptation. Nothing is said of any measures to combat the production of feeble-mindedness.

At the end will be found a bibliography which is, however, unworthy of so excellent a book, being loosely and carelessly compiled, and full of all sorts of errors, even of spelling both as regards proper names (Sawyer for Sanger, Kirsch for Kisch, Minod for Monod, etc.), and French and German words.

HAVELOCK ELLIS.

Epitome of Current Literature.

I. Psychology.

Intuition. (*Psychol. Rev.*, November, 1916.) Dearborn, G.

The concept of "intuition" is very frequently and popularly spoken of, and is especially attributed to women. The author believes that the time has now come when we should subject it to scientific analysis. That it is more often a feminine than a masculine characteristic he is prepared to believe, and he considers that, in the light of recent trends in psychology, intuition takes on a new and important interest.

There are at least four more or less distinct concepts labelled intuition: (1) The immediate knowledge of unlearned primary truth, an eighteenth century philosophical doctrine now chiefly of historic interest only; (2) the metaphysical usage of Bergson as instinct become disinterested; (3) the inexact use of the word as a foreboding of the future; and (4) the concept for which the author himself stands, as insight passing into foresight, or, in other words, an immediate knowledge of or insight into ejective, objective, and subjective processes and situations.

This involves at least four different kinds of psycho-physical event:

- (1) An *affect*, sometimes ill-realised, as to the intuited situation;
- (2) a *process of comparison and inference*, usually not consciously

appreciated; (3) a *comprehension* of the intuition, often acute and wise; (4) an *instinct to trust* the impression thus received.

Beneath the surface a number of processes are involved: (1) more or less sensory perception, (2) emotional mechanism, largely neural, (3) awareness of the emotional aroma, (4) conscious appreciation of its significance, (5) the attempt to understand that significance, leading to (6) comparisons, (7) judgment based on the comparisons, (8) more or less unconscious inference, (9) integration of the affect and the reasoning process, resulting in (10) tendency to understand the factors of the situation in relation to experiences of life, (11) unconscious belief in the rightness of this process, leading to (12) self-confidence, and (13) conscious realisation of a useful fact often more valuable than the results of laboured and extensive mental toil.

The affect or emotion concerned may be one of many, and the author has elsewhere enumerated some eighty which may thus serve. Sympathy often quickens intelligence, but "the dynamism of hate is at least equal to that of love"; always there is some vital interest at work. The process of comparison and inference is characterised by being quick, accurate, and subconscious. The "situation" comprehended by the intuition may be defined as "any appreciable relationship whatever, ejective, objective, or subjective, so long as not irrational." In practice intuition is most often used to learn the probable behaviour and character of some other person; that is why women become so expert in intuition when desiring to protect themselves against the strenuous and aggressive male. An important factor is the affective instinct to trust the intuition. As a rule men do not have this instinct, but are on their guard against their intuitions as often hopelessly wrong; in women, especially very feminine women, it is strongly marked, and their intuitions are highly adaptive to the situation.

The author regards it as demonstrable that the entire intuitional process, except its product, is in the highest degree intelligent and at the same time subconscious. In this way intuition and its comprehension of a total situation is a real criterion of intelligence. It stands for a high degree of that safeguarding of the individual which mind is specially meant to serve; obtuseness stands for abnormality and lowness of human grade. In this respect, and especially in its derangement or its lack, intuition has not received in test-systems the attention it deserves. In his own experimental psychological work Dearborn has often realised the mental significance of defective intuition. Intuition may, indeed, he argues, fairly be regarded as a criterion of sanity. As an individual the deranged man's conduct may be satisfactory, his nutrition may be satisfactory; even the mental aspects of his organism may possess all the requisites of proper function. But he is out of tune with the social consciousness around him. In relation to this out-of-tuneness, this fundamental disharmony with social values, there is no more accurate or concise concept than intuition. Intuition "suggests directly that appreciation of the basal life-relationships, causal, rational, social, as well as psychologically personal, on which alone our whole important concept of abnormality has any modicum of meaning."

HAVELOCK ELLIS.

A Transformation of Fear [*Sur une Transformation de la Peur*]. (*Rev. Phil.*, October, 1916.) Ribot, Th.

This paper bears witness to the mental vitality, up to the end, of its distinguished author, the editor of the *Revue Philosophique*, and the most prominent representative of French psychology, whose death has lately been announced.

The emotion in question is that of the sublime. Since Lessing and Burke this has usually been bracketed with the beautiful, and regarded as an æsthetic sentiment. Ribot himself so formerly regarded it. In the present paper he seeks to show that it is nothing of the kind.

Starting from an essay of Grant Allen's on the *Origin of the Sublime*, which he regards as fairly correct, Ribot points out that all the great groups of phenomena which have in the past impressed men as sublime have through all their transformations permanently retained the idea of a superior force which subjugates. Always there is the notion of a limitless force, exciting in consciousness the reaction which is the feeling of the sublime. He briefly summarises the principal classes of the sublime according to the perceptions, images, or ideas which arouse it: (1) limitless space; (2) infinite time; (3) gigantic mass, as of mountains or pyramids; (4) the violent forces of Nature or of man; and (5), most imposing of all, the sublime inculcated by religious beliefs, from animistic fetichism onwards. Although these causes of sublimity are so widely unlike, the underlying emotion is in all cases fear.

Psychologically analysed, however, the sentiment of the sublime is a complex state, in accordance with the general rule that a simple and primitive emotion passes through many processes in its higher evolution, whether by arrest or excess of development, or a synthesis of homogeneous states, or by combination. The last process, which leads to the appearance of a state apparently altogether unlike the constituent elements, is specially important. This occurs in the case of the sublime, contrary and even contradictory elements being united: (1) the consciousness of exterior power weighing upon us; (2) a resulting weakening and depression of personality; (3) an unstable secondary feeling of exaltation due to a kind of participation in the phenomenon witnessed; there are also other factors of a more negative character. The external attitude reveals a fixed gaze, expressing admiration and respect (which is the beginning of fear), or silence, an attitude quite different from that which accompanies the feeling of the beautiful.

The feeling of the sublime is thus an emotion combined of two fundamental elements—an affective element of fear, and an intellectual element involving the idea of a force imposed upon us. There is nothing æsthetic in it.

HAVELOCK ELLIS.

2. Physiological Psychology.

Pure Tactile-motor Consciousness [*La Conscience Tactile-motrice Pure*]. (*Revue Philosophique*, July, 1916.) Ribot, Th.

It is always with a feeling of regret that we read some of the last words of a writer who has recently passed away, and the regret is the more poignant when the writer was such a man as the learned, kindly Breton, Théodule-Armand Ribot. "The style is the man." The chief

characteristics of the man Ribot were his unselfishness and his unfeigned love for his fellows, and these characteristics found outward expression in his sympathy and courtesy. Courtesy was the keynote, the tone of his writings. He handled everything with a touch of velvet. But this gentleness was not a sign of weakness. Under the velvet glove was the strong, though kindly, hand. Possibly it was this innate courtesy which gave to his language its exquisite melody. In spite of the gravity of the subjects dealt with, and the closeness of the reasoning, Ribot's works have all the charm of poetry. No philosopher was ever so endowed as he with the power of translating the rhythm of thought into the rhythm of words.

Ribot opens the article, which is now before us, by saying that at the side of the psychology of the intellectual and emotional states, a third, which may be named the psychology of movements, has recently taken an important place. Its general characters and essential points may be set forth in a few words. Physiologically—and this implies all the rest—it attributes to the motor centres the preponderance in cerebral activity. Psychologically, the principal *rôle* of movements is to co-ordinate, unify and systematise the facts of experience. The movements are the regulators. By different attitudes of mind, notably by attention, they favour the work of intelligence of which the natural object is action. But the writer cautions us against allowing motor psychology to pass beyond the proper limits of its sphere.

The writer then proceeds to the real subject of his article, which is the study of the psychology of motion in the case of individuals who are both deaf and blind from birth.

It is important, he says, to observe that the expression "deaf and blind from birth" is applied to those who have been afflicted with their infirmity before the age of three years at latest—that is to say, at an age when visual and auditory recollections are too feeble to remain in the memory. To be exact, it is also necessary to remark that so-called congenital deafness and blindness are sometimes consecutive to diseases of early infancy, such as scarlatina, measles, meningitis, etc., which leave cerebral scars, and that consequently complete assimilation to (comparison with) a normal brain is impossible.

Unless they possess the sense of smell, which is often lacking, these patients can only make the acquaintance of the exterior world by tactile and kinæsthetic sensations. In order to understand the constitution of this strange form of consciousness, it is necessary at first to make an inventory of the materials of which it is composed, and then to determine the processes of mental elaboration—associating, reflecting, co-ordinating, etc.

Let us commence with the deaf-mute. The mental weakness of one who is deaf and dumb from birth is well known. Inaccessible to the perception of language, he cannot, as other children, try to imitate spoken words, and reproduce them after many attempts, and thus acquire an instrument for analysing thought. However, it is wrong to pretend that, left to themselves, deaf-mutes cannot rise above the level of sensorial consciousness. Cases in evidence of the ability to do so have been reported. It is well known that deaf-mutes invent gestures which are understood by those about them. It is to be remarked that

their syntax resembles that of primitive idioms. For example, the phrase, "After having run, I slept," is translated by four gestures, which mean running, myself, finished, sleeping.

In default of language, the deaf-mute has two processes for analysing his thoughts and translating them to the outside world: the language of the fingers, which becomes with exercise almost as rapid as speech; and the method of learning to speak by imitation of the movements of the lips and of the organs of phonation. This latter method produces a harsh, mechanical voice, which may be compared to that of an automaton.

Simple noises are for the deaf-mute only vibrations, but he distinguishes their shades and origins with great subtlety. Thus, Laura Bridgman recognised her companions by their footsteps.

As to musical sounds, such a patient distinguishes the different instruments by the nature of their vibrations. He can appreciate the pitch of sounds, the rhythm, the time, and the value of notes.

Let us now examine congenital blindness.

Sight is the sense of colour and of distance (in which the writer probably includes form). For the blind, the first function is irrevocably lost; the second he replaces as well as he can by direct contact and by movements. By movements of different parts of his body, as the neck, hands, arms, and legs, he creates for himself spatial determinations, such as direction, position, etc.; for great distances he walks, and time gives him the measure of space.

It is important to remark that while visual apprehension is synthetic, tactile-motor apprehension is analytic. A blind man only recognises an object after having felt all its parts with care. However, in the case of a familiar object he has no need of this lengthy proceeding; he acts as a man gifted with sight. The touch of the back of a chair evokes the recognition of the whole chair by restitution *ad integrum* of all its parts. This proceeding is equivalent to pure representation; a part represents the whole, or is in place of the whole, or replaces it. The last case is equivalent to abstraction.

A less known endowment of the blind is the "sense of spaces," or the "frontal sense"—a fact introduced for the first time into psychology, the writer believes, by W. James. It consists in the perception at a distance of about two yards of an obstacle, such as a wall or a tree. This sense differs according to the condition of the patient, fatigue, and atmospheric variations. Vuilberg believes that this sense exists also among those endowed with vision, but that they are ignorant of it because they have no need of using it, having something better at their disposal. This sense, which is situated in the forehead and the temples, appears to be allied to hearing; it disappears if the nose and ears be stopped up.

It is often said that man is especially a *seeing* animal, on account of the preponderance of visual perceptions and representations in daily life and in the metaphors of language. Among the blind from birth this preponderance is transferred to the tactile-motor information of the hand, which is for them singularly suggestive. The importance of the hand in the intellectual development of man was recognised very early; it was remarked upon in ancient times by the Greek philosophers.

Proofs abound of the richness of the information acquired by the hand, which is not only an organ of action, but also an instrument of conjecture and psychological divination.

To sum up, the form of consciousness which we are studying (that is to say, of the blind) is spatial, and as such is constituted especially by motor activity.

The writer then proceeds to study the case of those who are both deaf and blind from birth.

With some exceptions, those who are deaf and blind from birth have no sense of smell, but those who have preserved this sense make good use of it. They even rival dogs in the keenness of their scent.

Such afflicted persons are conscious of atmospheric changes, as heat, cold, dryness, damp, and electric tension. Many of them recognise the approach of a storm, and are able to point out exactly its precursory signs. They have also the vital sensations resulting from the work which goes on in the organism. They have appetites, instincts, sentiments, emotions, and passions, and even varieties of character.

With these materials how can a man deaf and blind from birth develop himself by the work of mental elaboration which is proper to him? One cannot give a satisfactory reply to this question. As to those who are only deaf, or only blind, there are abundant facts to interpret their psychology. But, when the two infirmities are conjoined, the conditions change. One may, however, try to indicate the main features of mental elaboration by studying the few cases which have been carefully observed.

The deaf and blind can abstract and generalise. (The case of abstraction by the blind has been alluded to above.) By the natural tendency of the human mind towards simplification and the least effort, they substitute for the whole a portion of the object presented or represented. This tactile-motor *abstraction* is sufficient for the operations of the mind. The employment of signs permits them to think by concepts; but these for the most part, notably the moral ideas, virtue, vice, justice, etc., of which the origin is instinctive and affective, appear to be less the fruit of their personal reflection than the gift of their education.

Is the idea of God innate? The religious character of (deaf and dumb, and blind) asylums, Catholic or Protestant, naturally gives rise to this question. Laura Bridgman appears to have had a vague idea of some superior spirit, equivalent in some way to that which is met with in primitive religious beliefs.

The idea of death appears to have been gained by touching a corpse, by the horror caused by the cold and rigidity, and by the indignation felt at learning that one was oneself destined to the same fate.

The notion of extent is easily constructed. The blind man, says Villey, does not move in a void, as the seeing are inclined to believe. He has in his mind a topographical map, which represents the places in which he walks, the position of things, and their form and distance.

The conception of duration appears to have been forgotten by most observers. F. Thomas, who almost alone has studied it, says that to his deaf and blind patient the future appeared as a long walk—an indefinite series of movements of the feet. For the rest, duration is determined

by the order and succession of the occupations of the day. This notion has a double origin: external and internal sensations, particularly vital rhythms.

It is difficult to study the faculty of invention, the creative imagination, among such patients. In what concerned practical life, Laura Bridgman is represented to us as industrious. It is said that "she did work of different sorts, which she sold to her visitors in order to provide herself with a little pocket-money." This is very vague. Was it invention or imitation?

For these patients the field of æsthetics is very limited. For the blind from birth the world of colours does not exist, but he has a very rich and fine perception and representation of forms. For the deaf-mute the world of vocal and musical sounds does not exist. For him, then, there is one art suppressed—music, and one might add eloquence. There are deaf people who, because they can distinguish musical instruments by their vibrations, fancy that they can represent an orchestra to themselves. Strange idea of music!

It is impossible for us to determine what a brain which, beyond vital sensations and affective states, can only perceive tactile-motor phenomena, would be capable of doing by itself alone, without the cleverness and devotion of its teachers—if it had not been, so to speak, created a second time, if it had not received from its instructors the gift of civilisation. Among such patients, in addition to an organic deficiency, there is a social deficiency, because they are not adapted to a normal human environment.

Let us imagine a number of people deaf and blind from birth shut up in an enclosure, as the lepers were in the Middle Ages, and having no communication with the rest of humanity except what was necessary to provide them with means of existence. What would they do? It is probable that by means of touch and reciprocal movements they would be able to establish some sort of acquaintanceship between themselves, some bond, some sentiment of sympathy or of aversion, but it is most likely that in spite of their human brains the mental level of this assembly would remain below that of societies of superior animals.

But it is useless to build a psychological romance on a fantastic hypothesis. Our object is to discover what the human mind, doubly handicapped, but furnished with artificial methods and with the assistance of others, can know by the single means of its pure tactile-motor activity.

How can one explain the extraordinary development of the modes of perception which exist among these patients? One replies, by the substitution of sense. Practically, this reply is incontestable and sufficient, but it does not teach us the operating cause of this transformation by which the hand becomes the eye, and the fingers "the antennæ" of language. This operating cause is a property of living beings—adaptation. Since the enunciation of the doctrine of transformation, the importance of this factor as a cause of spontaneous or provoked variations has become very great in biology. Better than that of Darwin the position adopted by Lamarck, and especially by the Neo-Lamarckians, can aid us to understand the genesis of "substitutions." The *primum movens* is a physiological or psychological need, instinct, or

desire—whichever term one prefers. It is not necessary that the effort be conscious or subconscious; an unconscious thrust is sufficient, and it does many things in vital development. Thus, a variation is constituted. "Substitution" is nothing else than variation.

There can be psychological variations as well as physiological. For instance, attention under its utilitarian form is a principle of fixation. This may be illustrated by examples. The "sense of spaces," the "frontal sense," mentioned above, exists among many people who do not know that they possess it. They could by attention cultivate it, but they do not trouble to do so, having at their disposal more practical instruments of perception. For sounds, we can, as the deaf, perceive them otherwise than by the ears, that is to say, by the feeling of vibrations. With some perseverance, in this case also we could create an adaptation. But what would be the good of it?

Every individual has at his disposal a capital of energy variable according to his constitution and the actual conditions of the moment. To him who can neither see nor hear, there remains a part of his capital which has not been expended by his eyes and ears, and which, being turned towards other functions and utilised in other ways, permits of new adaptations.

Taken in its entirety, the case of the deaf and blind from birth gives rise to many other problems; but the writer's design was to restrict himself to a study of pure motor psychology, to penetrate into the consciousness, where—with very few exceptions—all is reduced to perceptions of movements, to images of movements, and to combinations of movements.

Stanley Hall, in his interesting study of the case of Laura Bridgman (*Mind*, 1879), makes a remark which the writer says he borrows, because it is the *résumé* and logical conclusion of his article: he sees in this direct perception of oscillations, as such, a very important fact, the most general characteristic of the physical world entering thus directly into the consciousness.

J. BARFIELD ADAMS.

The Automatic Writing of Children from Two to Six Years, Indicative of Organic Derivation of Writing in General. [*The Psychological Review*, November, 1914]. A. Wyczolkowska.

From the study of the automatic handwriting of children, the writer has been able to discover the existence of five different stages in the evolution of the writing. These are as follows: 1. (a) Incoherent lines produced with obvious timidity and clumsiness in moving the hand; (b) automatic and unattentive scribbling or chaos of straight and concentric lines, limited only by the edge of the paper (2-2½ years). 2. Circular, perpendicular, and horizontal waving lines, with small amplitude but very long phases (2½-3 years). 3. Continuous curves with high amplitude, and a notable diminution of phases, with much attention brought into the writing exhibit (3-5 years). 4. More or less isolated zig-zag, with unconscious limitation of letters and symbols of the writing in various languages. 5. Conscious imitation of printed or cursive writing of adults, mixed with the previous graphic elucubrations.

From the examination of a number of children the writer concludes

that these stages are invariable, and that it becomes possible to guess the age of a child of normal development from a specimen of its handwriting. In one case in which a child of four years could only produce straight, horizontal lines, the teacher stated that retardation was apparent in every other direction. Thus every stage of graphical evolution in a child is connected with the corresponding age, in accordance with the degree of general development.

The writer concludes that every child is subject to a graphico-automatic evolution which to a certain degree helps it to the acquisition of trained writing, and extending these views to writing in general, she contends that the graphical faculty must have been in the remote past the direct cause and source of the impulse which had for its aim the beginning of writing in general.

A further analysis of the various elements in the automatic writing of children, and a comparison of the elements with those found in the symbols of oriental and modern languages, leads to the conclusion that it is essential to recognise in these graphical elements the organic basis from which cultural writing has evolved.

H. DEVINE.

3. Clinical Neurology and Psychiatry.

The Works of a Paranoïc Artist [I Lavori di un Pittore Paranoïco].
(*Archivio di Antropologia Criminale Psichiatria e Medicina Legale*,
March-April, 1916.) Sacerdote, Dr. Anselmo.

In this paper the writer studies the paintings and sketches of Lorenzo Pedrone with the object of pointing out the effect of mental disease on the work of an artist. The brief biography which prefaces the article is from the pen of Prof. Giacinto Pacchiotti, who in his time was a physician of great reputation in Turin.

Lorenzo Pedrone was born at Alessandria in 1815. His father, who was not well off, obtained a situation in Turin, and Lorenzo was taken as an infant to that city. In due time the boy was sent to a public school, and appears to have received an excellent education. He was passionately fond of painting, and in 1831 became a pupil at the Reale Accademia Albertina di Belle Arti. Here he was considered one of the best students. However, his father wished him to study for the profession of land surveyor. For a time Lorenzo obeyed, but in the end the attractions of art overcame those of geometry.

A correct and elegant draughtsman, a water-colourist justly esteemed by all, he found protectors among his former professors, and patrons among the nobility and the richer tradespeople of Turin, who sent their children to him to be taught drawing. Later, he was entrusted with the task of designing the new uniforms for the Sardinian army, created by King Carlo Alberto after he ascended the throne. This work was carried out by Pedrone in a very masterly manner.

The remainder of the man's life appears to have been a failure. Little by little he sank in the social scale. He became irritable, and envious of everyone. Desperate, without work, without money, he sought momentary comfort in alcoholic excitement. He fled from everybody, he hated everybody, he suspected everybody. The writer

of the article considers the case to have been one of paranoia, aggravated by alcoholism.

Lorenzo Pedrone died in 1865 in his fiftieth year. One morning his body was found in a ditch near the city poorhouse, half buried in mud, and with the clothing soaked with rain. Death was probably due to natural causes, as there does not appear to have been any suspicion of either suicide or murder.

In the possession of Prof. Pacchiotti was an album containing all the designs and water-colour drawings executed by Lorenzo Pedrone during the last years of his life, when poor, feeble, humiliated, almost a beggar, maddened by alcohol, living in a bare garret, without suitable light, often without proper paper, without models, whom he could not afford to pay, often without colours, using rough paper which had served to wrap up cheese, often with only pen and ink, he designed at fancy what his intellect, powerful still, though darkening with disease, dictated to him.

This album is preserved to-day in the Museo Civico at Turin. The writer gives a list, with a full description of each subject, of sixty-three of the water-colour drawings contained in the album, and he illustrates his article with seven reproductions of the pictures. The subjects of many of these water-colour drawings are poverty, misery, death, murder, fraud, and other crimes.

In these pictures the writer considers there are two points which should arrest our attention: first, that their conception reflects a state of delirium; second, the sincerity with which the artist has given form to the morbid ideas of his imagination. It is this sincerity, he thinks, which sharply differentiates these water-colour drawings of Lorenzo Pedrone from the works of the greater number of painters of miserable and repulsive things, or of objects suggestive of death—the so-called "*artisti macabri*." Whatever be the perfection of execution, of technique, or of colour in the paintings of these last mentioned artists, they are artificial, and lack force of conception. He likens the work of the *artisti macabri* to a landscape painted from imagination; that of Pedrone to a scene painted from Nature. The one may be far superior to the other in technique, but it lacks the sense of life. When one thinks of the mural paintings in the Campo Santo at Pisa, one does not altogether agree with Dr. Sacerdote.

The writer then proceeds to examine in detail the pictures with which he illustrates his paper. One represents a dead body lying in an open field, and almost entirely covered with snow. The feet—the anatomy is fairly good—emerge from the drift, and are bare, save for a little snow which lies on the toes and in the hollows between them. The composition of the picture and the management of light and shade are good. The long grass struggling through the snow in the foreground, the clump of leafless trees, laden with snow, on the right, the pollard willows in the background, and the birds hovering over the corpse, are indicated successfully.

Another drawing shows us an old woman, who is dozing over a fire, suddenly startled by the grinning face of a devil appearing in the midst of the flames. The composition of this picture is not bad, but the technique is decidedly so, though the artist has succeeded in conveying

the idea of terror into the attitude of the woman's figure. In this work the writer sees a faithful representation of one of Pedrone's own terrifying and demoniacal hallucinations.

In a third drawing we see Macbeth listening to the witches. The main figure is stiff and awkward, but the idea of listening is well indicated, though with a certain amount of conventionality. The writer admits that this picture is less significant than some of the others, because its inspiration does not come from Pedrone himself, but he sees in it the imagination of one who suffers from hallucinations of hearing, of one who is tortured by "voices."

The best picture of the series represents a maniac behind the bars of his cell. The drawing is excellent. The face expresses acute delirium. As the writer says, no one could mistake the man for a sane prisoner craving for liberty. Prof. Pacchiotti informs us that this picture is the portrait of an insane patient actually seen by Pedrone.

Then follows a ghastly representation of a gravedigger sitting at a table in his cottage, gnawing a human bone. The physiognomy of the man is at once stupid and ferocious. The pose of the figure is natural, and the anatomy and foreshortening of the limbs are fairly good. The table at which the man is seated is badly drawn and out of perspective, but the drawing of the worn steps of the staircase in the foreground, and of a barrow on the right is good. Through an open door in the background one catches sight of the graves in a cemetery. The light and shade are badly managed, and the artist has failed to give the idea of depth. Taken as a whole the picture is very faulty.

The next sketch represents Death carrying away a coffin in a two-wheeled cart. The anatomy of the galloping horse is fairly good. The figure of Death is indistinct, but the writer thinks that the artist has succeeded in indicating indifference (in the attitude, I suppose) and irony in the fact that the figure is smoking a short pipe. The snow-covered landscape is well drawn. On the whole the picture is good, and the writer thinks it is of importance as demonstrating the persistence of the idea of death in the artist's mind.

The last reproduction of the water-colour sketches represents a murder, and is very bad both in technique and composition.

The last of the series of prints which illustrate the article is the reproduction of a portrait of Prof. Pacchiotti by Lorenzo Pedrone. The portrait was painted before the decadence of the artist's powers, and is reproduced to give a specimen of his better work. It is certainly good. The expression is natural, and the modelling is excellent.

The writer points out that from the point of view of technique the water-colour drawings in Pedrone's album are very imperfect, but that this imperfection is partly due to the deficiency of means—paper, colours, etc.—during the artist's days of poverty, and partly to physical and psychical alterations in his condition. The portrait of Pacchiotti gives us an idea of the excellence of his work in his earlier, happier, and healthier days, and thus serves as a standard by which we can measure the extent of his decadence. "When then we see," says the writer, "that technically the work of Pedrone went from bad to worse, and that the artist reconciled himself to considering as finished these little pictures (the water-colour drawings in the album), which mos

certainly he would have repudiated in earlier times, we may conclude that the level of his æsthetic criticism had become lowered." Here it seems that the writer assumes a little too much. No evidence has been produced that Pedrone did consider a sketch made on a scrap of rough paper, which had just been wrapped about a piece of cheese, as a finished picture. At the same time, if he had done so, one quite agrees that such a blunting of the æsthetic sense would be natural in the case of a paranoic and alcoholic artist, and would be due to the failing of the power of auto-criticism.

The writer passes on to the consideration of another matter. It is natural that the productions of a paranoic artist, who suffers from hallucinations, should be representations of these hallucinations. We concede the point, but not the converse, namely, that the painter of every weird and eerie picture is a paranoic. And the writer himself is more than half inclined to agree with us. If we walk, he says, through galleries filled with the works of painters and sculptors of every degree of fame and of every form of culture, we are impressed with the fact that a large number of the subjects of the works of art represent death, hell, devils, witches, and every form of human sadness and vice. Are we then to conclude that all the artists, who produced these works, were suffering from paranoia or some other form of mental disease? The writer might have narrowed the scope of his question, and emphasised the answer, if instead of visiting the great public galleries, he had gone to the Campo Santo at Pisa, previously referred to, where the true *artisti macabri* reign supreme. The subjects of the mural paintings which he would have seen there are weird enough in all conscience—"The Dance of Death," "The Triumph of Death." But were the painters of these many figures—some strange and grotesque, and others of exquisite beauty—all insane? Was Orcagna a paranoic?

Max Nordau affirms that "Art is a slight, initial deviation from perfect health." The affirmation is open to discussion.

The writer considers that to form a psychological valuation of any work of Art it is necessary to have a perfect acquaintance with all the conditions of the artist's time, place, and surroundings, his artistic education, the obstacles he has surmounted, and the troubles and joys which he has met with on his way; in short, a minute and anecdoted biography, gathered together and explained by anthropological criticism. So one could determine—without employing the hypothesis of an abnormal psychical activity—the origin of the inspiration of many works of art on sad and repulsive subjects. It will be generally found that the choice of such subjects is due to religious or superstitious conceptions, occasionally to a transitory state of the artist's mind.

All through the latter part of the article one sees that the writer is trying to free himself from the influence of Lombroso. But he cannot do so entirely, and his oscillations are amusing. Because some geniuses are diseased, it does not follow that disease is the cause of genius. Disease modifies the brilliancy of genius in precisely the same way as it modifies the stolidity of the average man.

It will, I think, be admitted that it is more difficult to read the mind of an artist in his paintings than that of an author or a musician in their respective works. It may be easy to perceive Fra Angelico's

saintly mind in his heavenly scenes and angels' faces. But what about that old rascal, Fra Filippo Lippi? Do not his saints and madonnas also speak of beatitude and innocence? Yet I must confess, and in so doing I weaken my argument, that I remember a little angel who looks out of the corner of one of his pictures—it hangs, I think, in the Uffizi Gallery at Florence—whose face wears an expression of sheer naughtiness.

With regard to the works of Lorenzo Pedrone, and the indications which they give, or are supposed to give, of the mental condition of the artist, the writer would probably have strengthened his argument if he had given us some idea of the chronology of the water-colour sketches. If the picture of the maniac behind the bars of his cell were among the first of the series, and that of the old woman frightened by the apparition of the devil among the last, one would appreciate much more readily the decadence of the painter's skill.

J. BARFIELD ADAMS.

A Question of Epileptic Dementia with Recovery. (Journ. Ner. and Ment. Dis., December, 1916.) Thom., D.A.

The patient, who was admitted to a Massachusetts State Hospital at the age of 37, had had one convulsion during teething, and during early life was sensitive, easily offended, quick-tempered, and inclined to seclusion—revealing general traits of the epileptic temperament—before, at the age of 20, attacks of *petit mal* occurred, passing three years later into *grand mal* convulsions of serious type. For a period of thirteen years he had convulsions almost daily. He became mentally confused most of the time, and had fixed ideas of persecution by his family. For the first two years after admission to the asylum he was able to do work involving a certain amount of ability and intelligence. But, on the whole, during the first seven years there was a slow progressive mental deterioration, and at the end of the fourth year he already showed symptoms of dementia, inability to do any kind of work, loss of orientation, apprehension, and apperception, complete clouding of consciousness, failure of memory for both recent and remote events, unclean habits, and inability to feed himself, while there were occasional outbursts of impulsive violence. This phase lasted for three years. Then, after a series of convulsions of unusual severity—sixty-nine in twenty-four hours—the patient became comatose, death seemed imminent, and the last rites of the Church were administered. Next day the convulsions and the general condition began to improve. Three weeks later he was up and about, gaining flesh, free from fits, showing much mental improvement, tidy in his habits, and able to dress himself. Three months later he had his last epileptic seizure. In the three following years up to the present there has been continuous physical and mental improvement, although the original epileptic personality remains pronounced; he is irritable, impulsive, fault-finding, and hyper-religious. Even in these respects, however, there is a continuous improvement. He works at gardening faithfully and intelligently, is an excellent penman, shows unimpaired memory, bordering indeed on hyper-amnesia in its retentiveness, can discuss general questions intelligently and politely, and possesses quite normal powers of attention and concentration.

The author criticises Bolton's and Turner's definitions of dementia, diagnoses the case as epileptic dementia (on Tuke's definition) with fair recovery, and concludes: "It seems that it is time to settle the question of the permanency of dementia, and, if we are to consider it due to irreparable cortical changes, to refrain from using it in the acute confusional states which go on to recovery. That is, separate in a clinical way the functional from the organic. The present case is an excellent example where such a distinction would be of value."

HAVELOCK ELLIS.

Prophylaxis and Therapy of Moral Diseases [Profilassi e Terapia delle Malattie Morali]. (Archivio di Antropologia Criminale Psichiatria e Medicina Legale, July-August, 1916.) Ratto, Dr. L.

This paper is very disappointing. Carried away by his reverence for Cesare Lombroso, the writer drifts hopelessly away from his subject. A firm believer in the "criminal type" (il tipo del delinquente-nato), he is vexed with Carrara and Ottolenghi for the attitude which they have assumed towards this pet invention of the master, and he is almost angry with a certain English commission which, after mature examination, denied its existence altogether.

This commission was composed of English physicians and anthropologists who carried out an inquiry in English prisons on more than 3,000 prisoners, who were examined anthropologically, photographed, and weighed and measured with mathematical precision and an identity of method.

From these examinations were collected ninety-six data on the facts of the life and person of each prisoner. These data were more than sufficient for a conclusive study of the *physique* of the delinquent, and the conclusion arrived at by the English commissioners was that no physical characteristics exist by which the criminal (as such) can be recognised by bodily examination, and that there are no special stigmata by which the various classes of criminals—from assassins to thieves—can be distinguished from the most honest of citizens.

But the English Commission, says the writer, puffed up by success, permitted itself to draw an arbitrary induction from these collected data, namely, that there does not exist any moral stigmata, beyond a certain natural stupidity which appears as a constant coefficient of crime. Hence it was concluded that the delinquent is neither a creature *sui generis*, nor abnormal, but simply an "unusual" specimen of "normal humanity." The difference between the delinquent and the honest man is therefore not a question of physical strength, height, weight, or mental capacity, but of moral weakness in the face of criminal temptation. Such moral weakness is not due to morbid or unnatural conditions, nor to atavism, but to the fact that the individual follows the line of least resistance. I doubt whether at this point Dr. Ratto has quite caught the ideas embodied in the English Commissioners' conclusions. Surely, every man who follows the line of least resistance is not a criminal, nor a potential criminal!

Then an extraordinary position is taken up by the writer. He professes to believe that the English Commissioners were influenced in their

conclusions by a desire to preserve intact the theological dogma of free will. Anthropometria and biometria, he exclaims, will never prove anything for or against the doctrine of free will! Certainly, one agrees with him.

With much that the learned writer says in the concluding paragraphs of his paper concerning the influence exercised by Lombroso directly and indirectly on the amelioration of the lot of the criminal one is thoroughly in accord. The debt that anthropology, sociology, philanthropy, and legislation owe to the great Italian criminologist is enormous. Even the debt that literature owes to him is very great, for all those who have read his works will readily admit that he is one of the most charming of writers. But many of his theories have not stood the test of time. He had the fatal habit of not pausing to verify his facts. He was ever too ready to take them second-hand. For example, in theorising as to the relationship between genius and epilepsy he accepted with child-like faith the anecdotes related by that dear old gossip, Moreau de Tours, who in gathering them together exercised as much discretion and historical criticism as that employed by monkish chroniclers in the Middle Ages.

J. BARFIELD ADAMS.

4. Sociology.

Medico-legal Aspects of Mental Deficiency. (*Medico-legal Journ.*, May, 1916.) Gordon, Alfred.

The author, who is Neurologist to Mount Sinai Hospital, Philadelphia, here deals with the responsibility for illegal acts committed by individuals who, though not insane in a strict sense, are different from normal individuals in power of reasoning, as well as by sentiments, tastes, sympathies, etc. There is a long scale of such psychic deviations, beginning with mental monstrosities, and ending with slight mental feebleness. Idiocy and imbecility are here excluded. The large group of mental feebleness is one step higher than the imbecile, and its study is of much greater importance, from a sociological and legal standpoint, than that of idiocy and imbecility. The varieties and sub-varieties are many, and the transitions imperceptible. This is the most important chapter in the study of mental deficiency, for the number of these individuals is legion, and we are constantly meeting them, on school benches and in practical life. Their influence is frequently injurious to the community.

The author regards insufficient intelligence as primary in these cases, and moral obtuseness as secondary. Intelligence exerts enormous influence in moulding moral personality. Obtuse moral consciousness thus appears as a chief characteristic of the feeble-minded (apart from idiocy or imbecility). Through lack of judgment and of will the character is weak, unstable, lacking resistance, and an easy prey of passions. Most of the symptoms gravitate round the ego. The chief characteristics are egotism, envy, jealousy, defiance, doubt, anger, hatred, and impulsive manifestations, such manifestations being the expression of lack of control of ideas over passions.

The application of any legal test of "right and wrong" is unjust and scientifically inaccurate in these cases. We are dealing with quantitative-

deficiencies inherent to the individual, with an inaptitude to acquire knowledge and to perform complex mental operations, and particularly with an inherent deficiency of inhibitory power. Such individuals may be aware the act they commit is wrong and punishable, and yet by nature of their mental inferiority they are not totally accountable. The test of right and wrong is bound to be disastrous so far as the administration of justice is concerned. The responsibility must be regarded as limited.

Penal legislation must be combined with legal medicine to constitute a sound criminology. By the union of the two sciences narrow conceptions of liberty and responsibility will be destroyed and progress assured. A broader and less technical attitude is necessary. The degree of responsibility must be established in accordance with the essential features of the mental status of the particular individual. The author views with satisfaction the extent to which the conception of limited responsibility is gaining ground in the penal codes or projects of Norway, Switzerland, Russia, Germany, Austria, Japan, and Siam.

HAVELOCK ELLIS.

5. Asylum Reports for 1915.

Some English County and Borough Asylums.

Carmarthen.—Ill-fortune seems to have dogged the steps of this authority. After many years of worse than inconvenience from conflict of views on the part of the contributing County Councils and after much animadversion on the part of the lunacy authorities a satisfactory rearrangement was come to, and the way was clear for the provision of fresh accommodation to meet pressing need to provide more and better accommodation for the inmates. Then came the war and all progress was stayed by the Government. Urgent representations were made successfully, and the contract was allowed for the laundry work to proceed. But the Committee could not obtain the necessary authority to equip this addition. The Committee had in hand certain monies wherewith to make alterations or repairs on some newly acquired property, but the application of these monies was vetoed also by the Government. Further, the Committee has had to receive some Cardiff patients, and the asylum, which was provided for 600 patients, was overburdened to the extent of more than 167 inmates, or 25 *per cent.* in excess. Nevertheless, the patients are not found to be seriously prejudiced by the overcrowding. This is by no means an uncommon experience and speaks well for the skill with which difficulties have been overcome. The recovery ratio on direct admissions was 39·1.

Dorsetshire.—The report chronicles the retirement of Dr. MacDonald after thirty-three years of work here. The Committee acknowledge his services in handsome terms, most deservedly so in our opinion. Among several important changes worked by him the provision of complete and independent accommodation for private patients stands out pre-eminently. From the professional point of view little can be said beyond that while the recovery rate on direct rate-paid patients was 32·75, that for the

private cases was 41·86, while the death-rates were respectively 12·33 and 10·63 on the average residence. The average residence numbers were 665 rate-paid and 254 private cases. Of course before any useful conclusion can be arrived at from these bald figures, many other relevant facts would have to be enumerated. In congratulating Dr. Peachell on his succession to the honourable position of medical superintendent of this institution, we venture to suggest to him that he might confer a considerable obligation if he at some future time worked out some comparisons of the factors and results of the two classes of admissions. Given the general direction of environment and treatment by one brain, the study of such factors as early resort to treatment, the classification of mental disease, the ætiology, condition of physical health, and so forth could hardly fail to be fruitful. There can be little doubt as to the financial results of admitting private patients. We find that the latter brought £23,631 into the asylum chest surpassing by £2,500 the returns of all classes of rate-paid patients. We note, too, that no less a sum than £10,471 was transferred from the maintenance account to the building and other accounts. The average payment for the private patients was just under £90 *per caput*.

Essex County, Brentwood.—By far the most important portion of this report is that which deals with the clinico-pathological and pathological work carried on by Dr. Turner on the lines described by us last year. We again wish to emphasise the immense value of the exhaustive and minute observations recorded by him. We have nothing of the kind in this country. It is impossible to do more than to refer to one or two points, but the whole report is worth the most careful consideration by pathologists, those engaged in general work as well as those attached to mental hospitals. The accumulation of this careful observation will found a sure basis for advance in pathological science.

In one case of general paralysis the protein reaction and the Wassermann reaction of the cerebro-spinal fluid were negative; there was a slight lymphocytosis, and the blood gave a positive Wassermann reaction. This man, who it is evident from the blood-test had been infected with syphilis, had grandiose ideas and other symptoms suggestive of general paralysis, died, but histologically there was no evidence of this disease.

The lesions of the brain in general paralysis are in many cases extremely localised. In one male this year (No. 25,656), in which pieces of tissue from the prefrontal, the right paracentral, the left conjoined ascending frontal and ascending parietal, and the cerebellum were examined, the only one of these regions which showed the characteristic change was the prefrontal, and here the changes were of a very marked degree of intensity. In one of the women (No. 24,691), from whom similar parts were examined, it was also only in the prefrontal that the lesions were found.

One male case (No. 25,558) presented very anomalous symptoms, and was not diagnosed during life: a man, æt. 54, admitted with a history of alcoholic excess. The certificate stated that he was vacant and lost and incapable of intelligent conversation. He had been a potman, then a milk carrier, and two months before his admission was engaged as a gardener but found to be useless, as all he seemed able to do was to sleep. If handed flower pots he dropped them, and he would go to sleep whilst taking his breakfast. When admitted here he walked into the ward, undressed himself, got into bed, and promptly went to sleep. After a few days he became restless and resistive, and died within four months of coming here.

He presented none of the usual mental symptoms, and very few of the physical associated with general paralysis. If he had lived in tropical climates one might have suspected him to be suffering from sleeping-sickness, a disease due to a trypanosome infection, in which the anatomical picture in the brain is almost precisely the same as in general paralysis.

It will surprise many to read that in 24 *per cent.* of 87 males and 29 *per cent.* of 156 females the foramen ovale was found to be patent. This condition was most common in general paralytics, below the average in imbeciles. Among the male dementia præcox cases, nine in number, it was not found, but in 28 females it occurred 8 times. No suggestion is made. In three women and two men where the foramen was patent the age was approaching or upwards of eighty at the time of death.

In regard to the suprarenals the following is reported of a female case :

The right gland as the seat of hæmorrhage.—This last was a case of hebephrenic dementia præcox, æt. 18 (No. 25,496), who died rather suddenly and unexpectedly, and at the autopsy no visible pathological lesion was discovered except a hæmorrhage into the right suprarenal, which was slightly enlarged and firm, and looked, when cut across, like a piece of damson cheese. No lipid was to be seen in the cortical cells, and no difference in appearance between them and the medullary. On microscopical examination of the gland all the medullary veins were found to be either blocked or partially blocked by laminated clot, enclosing in its meshes only very few leucocytes. The gland-cells were necrosed and shrunken, and everywhere between them was an extravasation of red blood-cells, as also in the connective tissues surrounding the gland. In the cerebellum there was a very marked hyaline degeneration of the arteries with thickening, almost or quite in places obstructing the lumen; but elsewhere, that is to say in those regions examined (cerebral cortex, three regions—liver and kidney), no structural alteration of the vessels was noted, but the hepatic veins showed abundant laminated intravascular clot.

One is tempted to assume that in this case the clotting was brought about by the entrance of adrenalin into the veins, which would cause a rise of blood-pressure that might lead to rupture of the capillaries.

The systolic pressure of this girl on admission a few months before was normal, but no record was taken just before her death. Anyhow, the above appears to be a feasible explanation of the rupture in her case, and as hæmorrhage into the suprarenal is stated to be a cause of sudden death, it was returned as the immediate cause of her death.

Glamorganshire.—Dr. Finlay, in his ætiological tables, of which every one in the statistical scheme is kept up to the full, cannot trace any striking alteration from the records of former years. So far war and its horrors seems to have left no mark on the production of insanity. He points to some increase in alcoholism as a factor among the female admissions. We note that if the war has not led to increase of insanity, it has not brought about any decrease among the men by the fact that so many of the male population have been taken away to the Colours.

London County.—Of the many reports received this year that of the London County Asylum Committee shows the most marked war-shrinkage. Instead of a portly volume it does not even amount to a pamphlet; but consists of five pages only. Nevertheless it contains matter of interest. We are glad to see an undertaking to bring up information when more normal conditions exist, for it would be an immense loss to asylum science if later on there should be any considerable gap in the statistical work of a body like this, work valuable from

consistence and enterprise, with much light thrown on it by the analytical powers of Mr. Keene.

The first point we note is an appreciable decrease in the insane population of the area. This decrease does not apply only to the asylum, but also to the patients in the Metropolitan Asylum Board's institutions, and even to lunatics in workhouses or with friends. The total decrease in the year 1915-16 amounted to 950, of which 637 related to the asylum, and when this is contrasted with the 26-year average increase of 458 (415 in the asylum) it is evident that important changes have been at work, which the ordinary accidents and happenings will not suffice to explain. Of course the mere closing, for war purposes, of such a large asylum as Horton would tend to decrease the available space for cases which were not urgently acute. But if this were an important factor, operating on the relative population of asylums, the Metropolitan Asylum Board's asylums would respond by showing increase, whereas, as said, there is a marked decrease. The number of admissions, discharges, and deaths are not stated. The relations of these factors to each other would, no doubt, suggest the method in which the decrease was brought about, but would not, of course, give the real reason.

The principal facts relating to the use of Horton as a war hospital—the expenses of which are chargeable to the Government—are as follows :

Between May 20th, 1915, and March 31st, 1916, 7,734 sick and wounded soldiers have been admitted, of whom 5,997 have been discharged and 1697 remain. The asylum buildings proved most adaptable, and have made an admirable general hospital. The nursing has been mainly done by females, but such as were left of the male staff of the asylum became porters and assistants. The maintenance of the patients cost £127,000, and this, of course, was paid by the Government.

The Maudsley Hospital filled the covetous eyes of the military authorities, and was taken over by them, as well as the house, which had been secured for the nursing staff. At first, by the desire of the same authorities, the building of the pathological section was postponed, but they changed their mind again, and it is in their possession. Of course the consent of Dr. Maudsley was asked before the hospital was handed over, and he generously accorded it. We must, however, all feel much sympathy with him in the great disappointment entailed by delay, in the complete evolution of his great idea.

Metropolitan Asylums Board.—The report of this authority has, as might have been expected, shrunk to very small proportions, having shed most of its highly detailed statements. But it contains the subjoined note about Darenth, which conveys some idea of how the beneficent training has been carried on. Not the least interesting item is that which shows how, by reason of training, the school has even contributed recruits for the army.

The success of the workshops is the more remarkable, since a very large proportion of the training-staff joined the Colours.

"The industrial work done by these patients in the workshops provided for the purpose was valued at £17,939. In addition, articles to the value of £90 were made by the children in the schools section. Most of the goods were used in the

several institutions. Among the classes of work on which patients were employed were printing, bookbinding, and paper-bag making, brush and basket making, shoemaking and tailoring, mat and rug making, and toy making. On this aspect of the work the following remarks by the Medical Superintendent of Darenth Industrial Colony are worth recording:

"With the opening of the extensions of the workshops at the male side it became practicable to undertake the manufacture of toys, and this has been carried on during the war with marked success. It provides a new type of work, at once interesting and lucrative, which has been taken up with enthusiasm by the patients, and it is already making demands on our resources in the way of floor space and power which cannot be fully met. Since the toys are almost entirely made from waste materials, it is very desirable that supplies of these from the Board's institutions generally should be forwarded to Darenth, where a use can be found for such articles as boxes, tubs, tea chests, felled trees or large branches of trees, old American cloth, off-cuts of tapestry or cretonne, old leather belting, cotton reels, wall-paper pattern books, feathers, condemned skin mats, brooms, and brushes. About 3,000 toys, which were sold for a sum approximating to £160, were disposed of in this first year of working. Taking all the industries for adults into consideration, the working of the past three years is shown in the following table:

Year.	Value of goods made and disposed of.			Profit.		
	£	s.	d.	£	s.	d.
1913	14,251	0	5	2,078	0	0
1914	18,439	18	11	1,748	8	5
1915	17,939	8	9	1,692	8	5

"The fall in the proportion of profit suggests that the prices credited to the colony for articles made should be revised in the light of the general increase in market values. If this were done the figures representing the turnover would be even more satisfactory.

"23. During the year 73 cases were discharged from Darenth Industrial Colony to the care of the guardians, and 31 from Bridge Industrial Home. Of these, 23 entered the army. The total number of discharges during the previous year was 46 only. This increase, says the Medical Superintendent of Darenth,

is an expression of the alteration which has been caused in the economic position by the war. Among the patients at Darenth are many who are close to the vague boundary line which separates unsoundness of mind from what is regarded as a normal mental state. With the existing demand for labour places can be found for workers who hitherto have been unable to hold their own, while in the case of certain of these the control and guidance necessary to make good their defects of will and initiative can be provided by military service. Present-day conditions have enabled several of the inmates to become self-supporting, while the deficit in labour at other institutions of the Board has to some extent been made good by the transfer from Darenth of working patients."

Wiltshire.—At Devizes Dr. Cole reports a marked decrease in direct admissions. A large number of Bristol patients transferred under the War Office scheme led to much overcrowding. However, in spite of that, the recovery ratio was increased and the death ratio decreased. The decrease in the direct admissions was shown in the females as well as the males. Wiltshire is in the peculiar position of containing in its area the great war camps on Salisbury Plain. From these, two out-county soldiers and two civil strangers (connected with the camp) and four Wiltshire soldiers were among the direct admissions. Dr. Cole points out that possibly other Wiltshire military cases may have been sent elsewhere, but is firmly of the opinion that the occurrence of Wiltshire lunacy had decreased in the year. The recovery rate, as between direct recoveries and direct admissions, was 42 per cent.

Yorks, West Riding.—Dr. Shaw Bolton has to record that 552 patients from Wadsley were transferred to Wakefield, but in spite of that tremendous addition after a time there was no very appreciable overcrowding, the generous allowance of space in the Acute Hospital permitting of arrangements being made to meet the occasion. But he records also that a great number of the transferred patients were feeble and bedridden. The incidence and fatality of dysentery, and, to a small extent, of typhoid fever, was a demonstrable and, indeed, expected sequence. In this sense the war may be regarded as an indirect factor in the increased death-rate. Dr. Bolton writes on the effect of large transfers of patients :

“It was possible clearly to show that the increased incidence of dysentery during the year 1915 bore no relationship whatever to the local overcrowding of the asylum which occurred. It may, indeed, be regarded as certain that epidemics or exacerbations of disease occurring after extensive transferences of patients are due to the dissemination amongst groups of individuals of strains of dysentery and typhoid bacilli, which possess for them a pathogenicity higher than that of the strains to which they have been accustomed.”

Some Registered Hospitals.

Barnwood.—The Committee most liberally made an offer to receive some private patients from some public asylums when the latter were converted into military hospitals. The conditions of reception were that the patients should be mentally, socially, and otherwise similarly treated, and at the same charge, as at the asylums they were leaving. It is needless to say that this beneficent offer was accepted with much appreciation.

Reviewing the difficulties of ætiology, the just appreciation of individual factors, Dr. Soutar asks why is it that, if such factors are causal factors of insanities, only one individual here and there succumbs while the many prevail over the factors. He naturally suggests inborn tendency to development of mental disorder under stress as the probable answer. Then comes the further problem, why is this tendency only effective in a very small minority of those to whom it is handed down? We can suggest two solutions. First, can we ever assume that precisely the same factors can be found acting with exactly the same force in any two cases in each of which the hereditary tendency occurs? The fact is that however strong positive evidence there may be of certain ætiology there must be any amount of negative evidence lost to sight. We can see with a fair amount of confidence that a certain factor tended to cause the breach in sanity, but it is absolutely impossible to ascertain the non-transmitted weaknesses and failures which permit the breach. These latter go back to the earliest moments of life, and may be represented to some extent perhaps in the term environment, but their origin cannot be recalled at the time of the breach. Then there are the accidents of life—the opportunities, the friendships, the helping hands, and so forth which do much to determine the course of life in the individual. In this direction we suggest that there can often be

found the reason why of two cases having equal evil tendency one is taken and the other left. Yet again, are we to assume that among the offspring of a given pair the tendencies, whatever they may be, are handed down in equal force to each? Can we believe that the procreative powers of the parents are at all times constant in the begetting of health or unhealth? With regard to ætiological factors, we must recognise that they are individually elusive and untrustworthy, and that an ætiological table must not be read as a thing of scientific accuracy, or even as approaching that accuracy. But it has a very definite practical value in enumerating certain factors which are more or less often found in close relation with the occurrence of insanity, and which therefore require close watching and strenuous resistance if we desire to arrive at the highest mental vitality, whether in the individual or the race.

The Retreat, York.—Dr. Bedford Pierce, in pursuance of his claim that cases of incipient insanity should be admitted into mental hospitals without certificates, points to the fact that a large number of shell-shock and other forms of mental collapse on active service are being treated in special hospitals without certificates, and he hopes that the advantages of this will be so clearly demonstrated that before long such facilities will be extended. He scores a good point here.

As an instance of how patients can be got to do work if they are allowed to earn a small sum in this manner, he relates that a gentleman patient has made a plan of the grounds after a careful survey, and further, has made a plan of the estate in which all forest trees are numbered to correspond with a list in a tree-book which he has made. There are a great variety of trees on the estate, some of which are rare.

Some Institutions for Idiots.

Royal Earlswood Institution.—This most deserving establishment is undergoing a strenuous time. The subscriptions and legacies have been diverted to an alarming extent, notably on account of the many cries which have gone up from other bodies for financial help on account of the war. It would indeed be disastrous if, after seventy years of meritorious pioneer work, its progress were crippled by forgetfulness or lack of appreciation.

Both the Committee and Dr. Caldecott deplore the change of legislation governing the institution, which results in the absorption of an enormous amount of time in making returns and other work. As an instance, Dr. Caldecott says that the county magistrates spent six days of five hours each in re-certification of the patients, and this has to be gone through again this year. The regulations, rules, etc., of the new Act are more stringent than those of the Lunacy Acts, and he states that it is more difficult and more expensive to place a poor idiot or an imbecile in an institution than it is to place a dangerous lunatic in an asylum.

His colleague, Dr. Stephens, has done excellent service by the scientific work, the results of which are appended.

The following is a summary of the results obtained :

(1) The serums of 100 male patients were examined, and the reaction was found

to be *definitely* positive in 12, *weakly* positive in 16, and *doubtfully* positive in 14.

(2) The reaction was found to vary with age, being strongest and most frequent in patients between 16 and 21 years of age; and stronger and more frequent in those below 16 than in those above 21.

(3) In 72 *per cent.* of Mongols the test was *negative*.

(4) Of the three cases of hydrocephalus examined the reaction was negative in two, and doubtfully positive in the third.

(5) Of the four Cretins examined, the reaction was negative in two, definitely positive in one, and doubtfully positive in the other.

(6) A positive reaction was obtained in 41·2 *per cent.* of epileptics, and in 22 *per cent.* of non-epileptic cases.

(7) About 30 *per cent.* of cases of simple amentia were positive.

The Royal Eastern Counties Institution.—Dr. Turner, in addition to worries caused by loss of staff, of difficulty in obtaining provisions and other troubles, has had to deal with very serious epidemics among the children. Referring to a virulent onset of scarlet fever, he announces a fact that is not generally known, *viz.*, that the incubation period of scarlet fever is often longer in mental deficient than is found in general patients, and appears to extend to twenty-two or twenty-three days. Among fifty-two attacked with virulent measles, no less than ten died, while in two others fatal tuberculosis was lighted up.

The following is an extract from the Report of the Committee :

“The Mental Deficiency Act has been in force now for nearly two years, and a closer acquaintance with its provisions has unfortunately confirmed the original opinion of the Board that the many restrictions and the great multiplication of forms and reports have thrown a heavy burden of work on the institution. The supporters of the institution will remember that this Act confers on County Councils certain powers enabling them to deal with a number of defectives. The Board have followed out the policy outlined in their last report, namely, that of placing all beds that owing to lack of subscriptions could not be filled by elected patients at the disposal of the local authorities of the four eastern counties—Essex, Suffolk, Norfolk, and Cambridge. The Board have refused all other offers made by authorities outside the eastern counties, and they conceive that this policy truly fulfils the purposes for which the institution was founded. They have endeavoured to allot the vacant beds fairly and in proper proportions to each of the four counties.”

Some Scottish Chartered Asylums.

The Crichton Royal Institution.—A notable feature here is the large number of voluntary patients, who constituted about 7 *per cent.* of the residents. But during the year they made up 11 *per cent.* of the admissions and 26 *per cent.* of the discharges. The Lunacy Law of Scotland was wise enough to provide that a voluntary patient requesting to leave should give seventy-two hours' notice. The twenty-four hours' notice required by the English law is all too short in the interests of a patient who requires to be taken care of.

The pathologist, Dr. Cruickshank, has joined the military forces, and has been appointed to a mobile laboratory in France. Some of the results of work done by him at Dumfries have already appeared in the *Journal of Mental Science*. Fortunately it was found possible to induce Dr. Thompson, Professor of Physiology in Trinity College, Dublin, to step into the gap, and continue the routine and research work in the

laboratory. Beyond that he has undertaken some most important work on his own account.

"Prof. Thompson, with the aid of the excellent equipment of the laboratory, has been able to bring to a successful conclusion an important biochemical investigation which he had begun in Dublin, the results of which are to be published shortly. A substance named creatine occurs in the muscles of our bodies, the use of which is not known, nor do we even know from what it is formed. Prof. Thompson has found, however, that when a substance called arginine, which enters into the composition of most articles of diet and which is chemically related to creatine, is injected into the veins or beneath the skin of animals, it will give rise to an increased formation of creatine. Thus one of the modes of origin at all events of creatine, the chemical source of which has long puzzled physiologists, has been definitely settled. In connection with Prof. Thompson's important discovery at the laboratory, it may not be without interest to recall that the wide-spread attention which the subject of creatine formation has evoked during the past few years, particularly amongst American investigators, took origin in a research which was carried out by Prof. Folin, now of Harvard University, at the time when he was assistant in pathological chemistry in the laboratory of the M'Clean Hospital at Waverley, near Boston, Massachusetts, one of the leading mental hospitals in America. In the routine and research work of the laboratory, both Dr. Cruickshank and Prof. Thompson received much useful and willing help from Miss Lockhart, whose good work there, as well as in the dispensary, was much appreciated by them and by the other members of the medical staff."

Royal Edinburgh Asylum, Morningside (1915).—Dr. Robertson notes a distinct reduction in the influence of alcohol among the admissions, and this occurs in both sexes. He thinks that if it is the case that separation allowances have led to more drinking among women, the drinking must, according to his figures, have been of such a nature as does not tend to produce insanity. The following remarks on his experience of soldiers' insanity are of value:

"We have admitted during the course of the year about thirty officers and soldiers, the great majority of whom had not been to the front. In a small number of cases alcoholic excess was assigned as the cause of the insanity. There were two types of insanity which, however, stood out prominently among these admissions. There was first a considerable number of cases of simple mental excitement or mania. It would appear that in these cases the excitement produced by their new environment and military duties, and the high tension under which they lived, had overstepped the normal. They were perfectly lucid in intellect, but very exalted in feeling. They over-estimated their own importance, bragged of their doings, and talked too much. There was definite loss of self-control, and it was owing to childish and foolish conduct that they got into difficulties. They gave us a great deal of trouble in the earlier periods of their treatment, but they all made good recoveries. They constantly suggested to me exaggerated types of Rudyard Kipling's soldiers.

"The second group of cases consisted of high-grade mental defectives. These men had passed the physical tests when they enlisted, and had answered the few questions addressed to them without displaying their mental deficiency. It was very soon found, however, that owing to their low level of intelligence they were quite unfit to be trained as soldiers or to realise their responsibilities. Had the Mental Deficiency Act been in force for some years, no doubt they would all have been known to the authorities."

Dr. Robertson scores another point in that question about which he feels as strongly as does Dr. Bedford Pierce. Adverting to the unpleasantness of certifying soldiers who have broken down in the war, and to the absence of certification in the Dykebar Military

Hospital, he says that there is no essential difference between the soldier who breaks down in war and a woman, for instance, who suffers from an attack of puerperal insanity. Logically, therefore, the freedom of treatment which is accorded to the entrant into a military hospital should be accorded to the candidate for the asylum. He points out that the Lunacy Law in Scotland enables the doctor to treat an unconfirmed case in any private house or lodging, but the only place where this beneficent provision cannot be carried into effect is the asylum, thoroughly equipped as it is for carrying out the best treatment under strict regulations. The rich can secure an advantage which the poor cannot do. This proposition focuses the position and arguments very thoroughly, and demonstrates the jealous foolishness of the upholders of Lunacy Law as it is now written.

Morningside (1916).—We have the advantage of receiving an advance copy of Dr. Robertson's report to the Managers for the year just gone. We are prompted to anticipate its consideration on account of some strong and wholly admirable remarks made by him on spiritualism. The fact of its having appeared among the causes of the year's insanity at *Morningside* suggests to him the need for uttering a warning. He reminds "inquirers into the subject that if they would meet those who are hearing messages from spirits every hour of the day, who are seeing forms, angelic and human, surrounding them that are invisible to ordinary persons, and who are receiving other manifestations of an equally occult nature, they only require to go to a mental hospital to find them." He gives an instance of a person who, losing her son, resorted to spiritualism in its usual procedure, first hearing of him through medium, then getting into touch with him herself, and then widening her circle of spiritual acquaintance till she heard God's voice. He asks spiritualists to say "where in this case does spiritualism end and mental disorder begin. Do they overlap? Do they coexist? Or is there such a state as disordered mental function at all? Or is it that spiritualism was wholly absent in this case?"

In his experience he has found that, in addition to such cases as the above, where spiritualism sometimes leads to insanity in the predisposed, more frequently there is a great fascination for spiritualism among those who suffer from the simple forms and early stages of mental derangement. It is a ready and comforting explanation to them of the imaginary voices, etc. In such cases obviously it would be wrong to describe spiritualism as the cause of derangement, even though it may be prejudicial to the course of the case.

Not everyone, however, will probably be prepared to agree with Dr. Robertson in thinking that spiritualism "is a difficult subject worthy of patient and unbiassed inquiry by competent investigators." What is the measure of competency to undertake the investigation? If it lies in power of analysis, inference, deduction, and dispassionate judgment, we can but remember that for thousands of years this problem has been treated with such psychological elements by many strong brains. With what practical results? Where are there any data on which fertile reasoning can find a starting point? Where is there any settled formula founded on proven fact? Where is there anything more convincing

than the expression of personal belief? Surely by this time trustworthy data, if they existed, should have emerged. Unless there is some sure ground whereon to found intellectual inquiry, there can be no such prospect of value in result as will compensate the known dangers, which include not only the asylum aspect, but that of the police court as well. These hard days impress on us lessons of economy and temperance. Does not spiritualism, in its temptation to meticulous and wind-beating ratiocination, lead towards wasteful intemperance and riot of thought, just as much as the problem of squaring the circle did for many a long day? Brains competent to deal with the elusive immaterial should be able to find more value in the study of the material.

Royal Glasgow Asylum, Gartnavel.—We are indeed glad to see in the report of the annual meeting of the contributors that Dr. Yellowlees continues to be impelled by a sense of duty, in spite of increasing age and infirmity, to attend and express the thanks of the meeting to his successors in the medical direction of the institution. The key to this sense of duty lies in the fact that, as he says, none but an asylum physician can fully realise the difficulties that confront the superintendent. On this occasion he could point to the terrible strain cast on Dr. Oswald by the absence of sufficient medical assistance and of sufficient nursing staff to do the work fully. He says that he himself has repeatedly offered to go to Gartnavel to render what help he could. We believe that for a considerable time Dr. Oswald has carried on the medical work entirely by himself in addition to the duties of superintending. Verily the heavy strain of war does not fall on the combatants only. We fear that many asylum doctors bear an almost intolerable burden, but they bear it bravely indeed.

Dr. Oswald adds yet another aspect of the cry that goes out for relaxation of legal formalities :

“The legal processes necessary before a patient who does not seek treatment voluntarily can be admitted to a mental hospital have done a great deal towards causing the public to avoid an insane person, and to keep up the belief that mental disorders are in some way different from other bodily diseases. I am convinced that a relaxation of those, with proper safeguards to individual liberty, would be a great forward movement, and it should not be beyond the wit of man to devise a scheme which would protect the public, and yet modify the cumbersome procedure which attends the admission of patients to mental hospitals.”

“The apparent great increase in the number of the insane is one of the most attractive subjects for a speaker or writer on insanity, and the sensational have drawn lurid pictures depicting the ruin of civilised nations through mental deterioration. In my opinion, the improvement that has taken place in the special institutions devoted to the insane, and in the treatment and care they receive there, is one of the principal causes in the increased recorded numbers. In areas of most advanced social development we find evidences of a better feeling in the form of increasing numbers of voluntary admissions, the patients themselves and their friends having now the hope of being benefited by treatment, and having less reluctance to take advantage of it. In a crusade against mental and nervous diseases the Press can be of the greatest assistance in helping to break down the prejudice against mental hospitals, in emphasising the need there exists for the early treatment of incipient cases, and in urging the legislature to give facilities for the care of advanced cases, without resort having to be had to certification. The present tendency on the part of the public to make flippant remarks about sufferers from mental illnesses is cruel and heartless, and should be frowned on by all humane people.”

In relation to war ætiology Dr. Oswald finds other associations than direct loss :

"Indeed, the saddest cases I have seen have been those in whom not the war itself, but the barbarous manner of its conduct by the enemy, and the murder of innocent women and children, have produced morbid depression closely allied to insanity. The sufferers have usually been women of high and unselfish character, who in the perpetration of such deeds by a nation believed to be highly cultured and civilised see a negation of God, and a disturbance of their deeply-rooted Christian beliefs."

He reports a case where pellagra was the cause. This is a rare factor in this country, but not altogether unknown. The patient, a female, duly recovered.

Royal Montrose Asylum.—Dr. Shaw, in referring to the cases received from Bangour and Dykebar says that they were all more or less chronic with a very unfavourable prognosis, and points out that if the duration had been shorter and the type more amenable the change from one asylum to another might have resulted in more mental improvement. The various changes, no doubt, had to be effected more or less hurriedly, and we fear that this point has been lost sight of. We see that with the exception of a few weeks Dr. Shaw had to carry on the whole of the medical work by himself ; this must have been a somewhat discouraging commencement to his office of Medical Superintendent.

Some Scottish District Asylums.

Fife and Kinross.—We note that Dr. Skeen has succeeded our old and valued friend, Dr. Turnbull, whose recent death we have deplored. We cannot but think, while congratulating Dr. Skeen on his appointment, that he will find his work the easier from the conscientious methods of his predecessor. We are glad to see that he proposes in future years when the whole of the admissions have passed through his hands, to find it possible to prepare a table indicating roughly the cases recoverable and irrecoverable. This would, he says, be of more value statistically than simply to say that the recovery-rate was 30·5 *per cent.* on the admissions when such calculations ought really to be made upon the possibly recoverable admitted. Any such table illuminating a particular issue must be welcome.

He dwells on the inconvenience, when estimating the cost of the asylum patients, now and henceforth to be caused generally in Scotland by the accounts of the District Board, including the cost not only of the lunatics chargeable to the district, but also that of the mental defectives. As the accounts now stand, analysis is required to arrive at the actual asylum cost, which, he rightly contends, is a very important matter.

He also deals with the vexed question of farm profits. We have commented on this subject more than once in these columns some years ago. The new methods of book-keeping under the new Act do not admit of charging items, such as carting done by the farm for the asylum, or, on the other hand, of making a charge for rent. We have before expressed the opinion that everything should be charged which would be charged by an outside farmer, for the simple reason

that really efficient management of the farm (which should make the farm a valuable asset) cannot be ensured unless a reasonable comparison can be made with the results of neighbours' farming, which is carried on under similar conditions of climate, soil, proximity to market, etc. As he says, under the present mode of reckoning, a considerable and hitherto uncalculated amount of labour is obtained at practically no cost to the farm, but to some extent at the expense of the institution proper. The obvious remedy in this matter is to assess and charge the value of the labour, not only of the patients, but of those attendants who work in charge of them. It is not difficult for the bailiff to make such an estimate, especially if he is helped by the Medical Superintendent and any of the Committee who have the requisite experience. To complete the account, rent, interest on capital, and such matters as hog-wash received from the asylum, should be debited to the farm, and all work done by the farm for the asylum or other customers should be credited. A farm account, additional to the official account, is kept on these lines at many asylums, East Sussex, for instance. It has the good effect, at all events, of showing an approximately correct statement of the working, thus saving wonderment and possible jealousy on the part of neighbours at the inflated profits now officially shown.

Inverness District.—It is very satisfactory to read that one asylum working-party was employed for months in straightening out a dangerous corner for the County Council, which had proposed to do itself the work of considerable magnitude, and was glad to accept the offer of help from the asylum. Another party for several weeks gave valuable assistance in the erection of a large new workshop for munitions. Dr. Mackenzie is rightly proud of the work, which, he says, affords an example of the extent to which dilution of labour may be successfully and profitably pushed in such times as the present.

Some Irish District Asylums.

Belfast.—There is probably much truth in what Dr. Graham says in this extract from his report.

"Yet the fact is indisputable that insanity, like crime, has lessened during the period of the war. It will not do to say that the vast numbers of men called to the colours include some who might otherwise be recognised among our asylum population, for the greatest reduction is among women, 119 being admitted in 1915, as against 154 in 1913. This fact raises some intensely interesting questions as to the probable influence the war will exercise upon the mental life of the nation, and upon the problem of insanity. This problem is not an isolated one. It is implicated in the general economic, sociological, and physical state of a community at a given time. Now the present war will have a powerful bearing on these factors, and so, will affect deeply the general mental health. To begin with, it is evident there is a shifting of the distribution of wealth, so that vast numbers who had formerly lived in poverty or at least in mean circumstances, have suddenly, owing to the rise in wages, found themselves in a degree of comfort, and even, relatively speaking, of luxury which in time past had not entered their wildest dreams of welfare. These people will have gained a higher standard of living. With this standard will come a wider range of interests. The curse of grinding toil and abject poverty is that the poor toiler is so pre-occupied with the task of gaining a precarious livelihood that he has no time or energy left for the pursuit of aims worthy of a truly human life. Long, protracted labour means

that the mind is stupefied with fatigue-products, and the worker will seek relief in some artificial redeemer from dulness and weariness, such as alcohol. But with greater leisure, more education, many of the temptations to indulgence in drink will vanish."

There appears, however, among his admissions a causal factor as frequent as, but far more dread than, alcohol, which affects only 7 *per cent.* Syphilis has exactly the same ratio of causation. Yet even within recent years alcohol was a highly prolific agent, whereas syphilis was almost unknown as a factor in any part of Ireland.

Down District.—Dr. Nolan, in referring to the influence of the war on the insanity of his district, relates that of the eight soldiers admitted under the Army Act not one could be properly referred to that factor. So, too, with the civilians. In fifteen cases in which the war was assigned as a factor a close investigation of the full histories resulted in the disestablishment of the war in favour of quite a number of other associated factors. The "war idea," he says, has had less effect on the coloration of existent insanity of those already under care than it would have had were the current illustrated and other newspapers in the usual free circulation. Other suitable literature has been substituted.

The effect of the war on finance and supplies has been, says Dr. Nolan, discounted here to some extent by careful pre-war economy. As an instance, the substitution of cocoa for tea at supper, a change made some years before with a view to reducing insomnia and nervous irritability, effected at the time of initiation a saving of £150 per annum. At the present time the increase in patients and in the cost of tea has increased the saving by an additional sum of £265.

Enniscorthy.—Dr. Drapes records a considerable reduction in population during the year. We note that the admissions (77) are well outset by the exits, on discharge, recovered or otherwise, or on death (100). But he warns his committee that such figures, taken alone, are unreliable. In place of them he offers better evidence of the trend of insanity. He estimates the average daily residence for four periods, constituted by five-year divisions of the last twenty years. He finds thereon that the percentage of increase in the said daily average residence for the last three five-year periods has been 10·7, 9·2, and 5·5 respectively. He draws, correctly we think, hopeful conclusions for the future from this dwindling proportion. The length of the test-period is more convincing than yearly comparisons. We suggest that the same process applied to admissions might furnish further highly confirmatory evidence. But we can see that some discount might have to be made therefrom on account of the illusory alcoholic admissions against which he inveighs very strongly. He says that some of these are sane within twenty-four hours of admission. He complains, further, that when the easy process of shunting a drunken person into the asylum is once initiated, it is repeated whenever he goes a little beyond the mark. Seventeen *per cent.* of his admissions last year were due to alcohol.

Dr. Drapes finds that he can assign no causative influence to the war. We may say, after looking over many similar reports, that this

seems to be the opinion of the vast majority of asylum superintendents. But this is only the asylum experience. The true answer to any question of the real war-influence can only be given when on its conclusion a summation is made of all cases treated, whether in special military hospitals or in asylums, and some further cases of an evanescent nature may have been treated elsewhere.

Omagh.—Dr. Patrick, when referring to the vast importance of heredity as a causal factor, relates the following interesting particulars. During the year there were in residence two mothers and sons, four brothers and sisters, seven pairs of sisters, nine cases of brothers, eight known cases of cousins, three cases of uncles and aunts with nephews or nieces, and one husband and wife. Also, a patient lately discharged who had been in the asylum three times, and whose mother is still resident therein, married a woman, one of whose sisters died there, another sister being still detained as a patient. One wonders whether this could be beaten as an instance of disregard of danger.

Alcohol was assigned as a principal factor in 8 *per cent.*, while syphilis only appeared in one case in 102 males.

Part IV.—Notes and News.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE QUARTERLY MEETING of the Association was held at the Medical Society's Rooms, Chandos Street, W., on Thursday, February 15th, 1917, Lieut.-Colonel David G. Thomson, M.D., President, in the chair.

There were present: Sir G. H. Savage, M.D., Sir Robert Armstrong-Jones, M.D., and Drs. F. Beach, D. Bower, A. Helen Boyle, A. N. Boycott, J. Chambers, R. H. Cole, M. Craig, H. Devine, E. L. Dove, T. Duff, J. H. Earls, F. H. Edwards, C. T. Ewart, C. F. Fothergill, A. H. Griffith, B. Hart, H. E. Haynes, T. B. Hyslop, G. H. Johnston, H. C. MacBryan, A. Miller, G. H. Monrad-Krohn, Jessie M. Murray, J. G. Porter Phillips, D. F. Rambaut, J. N. Sergeant, G. E. Shuttleworth, J. G. Soutar, J. Stewart, R. C. Stewart, J. Tattersall, F. R. P. Taylor, H. Wolseley-Lewis, E. W. White, and R. H. Steen (Acting Hon. General Secretary).

Visitors: A. H. Buchanan, Dr. Wildon Carr, Beatrice Edgell, Miss Fletcher, P. C. Maitland, Dr. Lapinska, Mr. Flugel, Thomas Jones, M. Jones, Dr. Alice Johnson, Sir Herbert and Lady Sloley, Col. J. W. Springthorpe, Lady Grey Wilson.

Present at the Council Meeting: Lieut.-Colonel D. G. Thomson, M.D. (President) in the chair, Drs. R. H. Cole, A. Miller, J. N. Sergeant, J. G. Soutar, H. Wolseley-Lewis, and R. H. Steen (Acting Hon. General Secretary).

The following sent communications expressing regret at their inability to be present: Drs. T. S. Adair, G. N. Bartlett, C. H. Bond, R. Dods Brown, R. B. Campbell, T. Drapes, C. C. Easterbrook, J. R. Gilmour, Lieut.-Col. J. Keay, Lieut.-Col. H. A. Kidd, G. D. McRae, N. Lavers, H. H. Newington, and T. E. K. Stansfield.

The PRESIDENT said the minutes of the meeting held in November last were printed in the Journal of January last, and, unless a proposal was made to the contrary, he proposed to ask the meeting to accept them as read. Agreed.

The PRESIDENT said he had a few announcements to make before the meeting proceeded to deal with the subjects on the agenda.

First, the Association had to lament the death of Dr. Charles H. Hughes, of St.

Louis, U.S.A., a distinguished specialist in mental and nervous diseases and an Honorary Member of the Association.

They had also to regret the death of Dr. William Orange, C.B., of Broadmoor, a former President of the Association.

Dr. Adam Robert Turnbull had also died. He was late Medical Superintendent of the Fife and Kinross District Asylum and President-elect of the Association, but, members would remember, owing to ill-health he was unable to occupy the chair.

The death had also to be deplored of Dr. Langton Fuller Hanbury, who was Medical Superintendent of the West Ham Borough Asylum, Ilford, Essex. He joined the Army on November 1st, 1914, as a private in the Sportsmen's Battalion, Royal Fusiliers, and saw service in France. He was reported "missing" in July, 1916, after an engagement in Delville Woods. Since that date, however, the War Office seemed to have received some further information causing them to officially notify Dr. Hanbury as dead.

He asked the members to pass, in the usual manner, a resolution, which he proposed, that a vote of condolence be sent to the relatives of the deceased members.

The resolution was carried by members rising in their places.

The happier duty now devolved upon him of proposing, as the Association's official mouth-piece, that a vote of congratulation from the Association be passed concerning the honour which had recently been conferred by His Majesty on their fellow-member Honorary Major Robert Armstrong-Jones, who had received a Knighthood.

Another honour was that which had been received by Dr. John Warnock, who had been granted the Order of St. Michael and St. George. He, as members were aware, was Medical Superintendent of the great Egyptian Asylum at Abbasiyeh, where he had done real and very important work for many years.

The next honour was that of Captain Huws Pennant, who was Assistant Medical Officer at Barnwood House Asylum, Gloucester, and who had been awarded the Distinguished Service Order.

Dr. P. M. Turnbull, Senior Assistant Medical Officer at Tooting Bec Asylum, Temporary Lieutenant in the R.A.M.C., had been awarded the Military Cross.

There was no business to report to the general meeting as arising out of the Council meeting just terminated.

ELECTION OF CANDIDATES FOR MEMBERSHIP.

The PRESIDENT nominated as scrutineers for the ballot Dr. Wolseley Lewis and Dr. Boycott.

The following gentlemen were balloted for and duly elected:

BOWIE, EDGAR ORMOND, L.A.H.Dub., Dip. Grant Med. College, Bombay, L.M.Coombe, Dublin, Lieut., I.M.S. (T.); "Cairntows," Dyserth, Flintshire, N. Wales.

Proposed by Drs. J. R. Gilmour, S. Edgerley, J. O'C. Donelan.

MUNRO, ROBERT, M.B., Ch.B.Aberd., Assist. Med. Officer, Dorset County Asylum.

Proposed by Drs. G. Ernest Peachell, A. E. Patterson, and R. H. Steen.

PAPER.

SIR ROBERT ARMSTRONG-JONES, M.D., Hon. Major R.A.M.C., "Dreams and their Interpretation, with reference to Freudism." (See p. 200.)

SCOTTISH DIVISION.

A MEETING of the Scottish Division of the Medico-Psychological Association was held at Dykebar War Hospital, Paisley, on Friday, March 16th, 1917.

Present: Lieut.-Cols. Thomson and Keay, Major Hotchkis, and Capt. Buchanan, R.A.M.C.; Drs. Stewart Campbell, Carre, Carswell, Easterbrook, Kerr, Oswald, G. M. Robertson, Jane L. Robertson, Ferguson Watson, Yellowlees, and R. B. Campbell, Divisional Secretary; Lieut.-Col. A. J. Bourke, Capt. R. G. Bannerman and A. Ninian Bruce, R.A.M.C.; Drs. Ferguson, Dawson, and Anderson being present as guests.

Lieut.-Col. Thomson, R.A.M.C., President of the Association, occupied the chair. Before taking up the ordinary business of the meeting, the Chairman referred,

In appropriate terms, to the loss which the Association and the Asylum Service had sustained since last meeting through the death of Dr. A. R. Turnbull. He stated that Dr. Turnbull had been Medical Superintendent of Fife District Asylum for the long period of thirty-four years, and that he had always taken a very active part in the work of the Association, having acted as Divisional Secretary for Scotland for several years, and that he was elected President of the Association in 1910, but, owing to ill-health, he was unfortunately prevented from undertaking the duties. The Chairman also referred to his many fine personal qualities. It was unanimously resolved that it be recorded in the Minutes that the members of the Scottish Division of the Medico-Psychological Association desire to express their deep sense of the loss sustained by the death of Dr. A. R. Turnbull, and their sympathy with his relatives in their bereavement. The Secretary was instructed to transmit an excerpt of the Minute to his relatives.

The Chairman also referred to the recent resignation of Dr. Carlyle Johnstone from the Medical Superintendentship of Roxburgh District Asylum, Melrose, a position which he had occupied for over thirty years, and he considered that such an event could not pass without the Division recognising the long and valuable services which Dr. Carlyle Johnstone had rendered in the interests of lunacy, and at the same time expressing the hope that he might be long spared to enjoy his well-earned retirement. It was unanimously resolved that the Secretary be instructed to transmit an excerpt of the Minute to Dr. Carlyle Johnstone.

The Minutes of the last divisional meeting were read and approved, and the Chairman was authorised to sign them.

Apologies for absence were intimated from Drs. Reid, Fraser, Parker, McRae, T. C. Mackenzie, Alexander, Shaw, Orr, Steele, and Crichlow.

The SECRETARY submitted a letter which he had received from Dr. R. B. Mitchell, thanking the members of the Division for their good wishes on his retirement from the Medical Superintendentship of Midlothian and Peebles District Asylum.

Drs. C. C. Easterbrook and L. R. Oswald were unanimously elected representative members of Council for the ensuing year, and Dr. R. B. Campbell was elected Divisional Secretary.

Dr. Hugh de M. Alexander was recommended to the Nominations Committee of the Council as an examiner for the Certificate in Psychological Medicine.

The following candidate, after ballot, was admitted to membership of the Association:

Alexander Ninian Bruce, M.D., D.Sc., F.R.C.P.E., Lecturer on Neurology, University of Edinburgh, 8, Ainslie Place, Edinburgh. (Proposed by Drs. Hotchkis, Buchanan, and Campbell.)

Major HOTCHKIS read an interesting paper describing Dykebar as a War Hospital, and he referred to the chief features of the cases of mental disease which had been admitted from the Expeditionary Forces during the past year. (A copy of the paper appears in the Journal.)

The members were afterwards conducted over part of the hospital by Major Hotchkis, when some of the most interesting cases were shortly described by Capt. Buchanan.

The CHAIRMAN thanked Major Hotchkis and his staff for the trouble which they had taken to make such an interesting and successful meeting, and a vote of thanks to the President for his presence in the chair concluded the business of the meeting.

After the meeting the members were kindly entertained to tea by Major and Mrs. Hotchkis.

No dinner was held after the meeting.

IRISH DIVISION.

THE SPRING MEETING of the Irish Division was held, by the kind invitation of Dr. J. O'C. Donelan, at the Richmond Asylum, Dublin, on Thursday, April 5th.

Members present: Dr. Drapes, Major W. R. Dawson, R.A.M.C., Drs. J. O'C. Donelan, Gavin, Mills, Rainsford, Forde, Irwin, Rutherford, Leeper (Hon. Sec.).

Dr. Drapes, having been moved to the Chair, the minutes of the previous Meeting were read and signed. Letters of apology for unavoidable absence were read from Dr. M. J. Nolan, of Downpatrick; Dr. Hetherington, of Londonderry; and Dr. Greene, of Carlow; and some others, stating their regret at being prevented from attending. A letter of acknowledgment of the receipt of the resolution of condolence was received from Mrs. Kirwan, widow of the late Dr. Kirwan, of Ballinasloe Asylum, expressing her thanks for the sympathy of the members of the Irish Division in her bereavement.

The Meeting next proceeded to elect an Hon. Sec. and two Representative Members of Council for the ensuing year.

On a ballot being taken and a scrutineer being appointed, the CHAIRMAN announced that Dr. Leeper had been unanimously re-elected Hon. Sec. of the Division for the ensuing year, and Drs. Rainsford and Mills were unanimously elected Representative Members of the Council.

It was decided to accept Dr. Mill's kind invitation to hold the Summer Meeting of the Division at Ballinasloe Asylum.

The following dates were fixed for the meetings of the Division for the ensuing year:

Autumn Meeting, Thursday, November 1st, 1917.

Spring Meeting, Thursday, April 4th, 1918.

Summer Meeting, Thursday, July 4th, 1918.

It was proposed by Dr. RAINSFORD, and seconded by Dr. J. O'C. DONELAN, and passed unanimously, "that the Irish Division of the Medico-Psychological Association desires to place on record their sense of the admirable manner in which Dr. Leeper has discharged the duties of Hon. Sec. of the Division during the year."

Dr. LEEPER thanked the meeting for their most kind and flattering resolution. He regretted he was unable to serve them better, but should always do his best to discharge the duties of his office to the best of his ability, and thanked the members of the Division for their kindly support and help in the carrying on of the business of the Association.

On considering the question of the position of Irish Asylum officials under any new Irish legislative changes, it was proposed by Major DAWSON, and seconded by Dr. RAINSFORD, and passed unanimously, that a Committee be appointed, consisting of Drs. M. J. Nolan, O'Mara, J. O'C. Donelan, Gavin, and the Hon. Sec., "to consider the position of asylum officers as regards pension under a possible Home Rule Government, and to draw up a memorandum, expressing their views, to be forwarded to the Irish Members on both sides of the House of Commons and any other Members of Parliament likely to help."

Dr. J. O'C. DONELAN next gave a most interesting account of the War Hospital work of the Richmond Asylum.

The hospital was started in June, 1916, and 104 cases have so far been admitted, suffering from mental trouble due to three varieties of causation: (1) Patients who would have become insane in all probability in any case, having had previous attacks before the war; (2) patients with neurotic constitutions whose resistance to stress and war conditions was insufficient to ensure their remaining free from mental trouble; (3) patients whose condition was directly due to shell shock and stress of war conditions.

These cases of shell shock were usually merely confusional insanity passing into stupor, often of particular faculties.

Many interesting cases were recorded, and treatment by hot and cold baths and medicinal means were mentioned.

Dr. FORDE, who had had many opportunities of treating these cases, gave the meeting the benefit of his experiences. He regarded these cases of shell shock as due to a dislocation of the brain-cells. Hot and cold baths given alternately had produced good results in some cases of loss of the power of speech. Many cases are borderland cases of insanity. There was marked tremulousness of the musculature and shakings of the body, with profuse perspiration of the skin of the head. He had found a mixture of the bromides, together with antipyrin, and citrate of caffeine, gave great relief where headaches existed, and when the mixture was discontinued the men begged for its repetition. Fletcher's syrup of the hydrobromates was useful, and hastened recovery in some of the cases he had treated.

Hallucinations of sight and hearing were sometimes present, but many of the cases were quite conscious of the hallucinations, and realised that they were abnormal, and were, therefore, not to be regarded as ordinarily insane patients suffering from hallucinatory states. Altogether it appeared that 56 patients out of the original 104 had been dealt with at the Richmond Asylum War Hospital. Of these 26 had been sent to other asylums, 12 had been sent home, and the balance had been able to resume their occupations. The patients were segregated from the other asylum inmates, and not certified insane.

Dr. LEEPER pointed out that so far as he understood the causation of shell shock was due to the sudden effect upon the blood vascular system by shell explosion, driving the blood of the body towards the nerve centres, and thereby disorganising or injuring them with sudden violence, or interfering with their functions.

Major W. R. DAWSON gave a most interesting account of cases of shell shock and cases resulting from war stress. These varied from cases of slight nervous disturbance, where men were easily startled by sudden sounds or noises, to the most serious breakdowns.

Cases in which excessive tremor was a cardinal symptom in patients suffering from traumatic neurasthenia, loss of speech, and hearing, and sight. Loss of sight appeared to be regained quicker than the loss of hearing or speech. It is often most difficult to restore the powers of speech. Some had got good results from treatment by hypnotism, but this had been found of little use in other hands. Major Dawson spoke of the great kindness and attention of Dr. Forde and Dr. Dwyer with regard to the wounded soldiers, which was beyond all praise.

The CHAIRMAN said that the members were much indebted to Dr. Donelan not only for the sketch he had kindly given them of the work done amongst the war sufferers in the Richmond Asylum, supplemented as it was by Dr. Forde's careful observations as regards the clinical aspect of some of these cases, but also for the very interesting discussion which followed, to which Major Dawson's large and varied experiences as specialist adviser in nervous diseases to the troops in Ireland were a most valuable contribution. He had not had much opportunity himself of observing cases of shell shock, as, although a few soldiers had been admitted into Enniscorthy Asylum during the past two years, some were very transient cases due to a bout of drinking: others had had previous attacks, and would probably have broken down under any stress, whether they were in the army or not. He thought that the military medical experience of the present war ought to go far towards finally disposing of the so-called theory of psychophysical parallelism, as almost every possible symptom, whether purely somatic, nervous, or mental, was found to follow shock to the brain, so that it would be quite impossible to determine where "bodily" symptoms ended or mental began. They all were the results of similar causes, and there was no line of demarcation between them. A great many of these cases were, in their symptomatology, very much akin to hysteria, and similar treatment to that employed in hysterical cases would be likely to prove efficacious.

A cordial vote of thanks to Dr. J. O'C. Donelan for his hospitality and great kindness in entertaining the Division at the Richmond Asylum was passed by acclamation.

This terminated the proceedings.

SOUTH-WESTERN DIVISION.

THE SPRING MEETING of the above Division was held, by the kind permission of Dr. MacBryan, at 17, Belmont, Bath, on Friday, April 27th, 1917, at 2.30 p.m.

The following members were present: Drs. Aveline, Norman Lavers, MacBryan, Rutherford, and Bartlett, who acted as Hon. Divisional Secretary.

Dr. Aveline was voted to the Chair.

Letters of apology for non-attendance were received from Drs. Macdonald, Pope, Soutar, and Starkey.

The minutes of the last meeting were read and confirmed.

Dr. G. N. Bartlett was appointed as Hon. Divisional Secretary, Dr. Aveline very kindly expressing his willingness to undertake the duties in the event of the former being called for military duty.

Dr. Aveline and Dr. Norman Lavers were elected as Representative Members of Council.

Dr. MacBryan and Dr. Nelis were elected as members of the Committee of Management.

The following dates were fixed for the Autumn and Spring Meetings respectively: October 26th, 1917, and April 26th, 1918, the place of the meeting for the former being left in the hands of the Hon. Secretary.

The members present made a sympathetic allusion to the loss sustained by the Division in the recent decease of Dr. F. St. John Bullen, and it was proposed that the Hon. Secretary be requested to convey their sympathies to Mrs. Bullen.

The decease of Dr. Smyth, Medical Superintendent of the County Asylum, Gloucester, was recorded with regret.

The Hon Secretary was requested to express the thanks of the members to Dr. Starkey for his kind invitation to entertain the Division at the Plymouth Borough Asylum.

THE MENTAL AFTER-CARE ASSOCIATION.

THE ANNUAL MEETING of this Association was held, by the kindness of Sir Robert Armstrong-Jones, M.D., at 9, Bramham Gardens, Kensington, on March 1st, the Lord Mayor presiding.

Sir ROBERT ARMSTRONG-JONES, in welcoming the Lord Mayor, said the City of London was noted for the more than kind solicitude which it extended to the distressed and those who suffered. Whether these were individuals, or families, or social groups, or nations, the charity of the Mansion House was so well known that no words of elaboration were needed. Judging by the numerous reports in the daily Press of the meetings held at that civic centre, the Corporation of London realised the supreme importance of sound mental and physical health, and that was an asset upon which, especially at the present time, no limitation could be placed. As Treasurer of the Crippled Children's Homes the Lord Mayor's time must be fully occupied, but his heart was large enough and his sympathies deep enough to allow him to extend his beneficent help to other charities. The greatest pleasure a person could have was the full realisation and use of his mental equipment, and to lose that was a very sad event. He was glad to know that the nurses engaged in the large mental hospitals had a three years' training, and the forty examination papers he had been looking through, the work of mental nurses, compared very favourably with that of budding medical students.

The LORD MAYOR said it was in 1912 that he first had the privilege of addressing the Association, and it was a great pleasure to him to know that it was receiving such unqualified support. He was so impressed years ago with its good work that he became a life-subscriber, and he hoped others in the room would do the same. When people recovered from physical illness they required rest, change, and support; and when convalescent from mental disease surely the need for this was even greater. This Association gave that care. Some people who came out of asylums found that there was an unwillingness to associate with them, so that they felt they had no place to turn to. As there was no other body which carried on this very useful work there need be no fear of overlapping. When people came from asylums they were cured, but were not mentally strong; they required people to come along and be props to them. He commended the charity to his hearers, and felt grateful that he was allowed to participate in a small way in such a useful work.

Dr. RAYNER (for Miss Vickers, the Secretary) submitted the annual report, which showed that the work of the Association had progressed most satisfactorily during the past year, in spite of the war. The number of patients dealt with had increased, and encouraging financial support had been forthcoming. The cases were very sad, and often specially difficult. That the work was highly appreciated was shown by the efforts made by the subjects of help to repay some of their indebtedness when their progress enabled them to do so. Special thanks were tendered by the Council to Miss Lucy Wills, who had contributed two separate £100 gifts. During the year under review applications were made on behalf of 508 persons (377 women, 131 men), or 33 *per cent.* more than last year; 984 inter-

views were held at the office, 630 visits paid, 154 situations found, and 6000 letters were written about the cases. A number of typical examples were quoted. The Guild of Help had sent some splendid articles of clothing from time to time. An account was also given of the work at the affiliated branch at Birmingham.

Sir WILLIAM COLLINS, M.P., proposed the adoption of the report in an eloquent speech. He said that Mrs. Tuke's death reminded one of the enormous amelioration of the lot of the mentally afflicted which the last century had witnessed. To realise that, one had only to look back upon the satire which Hogarth put upon canvas in that memorable picture in the series called "The Rake's Progress," in which he showed at a glance the panorama of London's intellectual refuse and the way in which it was treated in the latter part of the eighteenth century. In that new philanthropy reforms had succeeded each other quickly; Wilberforce, Howard, Samuel Romilly, and others had that humanitarian spirit which flamed to-day, and which found its expression in such an agency as this After-care Association. Their own Tuke, of "The Retreat" at York—a member of that body, not too popular to-day, which was associated with many of the greatest reforms in this country, the Quakers—had done very much, as had Conolly at Hanwell, to ameliorate the lot of the mentally afflicted. Perhaps at the present time our reforms ran more in the direction of doing something more for the beginnings and endings of mental affliction; and this Association stood for that most important phase when the mentally afflicted returned again to participate in the affairs of the world at large, when they stood so much in need of a guide, philosopher, and friend. There was a form of mental alienation which was spoken of by experts as agoraphobia: the fear of the market-place, a fear which led them to seek in desperation for something or somebody to hold on to. But the mentally afflicted had a highly-developed individualism or egoism, though he hoped it would not be maintained that highly individualistic persons were necessarily insane. Most people knew the feeling experienced when recovering from physical illness, and he imagined this must be so intensified as to raise it to the Nth degree in those who were emerging from mental disease and were seeking again to pass into publicity. There were still persons who believed that the mentally afflicted were demoniacally possessed; but the work which this Association was carrying on appealed to the highest ideals and the most practical benevolence. He remembered seeing, in Florence, a picture which impressed him greatly, and which seemed to carry a lesson for such occasions as this. The mediæval artist endeavoured to put on one small canvas the Mount of Transfiguration, and, in the corner of the picture, the epileptic boy who, according to the Evangelist, was so faithfully described as gnashing his teeth and pining away. Was not the highest idealism needed to minister to the mentally sick? Some of the humblest ministrations were to those who were most to be pitied, and they rose to the highest ideals, ideals which transfigured and transformed our lives. And if we desired to realise our ideal we could hardly do it better than in endeavouring to idealise the work as it lay at our doors, and assist in the common kindly work which this Association was endeavouring to do.

The Right Hon. Sir DAVID BRYNMÔR JONES, K.C., seconded the resolution. With the experience he had had in connection with lunacy he could say that the Association demanded almost universal sympathy; for under the existing Lunacy Laws it was doing a necessary work. Under the Lunacy Act of 1890, the mere fact that a patient was discharged from an asylum was not conclusive as to the discharge of an order about his property: that meant that though a patient was regaining his freedom it might not yet be expedient for him to resume control over his property. This Association was valuably supplementing the Lunacy legislation and administration of the country, and though this was not the time to ask for money, he hoped assistance for such a worthy object would continue to be forthcoming.

Sir JOHN JARDINE, M.P., and Sir RICHARD DOUGLAS POWELL, K.C.V.O., having supported the motion, it was carried unanimously.

The various officers who retire by rotation were re-elected, on the proposition of the Rev. Prebendary SWAYNE, seconded by Miss EVELYN FOX. Miss Fox, speaking as a member of the Visiting Committee at one of the large Metropolitan asylums, said she could not imagine anything which would be more difficult and

make one feel more hopeless than dealing with these cases if one felt there was no one who could be appealed to for assistance. Women and girls who were leaving the asylums felt it was a turning-point in their lives; and it was distressing to think they might be returning to the conditions which had been answerable for their breakdown, but which might be prevented by such advice and help as the Association could give. She could not speak too highly of the sympathy and human understanding which was given to the work by the Secretary, Miss Vickers.

Dr. NICOLSON, C.B., supported the resolution and commended the fine work of the officials. Now that many families in the country were earning considerably more money, some of the relatives of mental patients could perhaps afford an enhanced sum if the claims of the Association were brought home to them. The Rev. J. C. MEAD ALLEN also spoke, and the resolution was unanimously adopted.

Sir GEORGE SAVAGE proposed a cordial vote of thanks to the Lord Mayor for his kindness in presiding. This was seconded by Dr. G. E. SHUTTLEWORTH, and carried with enthusiasm.

The LORD MAYOR, in acknowledging the compliment, said he took it as a tribute to his office rather than to himself. He would be pleased at any time to place the Mansion House at the disposal of this and any kindred Society. He referred to the fact that his personal acquaintanceship with Sir Robert Armstrong-Jones commenced forty years ago, and it was a great personal pleasure to him to see that he had been honoured by His Majesty.

Thanks having been also tendered to Sir Robert and Lady Armstrong-Jones, the meeting terminated.

KNIGHTHOOD FOR DR. ARMSTRONG-JONES.

It is with sincere pleasure that we offer our congratulations to Sir Robert Armstrong-Jones on his having had recently conferred upon him the honour of knighthood, an honour which has been bestowed on him on account of his life-long labours in the interests of the insane, of psychiatric science, and, indirectly, of the public generally, who are at last beginning, as it were at the eleventh hour, to recognise the vast importance of this branch of medicine.

Dr. Robert Jones, as we knew him for the greater part of his life (he recently took the additional surname of his wife's family) is the eldest of five sons of the Rev. Thomas Jones, Eisteddfa, Tremadoc, who at the time of his death was the oldest Congregational minister in North Wales. He was educated at a private Grammar School at Portmadoc, and at Wrexham, and finally in the University College of Wales at Aberystwith. From there he entered St. Bartholomew's, on which occasion there was a record number of entrants, over 150, and while there was pro-sector to the Anatomy Lecturer. Among his fellow students who have achieved distinction were Sir Wilmot Herringham, Sir Anthony Bowlby, now Chief Surgeon to the Military Forces in France, and Sir William Collins, M.P. for Derby, to whom asylum workers are so greatly indebted for his labours on their behalf, and between whom and Sir Robert since their student days there has always existed a close mutual friendship and regard.

At "Bart.'s" Dr. Jones was a diligent student, and not merely of medical lore, as in his second year he took the Hichen's Prize for an examination in Butler's Analogy, also the Wix Prize Essay for the Life and Works of Sydenham. He completed his medical course by taking the degrees of M.B., M.D., of the London University, and, later, of F.R.C.S. and F.R.C.P.E. His first appointment was that of Junior Medical Officer of the Earlswood Asylum, of which subsequently he was made Superintendent. Finally, he was appointed Superintendent of the L.C.C. Asylum at Claybury, which office he filled with honour and distinction for nearly twenty-four years. His retirement from active asylum work was the subject of a notice in the October issue of the Journal.

Dr. Jones' medical work was not limited to his duties within the walls of an institution. He became Lecturer on Mental Diseases to Westminster Hospital, and later to St. Bartholomew's, and also to the West London Post-Graduate College. He has been examiner in Psychology and Mental Diseases for the University of London, on which subjects he contributed articles to Clifford

Allbutt's *System of Medicine*, Quain's *Dictionary*, and to several Encyclopædias. He has also written many reviews and articles for English and American journals, and published a small text-book on *Mental and Sick Nursing*, which was dedicated by permission to H.R.H. the Princess Christian, and is now out of print. He is now Consulting Physician in Mental Diseases to the London Military Command, with the honorary rank of Major in the R.A.M.C. For helping to raise the standard of nursing in asylums he was elected a Knight of Grace of the Order of St. John of Jerusalem in England. He is a Fellow of the Society of Antiquaries, and a Magistrate for the County of Essex in which he lived whilst at Claybury. For ten years he was Hon. General Secretary of the Medico-Psychological Association of which he was elected President in the year 1906. He was also President of the Psychological Section of Medicine at the annual meeting of the British Medical Association held in Swansea. He married the eldest daughter of Sir Owen Roberts, D.L., M.A., D.C.L., B.D., the pioneer of technical education in London, and who was High Sheriff of Carnarvonshire in 1908. On this interesting occasion Sir William Collins acted as best man to Sir Robert. His wife has been his greatest and most sympathetic helper in all his social and public work. We wish Sir Robert and Lady Armstrong-Jones every happiness, and continued opportunities for usefulness in that sphere of work to which they have for so long devoted themselves.

CORRESPONDENCE.

THE BOARD OF CONTROL,
66, VICTORIA STREET, S.W.
February 16th, 1917.

DEAR COLONEL LORD,—I have recently received from Dr. F. Sano, the late President of the "Société de Médecine Mentale de Belgique," and Physician-in-Chief of the asylum for acute cases at Antwerp, who has been for some time past engaged at the Maudsley Hospital, the accompanying letter of appreciation of the way in which he and many of his fellow-countrymen and confrères have been received in asylums in this country, and also of the way in which persons of Belgian nationality have been treated in English and Welsh institutions since the outbreak of war.

The Board of Control are desirous that medical superintendents and assistant medical officers of the various institutions in the country should be made acquainted with the sentiments expressed in the letter, and accordingly would esteem it a favour if you could arrange for this letter, and Dr. Sano's communication, to appear in the next issue of the *Journal of Mental Science*.

Yours very truly,

E. MARRIOTT COOKE, *Chairman*.

Lt.-Col. J. R. Lord, R.A.M.C.,
Horton (County of London) War Hospital.

LONDON, February 1st, 1917.

MR. CHAIRMAN,—At this moment, when large numbers of Belgian patients leave England for France, the chief object of our visit is to tender our thanks to the Board of Control and to the asylums, from whence these patients have obtained such unstinted hospitality.

Undoubtedly the Belgian Government will prove its gratitude to Great Britain in many official and consequently more public capacities, but, in the name of the Belgian doctors who were appointed to British asylums with the permission of the Board of Control, I beg leave to state how grateful we are for all that has been done for the Belgian patients, and how much we appreciate the kindness with which they have been received, the healthy conditions under which they were tended, and the constant attention paid to them by medical superintendents and their staffs.

Our Doctors Deroitte, Maertens, Boulenger, Van de Maele, De Gheldere, Deckx, and myself will still remember the time we passed in the British asylums and the excellent experiences we have had therein. Dr. Deckx has returned to

Antwerp, Dr. De Gheldere has been called to France, Dr. Van de Maele is now on military duty, Dr. Deroyte will be attached to the Belgian Army, and I have been called for medical examination by the British authorities and may soon be required. These are reasons all the more good for us to take this opportunity to express our utmost admiration for the excellent organisation in which we were at work.

I have known the asylums of the Continent for nearly twenty-five years, I have known the patients and their constant demands for food, clothing, freedom, etc., but I think there have never been less claims in that direction than these we have experienced here for the last two years.

I have visited patients at Banstead, Claybury, and Colney Hatch, I have seen many other institutions for my research work, and also private homes where Belgian patients were being cared for, and I have heard everywhere the same admiration expressed, and especially by the families of the patients.

These few words, Mr. Chairman, are very insufficient, in our opinion, to convey all the sincere sentiments which will be preserved by us for the Board of Control and the British asylums, but we trust the future will afford many occasions in which we can recall with gratitude and all sincerity the friendly help of which our countrymen and ourselves have been the recipients in these times of general struggle and severe distress.

I have the honour to be, Mr. Chairman,
Your obedient servant,
(Sgd.) F. SANO, M.D., late President of the Société de
Médecine Mentale de Belgique.

To Dr. Marriott Cooke,
Chairman of the Board of Control, London.

In connection with Major Sir Robert Armstrong's paper on "Dreams" a pathetic interest attaches to the following letter received by him from the late Dr. Frederick St. John Bullen, of Bristol, shortly before his death. Dr. Bullen was a talented member of the Association, whom death has all too soon removed from our ranks. He had made a special study of insanity and diseases of the nervous system, and had contributed valuable articles on these subjects to various journals—*Brain*, *Journal of Mental Science*, and others—the last, which appeared in our own Journal, being a paper on the "Interpretation of Dreams according to Freud," which was published in the January number, 1915; and it adds to the pathos of his life that he fell a victim to one of those diseases, progressive muscular atrophy, with which he had specially familiarised himself. It is a rare example of fortitude and utter disregard of self, in the face of rapidly approaching dissolution; and few probably, even of medical men, would have had the courage and self-denial which he displayed in calmly and philosophically reviewing his own case, and giving his experience for the benefit of his fellows when actually within sight of the confines of the great Beyond.

"February 3rd, 1917.

"DEAR DR. ARMSTRONG-JONES,—I am very interested in your forthcoming paper at the Med. Psychol. Meeting on the 15th inst. You may not be averse to receiving some clinical matter, even at the eleventh hour.

"As a rather neurasthenic subject my earlier dreams were often characterised by Fear and impeded Flight. This was so constant as to be typical during childhood. This impaired freedom of muscular thought followed me through life (except for common and perfect 'flying' episodes), and here, in dreams, was but an emphasis of waking life, inasmuch as an invincible self-consciousness has hindered any attempts at public performances—e. g. playing the violin or piano either in solo or concerted works, taking part in discussions, etc.

"In dreams relating to performances on certain musical instruments, in which I was proficient, the facility of execution was *always impaired*, although that of original improvisation (merely ideal) was increased. The outcome of all this is that, after a considerable degree of paralysis of my right hand (from P.M.A.) had been reached, I had two or three dreams in which unwonted freedom of movement in right hand appeared, so real that I awoke with the supposition that the condition had improved. (Reflection on these dreams made me conceive them as of bad omen, for reasons you will at once grasp.)

"Later on, when the muscles of right forearm and upper arm were markedly involved, I had another dream in which a certain feat of violin-bowing (involving those parts) which I had never been able to accomplish in health, 'came off' easily. No more dreams concerning muscular movements have occurred till last night, when I dreamt I was riding a cycle over rough and hilly ground with facility. (I need hardly say that both lower limbs are gravely affected now.)

"Of course, one could interpret these freed ideal movements by Freud's theories; but to me they signify a freedom of ideas from inertia of muscle-representative-movements.

"One knows that dreams are relative to the person having them; *e. g.* in some increased activity of movement prevails; in my case the reverse has been the rule; so that freer ideas of movement (as compared with dreams in health) have come about through destruction of motor cells.

"It would be interesting to hear what cultivated musicians would have to say on this aspect of dreams. I hope to be able to read your paper on the earliest possible occasion, as a bulbar paresis is rather hastening up the progress of my case.

"I hope you will excuse these slipshod notes, but I can hardly speak or write now, and the laborious expression of my ideas hinders their flow. Please make any use you like of this letter."

On March 12th Dr. Bullen, retaining his cheerfulness and dauntless spirit to the last, joined the great majority, passing peacefully away. After his death his widow, who we need not say has our sincerest sympathy, with great kindness and consideration, sent the following extract from further notes regarding his case, which he had written laboriously with pencil, and she had with difficulty deciphered:

"My dreams were recounted, not so much as bearing on Freudism, as illustrative of the freeing of representation of muscular movements by an interruption in the ideo-motor arc; this interruption from cloying effects of projected muscular movements in my case, known to be due to a coarse lesion; in ordinary dreams probably from disordered synapsis. Freud, no doubt, would class these dreams as wish-fulfillments, or substitutions to avoid a painful idea, and to procure and prolong sleep. For myself, I follow the old adage, 'Dreams go by contrary,' *i. e.* dreams, like other cerebral automatic states, consist of a succession of images variant in whole or part to that image by which provoked, and a procession of such automatisms account for many of the subtle enigmas propounded by Freud. My last dream is not without interest. I am addressing a golf-ball, and my drive is accompanied by a slow effort-full swing, on which my comment is: 'How painful an effort; my muscles must be exhausted by influenza.' The ball has travelled, true to waking life, some 20 yards into a furze bush! This dream may be modified, as compared with others, by the fact that one arm only is completely paralysed, and the movement, even if entirely freed from inertia of muscular thought, would never have had the liberty of the movements concerned in music; there being aptitude and dexterity in this, and little or none in golf."

The clarity of thought and reasoning, and the touch of humour in this passage, in one on whom Death had almost already laid his heavy hand, are little short of marvellous. It helps us to realise all the more the loss the profession, and our speciality in particular, have sustained by the demise of such a gifted personality.

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE.

The following notice reached us too late for insertion in the January number. Some of the Lectures have, of course, been already delivered.

Session, 1916-17.

A course of seven public lectures on "Psychology in Relation to the War" will be given on Wednesdays at 5.30. p.m. as follows:

Wednesdays, March 7th and 14th, 1917.—"The Psychology of the Unconscious and the War Neuroses." By E. W. SCRIPTURE, Ph.D., M.D., late Professor of Experimental Psychology at Yale University.

Methods of investigating the unconscious mind; association experiments; analysis of dreams; how the unconscious produces myths and legends; the conflict between the conscious and the unconscious minds; the victory of the conscious mind necessary for normal life but never quite complete; nervousness, neurasthenia, and hysteria the results of partial victory of the unconscious mind; neuroses of dissatisfaction, timidity, and fear; the effect of war stress on the mind; the psychology of shell shock.

Wednesday, March, 21st, 1917.—"Repressed Instincts and War." By ERNEST JONES, M.D., M.R.C.P.

Psycho-analysis of repressed impulses in the unconscious mind; their fate and indirect manifestations. Possibilities and limitations of "sublimation" into socially useful channels; frequency of reaction-formations simulating this. Unconscious influences (1) facilitating the causation of war and (2) seizing the opportunity of war to enable reversion to more primitive standards of morality.

Wednesdays, May 9th and 16th, 1917.—"The Conflict of Motives." By Prof. T. PERCY NUNN, M.A., D.Sc., London Day Training College.

(i) The problems, theoretical and practical, suggested by the conflict between the "rational" and "irrational" motives in human conduct, although amongst the oldest in history, have received no generally accepted solution, and form a centre of contemporary psychological discussion. The war has inevitably increased the urgency and interest of the debate. A brief critical review of its present position (in the writings of McDougall, Bergson, Shand, Myers, Graham Wallas, Trotter, Bertrand Russell, and others) leads to the concept of life as *expressive organisation*.

(ii) This view developed and confronted with outstanding phenomena of individual and social life. Special importance of the discoveries associated with Freud. The practical consequence in education and social organisation.

Wednesday, May 23rd, 1917.—"Human Emotions in Relation to War." By C. BURT, M.A., Psychologist to the London County Council.

Wednesday May 30th, 1917.—"Psychological Surveys and Educational Reconstruction." By C. BURT, M.A., Psychologist to the London County Council.

Admission free. No tickets required. Doors open at 5.0 p.m. Entrance: Gower Street.

WALTER W. SETON, M.A., D.Lit.,
Secretary.

OBITUARY.

WILLIAM ORANGE, C.B., M.D., F.R.C.P.,

Formerly Medical Superintendent, Broadmoor Criminal Lunatic Asylum.

THE following obituary notice appeared in the *British Medical Journal* of January 13th, and merits a place in this Journal, constituting, as it does, a faithful record of the late Dr. Orange's career, and a most fitting tribute by his intimate friend to the memory of a distinguished member of the Association.

OFFICIAL AND PERSONAL: AN APPRECIATION.

William Orange, whose death on December 31st, 1916, at the age of 83, was announced last week, was of Huguenot extraction, an ancestor having settled in Derbyshire early in the seventeenth century, not so very long after the massacre on St. Bartholomew's Day in 1572. His father, the Rev. John Orange—a man of studious and philanthropic character—was an Independent Baptist minister who "preached the word" first at Newcastle and afterwards at Torquay, where the subject of this notice was born on October 24th, 1833, and where he showed much promise as a youngster at school and gained quite a number of silver medals.

When about 15 years of age Orange was apprenticed, as the custom then was, to a doctor at Swallowfield, in Berkshire, for the purpose of entering the medical profession. He prosecuted his studies at St. Thomas's Hospital in London, and became M.R.C.S. and L.S.A. in 1856. On leaving the medical school he took a prolonged tour on the Continent in charge of a gentleman whose health had broken down, a trip which enabled him to furnish himself with a passable linguistic equipment in French, German, and Italian, which he found very useful in after years. After some dispensary practice and a spell of three years' work as Assistant Medical Officer at Tooting he was appointed Deputy Superintendent of the Criminal Lunatic Asylum at Broadmoor at its opening in 1862, under his old chief Dr. Meyer, who was the first Superintendent. Together they got the place into working order, and laid the foundation of much public work in connection with this particular department. On Sunday in 1866, while kneeling at the Communion Service, Dr. Meyer was struck a violent blow on the head by a patient with a stone slung in a handkerchief; on his death in 1870 Dr. Orange, who then succeeded him, thus writes of him:

"To the injury which he received from a patient, and to the constant mental strain occasioned by the responsibilities of his office, must, I believe, be chiefly ascribed the loss which the asylum has had to deplore."

In 1868 Orange took the degree of M.D. of Heidelberg, and became a Member of the Royal College of Physicians of London, of which he was elected a Fellow in 1878. In 1883-84 he was President of the Medico-Psychological Society of Great Britain and Ireland, and in that capacity delivered an admirable address on criminal lunacy, pointing out the relations of mental derangement to offences against the law of the land, and explaining the efforts that were then being made by Parliament and the legal authorities to bring the procedure of the Courts, with regard to trials in criminal mental cases, into some sort of uniformity as a development of the practical experience of medical men in these cases.

The Home Office was well advised in promoting Dr. Orange to be head of Broadmoor, although such excellent and capable candidates as Dr. Lockhart Robertson, Superintendent of the Sussex Asylum, and Dr. Gover, the Medical Inspector of Prisons, were being "run" for the post. I knew Dr. Orange at this time, but I did not become officially connected with Broadmoor until 1876, when I was appointed Deputy Superintendent. Since that date it has been my privilege to preserve a close and unbroken friendship with him up to his death.

Orange's work as Superintendent of Broadmoor, as a pioneer in systematising the complicated details of management and treatment of criminal lunatics generally, and in formulating and adjusting the multitudinous array of questions bearing upon insanity in its relation to crime, made him a world-wide authority of the highest repute on these and allied subjects. Amongst the many privileges that I had as his deputy was that of meeting the many eminent authorities on insanity and crime, both British and foreign, who came to seek his counsel and to visit the asylum and its inmates. Dr. Motet, a French physician of great eminence and experience, wrote to his Government after a visit in 1881: "We have returned from Broadmoor satisfied at having found the realisation of an idea that has always appeared to us to be right." And two years later the French Senate received the following report:

"The delegates of the Commission of the Senate who visited Broadmoor on October 10th, 1883, were satisfied that, despite the fine exterior appearance, the liberality of the accommodation, and the exceptional care bestowed upon the dietary, there is no unnecessary extravagance. It is true that one might at first sight imagine some extravagance in the *personnel* of the attendants as regards their number, their selection with regard to height and physique, and their admirable appearance; in their bearing, in the taste bestowed upon their private dwellings, which form an avenue of charming cottages outside the asylum; but one recognises at once that the great importance given to this question of the *personnel* of the attendants affords the explanation, not only of the small number of escapes and other casualties at Broadmoor, but also of the unexpected spectacle of good order, tranquillity, and perfect discipline which strikes strangers who visit it."

It was a source of much gratification and encouragement to Dr. Orange to have such testimony to the success of his efforts in wearing down the officiously

adverse criticisms which were at times levelled against the *raison d'être* of Broadmoor, and the "extravagance" which attended the safe and proper treatment and management of this special class of asylum inmate.

In appreciation of his work the Medico-Psychological Society of Paris made him a Foreign Associate, and other societies abroad paid him a similar compliment.

Most of Orange's work as medical adviser to the Home Office in criminal mental cases was of necessity confidential. But among the many cases of individuals sentenced to death for murder in which, with a colleague, he held a statutory medical inquiry on behalf of the Home Secretary may be mentioned that of Christiana Edmunds (1872) the notorious Brighton poisoner. In this complicated and difficult case Dr. Gull and Dr. Orange, after a long examination of the prisoner, found sufficient grounds to justify them in certifying her to be insane. Another important case was that of the Walthamstow murder in 1883, where William Gouldstone took the lives of his five children. Here Drs. Orange and Gover found distinct evidence of insanity. In both these cases a considerable amount of feeling and of conflict of opinion amongst medical men and the public was engendered, the value of the Home Office reference under circumstances of the sort was demonstrated, and whatever excitement or irritation may have been displayed was allayed. Orange's capacity for making patient and searching investigation and of, as it were, penetrating the intimate workings of the mind of accused persons, and his wide experience in dealing with cases of the sort, made him invaluable in the administration of justice at this angle, where evidence has to be weighed in combination with personal examination, and where the issues of life and death may be said to be involved. In the case of Lamson, the Wimbledon murderer, who was hanged, no insanity could be found.

In March, 1878, the Rev. Henry J. Dodwell was tried for shooting at the Master of the Rolls (Sir George Jessel) and found "guilty but insane," and sent to Broadmoor. The Master of the Rolls was not hit on the discharge of the pistol, which contained no bullet, but only (as Dodwell himself told me) a wad made up of a marginal strip from the *Morning Advertiser*, upon which he had written "Unfaithfulness to the true interests of the Crown of England," Dodwell's real object being to secure a criminal trial at which he might have an opportunity of making his grievances public. On June 6th, 1882, Dodwell made a murderous assault upon Dr. Orange, and as the mental schemings of such a mind as his are ever of interest, I quote the victim's own account of the circumstances:

"A determined assault was made upon me, on June 6th, by one of the inmates, who, whilst I was occupied in reading some letters with respect to which he had requested my advice, suddenly, and without warning, struck me a violent blow on the head with a heavy stone slung in a handkerchief. The perpetrator of this act was the same man who fired at the Master of the Rolls four years ago; and the act was prompted by a precisely similar motive on both occasions—namely, in order to attract public attention to a conspiracy of which he believed himself the victim. He afterwards stated that he had made up his mind to commit an act that would lead to a coroner's inquest more than a year ago, but that no sufficiently favourable occasion had then presented itself. Being, however, cool and determined and cunning, although labouring under a dangerous delusion, he was, like insane persons of this description, able to exercise sufficient self-control to wait until the circumstances were such as he deemed favourable to the full accomplishment of the object that he had in view."

It so happened that some two months previously Dr. Orange had, at the instance of the Treasury, given evidence of insanity at the trial of Robert Maclean, who fired a pistol at Queen Victoria; and in the course of his examination he stated, as a matter of illustration, that some points in the case resembled those in the case of "the man who shot at the Master of the Rolls. He maintains he is right and always has maintained he is right. He knew beforehand that he would have to go through a criminal court, *but he is insane and irresponsible.*" This statement was read by Dodwell in the newspaper account of the trial, and it proved to be the factor in his mind which determined him to wait no longer, but to commit the assault on Dr. Orange at the earliest opportunity, which he himself created by asking the superintendent to advise him on a family matter of some importance.

Although he had leave of absence for a year, Orange never recovered from the effects of this assault; and the strain of the work made it a great struggle for

him to keep on in his weakened condition, because he felt that his confidence in his own powers had been reduced. This to a man whose leading mental attribute had been decision in action was fatal to his *amour propre*, and led to his retirement on pension four years after the date of the injury. He did no active official work after this, except that after prolonged rest he became a member of the Council of Supervision of Broadmoor from 1892 till 1904, and was usefully employed. On his retirement Queen Victoria conferred on him the honour of the Companionship of the Bath.

In its issue of June 5th, 1886, the *British Medical Journal* referred to Dr. Orange in the following terms:

"His eminently successful administration of this post has been testified to over and over again in our columns and elsewhere; and when we recollect the dangerous and intractable character of the lunatics sent to Broadmoor its superintendent cannot be said to hold an office which is either a sinecure or free from constant risks of all sorts. Dr. Orange's management of Broadmoor has been characterised by a judicious firmness, combined with a most kindly consideration for the interests of the unfortunate patients who came under his care. He will be greatly missed by them; while, as an evidence of the estimation in which he was held by the officers and staff of the establishment, he was, last Monday, presented by them with a handsome and substantial silver salver and many expressions of regret at his departure and cordial good wishes for his future. When referred to, as he frequently was, in cases of capital offences where the mental condition of the offender came into question, his investigations were thorough, his decisions clear and sound; and his recommendations were, we believe, invariably carried out, and never failed to be satisfactory not only to the authorities but also to the general public, in whose estimation he deservedly stood high."

And the *Lancet* of the same date congratulates Dr. Orange upon the successful results of his labours in the public service, and of his most efficient administration of a grave and responsible public trust. Referring to the "trying duties developing upon him as one of the advisers of the Home Office authorities in cases where capital crimes had been committed, and where the question of insanity arose," the *Lancet* went on to say that

"The general public have to be especially grateful to Dr. Orange, for, with an exceptional experience on the subject, his scientific penetration, his sound judgment, and his shrewd common sense never failed to secure universal approval for his decisions on these momentous issues."

After much that was in praise of Dr. Orange, the *Journal of Mental Science* for July, 1886, thus speaks:

"After hard and anxious work, Dr. Orange succeeded in reducing the complicated details of the asylum administration and of questions which thereafter arose as to the best methods of dealing with the criminal lunatics of the country to a complete system, such as has earned the unqualified praise of visitors from all parts of the world."

Dr. Orange's contributions to the medical press contained expressions of opinion which were always practical and well thought out. His article on "Criminal Responsibility," in *Tuke's Dictionary of Psychological Medicine*, deals with the rules by which Courts have been and are guided, and the cases cited by him are useful for reference. He concludes by saying: "It must be remembered that in a criminal court the term responsibility means liability to legal punishment." He adds: "In a general sense, a person may be said to be insane so as not to be liable to legal punishment: (1) When his mental condition is such as to render him unfit for penal discipline; or (2) when, in the words of Lord Blackburn, disease of the mind was the cause of the crime; or when, in the words of Mr. Justice Stephen, the accused 'was deprived by disease affecting the mind of the power of passing a rational judgment on the moral character of the act which he meant to do.'" In an address at Reading in 1877, on "The Present Relation of Insanity to the Criminal Law of England," Dr. Orange made the following remark, which ought to be borne in mind: "Moral depravity must be carefully distinguished from actual mental disease. The term 'moral insanity' is, I think, better avoided in a criminal court of law" (*British Medical Journal*, October 20th, 1877).

Of an attractive personality, Orange was essentially the official, and he devoted himself unsparingly to the work of his life, for which he was well fitted by a good physique, a sound judgment, an equable temperament, and a strong will. He had many friends, and was himself a staunch friend. He did not, however, readily make friends; his mind was formal in its activities, and a certain mannerism, referable, perchance, to his Huguenot (French) descent, together with a searching but not unkindly look from his clear eye, rather gave strangers the impression that they were "psychologised." In this way he no doubt did himself less than justice, for he was ever sympathetic with those in trouble, and ready to help when appealed to. His was a fine intellect which led him to sound decisions by a process of rapid intuition; but he was occasionally apt to spoil the effect by harking back and entering into minute details which occupied time, but which had the effect of satisfying him, as it were, that he had not failed to form a correct judgment at first.

He read much in scientific and general literature, was well informed, and could hold his own in controversy. He took little or no interest in outdoor games. He was keen on the asylum farming operations and fond of riding exercise on the Bagshot Heath or in the Swinley Forest, while nothing gave him more thorough enjoyment than a day with Garth's hounds. He could play a good rubber of whist, and was musical and capable of taking his part in glees and light operettas.

Orange had as a lifelong friend Dr. Charlton Bastian; and of close friends he had also Henry Weston Eve and Osmund Airy, and other masters at Wellington College, which was in the immediate neighbourhood. In this relation I must not omit to mention his good friend the late Sir Warwick Morshead, Bt., the Chairman of the Council of Supervision, who was Orange's steadfast collaborator in all that was done for the good of Broadmoor and its inmates.

Two years after he went to Broadmoor Dr. Orange married Miss Florence Elizabeth Hart, a lady of much charm and attractiveness. He had, I am told, fallen in love with her when she was a child, and married her when she was *æt.* 17. They were an ideally happy and domesticated couple, given to hospitality and the cheerful entertainment of friends and neighbours. She died three years before him, and they both lie at rest in the cemetery at Bexhill. They had five children—four daughters and one son—all well gifted with intellectuality and working capacity. The son, Mr. Hugh W. Orange, C.B., C.I.E., is the Accountant-General of the Board of Education.

In conclusion, I am glad to have been afforded the opportunity of writing this memoir of a courteous gentleman, a high-minded public official, and, especially to me personally, an esteemed friend.

DAV. NICOLSON.

DR. THOMAS SEYMOUR TUKE, M.A., M.B., B.Ch.(Oxon.).

DR. TUKE, a regular attendant at the meetings of the Association, is another victim of the severe winter.

After a short illness he died of pneumonia.

He was sixty-one years of age, but his hearty, buoyant nature gave one the impression that he was much younger, and, as a consequence, one cannot help feeling that he has been prematurely cut off in his prime.

He was the son of Dr. Harrington Tuke, who was President of the Association in 1873, and who for years was a leading consultant in mental diseases. He was proprietor of a first-rate private asylum, The Manor House. To this Dr. Seymour Tuke, with his brother, succeeded, and later moved to Chiswick House, the property of the Duke of Devonshire. Here, associated with his brother, he lived and died.

He was the grandson of Dr. Conolly, who was so well known all over the world as being the introducer of "non-restraint" in the treatment of the insane.

Dr. Maudsley was his uncle, and no one has been a more ardent supporter of humane treatment of the insane than Dr. Maudsley.

It has been remarkable that the name Tuke has always been associated with the most humane treatment of sufferers from mental disorders. There was Hack Tuke, a descendant of the founder of The Retreat, York, there was Sir J.

Batty Tuke, so well known as the owner of the best private asylum in Scotland, and M.P. for Edinburgh University. Yet these Tukes all belonged to different families, and I believe there was one other Tuke, who received mental patients in Brighton forty years ago.

So much for the heredity of Dr. Tuke.

He was educated first at St. Paul's School, which had the advantage of being a public classical school, allowing him to live at home. I know nothing special about his school days, but I have no doubt that already he had shown his mastery over the cricket bat, and he won a Scholarship to Brazenose, Oxford, at a time when that college was noted for its athletic powers, and was especially fortunate on the river.

Seymour Tuke took to cricket, and was in his College Eleven, in fact, I believe he was captain. He was a Freemason, and belonged to the best social clubs in the University. He took his arts degree and formed many life-long friends.

He was then, as ever, most kindly and genial, a good specimen of the English gentleman, with strong English tendencies to out-of-door sports. He entered St. George's Hospital, and for a time was also a student at the London Hospital, where he was able to have a larger field for study. He did not make any special mark at the hospital, but he was very much liked and respected. He took his degrees at Oxford, and then settled to his life's work. At first he was inclined to take things in a very easy, leisurely way, but he married the daughter of the late Dr. Graily Hewitt, and in earnest set to work with his brother to do the very best for the patients under his care.

Here he was conspicuous, always cheerful, and constantly with the patients, ever ready to walk, talk, play cricket, squash rackets, or golf with them. His patients became and remained his friends. No one ever carried out the humane treatment more consistently than Tuke. He was President of a branch of the British Medical Association, and, as I have said, he was a regular attendant at the local and general meetings of the Medico-Psychological Association and at the meetings of the other allied societies.

He wrote very little, but if he spoke it was always concisely and to the point.

He was conservative in medicine, and hesitated to follow any new lead till he had good evidence that there was reasonable hope of gain from it. Thus, at first, he objected to the Salvarsan treatment of general paralytics in Chiswick House, but later he accepted the trial, but was in the end against the treatment. He had some very strong, almost violent, prejudices. He felt that mental diseases and their study were a very clear and defined class, and needed very special study, and he was angry that gradually the British public were getting impressed that all asylums, and particularly all private asylums, were merely places where patients were retained and kept out of harm's way, but were not "treated" medically. He felt that the sending of these patients into ordinary nursing homes, or into the houses of lay-people, was placing them under conditions readily leading to incurability.

For the time to cure these disorders is at the start. Time, he felt, was wasted, and patients then sent to asylums when the prospect of cure was reduced.

He was often prophesying that this will sooner or later lead to scandal, or rather will lead to the discovery of scandals which are being carried on in "private-care" homes.

Personally, he felt the difficulty of understanding the working of the unsound mind unless personal care and great patience were exercised. And now he has passed away, leaving the beautiful house still carried on by the Tuke family, where he was loved and respected.

It is not fair to leave him without referring to other sides of his character.

He was a fine, all-round sportsman. He used to be a straight rider after the wild stag in Devonshire, a good game shot and cricketer, and, in fact, he would have been a good golfer, but he felt it would take too much time.

In the parish he was a recognised power, the Vicar looking upon him as a right-hand helper. He was a keen Freemason, and active in Volunteer work. He had a deep grief in the death of his only son, who was going into medicine, and was an undergraduate at Oxford. But he accepted his loss in a most truly reverend way, and he was certainly a fine example of a Christian

doctor. Deepest sympathy was extended to his widow and daughter, and the expression of this by the immense congregation at Old Chiswick Church.

He has left a pleasant memory, which will rather grow than dwindle with time.

JOSEPH TREGELLES HINGSTON, M.R.C.S.ENG., L.S.A.

Dr. J. T. Hingston died within a few months of his 82nd year on February 18th, 1917. He obtained his Medical Diploma in 1856 and almost immediately adopted Lunacy as his special subject, leaving the Middlesex Hospital to become Assistant Medical Officer at the North Riding Asylum, York. In 1862 he went to St. Andrew's, Northampton, as Assistant, and from there in 1868 he was appointed Medical Superintendent of the Isle of Man Asylum, to remain only a couple of years before he returned in 1870 to the North Riding as Chief, which office he fulfilled for thirty-five years, retiring in 1905 on the completion of forty-nine years' Asylum service. He was a member of the Medico-Psychological Association since 1871, and many will recall with pleasure the General and Divisional meetings held at his Asylum. Hingston throughout his lifetime endeared himself to all with whom he came in contact, by his innate old-world courtesy and his sympathetic nature. He was a fine type of the kindly, good-hearted gentleman whose thoughtfulness and consideration for others went far to alleviate their sufferings and trials.

He recognised the value of personality and moral influence in the treatment of the insane, and strongly advocated the importance of the hopeful word, cheerful surroundings, interesting employments, and amusements as a help to his patients to put aside the toil of disease and to climb the difficult and tedious path of recovery which leads to reason.

Hingston was of a retiring but cheerful disposition, and few outside his intimate friends had an opportunity of appreciating his wonderful charm of manner and keen sense of humour. On his retirement he went to reside at Leamington. For some time previous to his death he lived with his daughter and son-in-law at Acocks Green Vicarage, Birmingham. During the last few months of his illness he was subject to severe attacks of angina, but, as ever, his thoughts were not centred on his own suffering; his fear was that he might be a trouble to those around him.

"Leave him—still loftier than the world suspects
Living and dying."

ROBERT BRICE SMYTH.

It is with deep regret that we record the sudden death, on February 27th, of Dr. R. B. Smyth at the early age of forty-five.

He came of an old Ulster family, and his father and surviving brother, who are also members of the medical profession, are at present in practice in Belfast.

He was educated at Uppingham and Trinity College, Dublin, and qualified in 1893, taking the degrees of M.A., M.B., B.Ch., B.A.O. In the following year he went as Clinical Assistant to St. Luke's Hospital, and in 1895 he was appointed Assistant Medical Officer at the Gloucester County Asylum, becoming Superintendent of that institution on the death of Dr. Henley in 1908.

For eight years he carried out the duties of a difficult position with marked ability, and his lovable disposition and attractive personality endeared him to all. No undertaking was too great and no detail was too small for his energies and attention, and his whole object and aim in life was the welfare, good name, and honour of the institution entrusted to his care.

From the outset he won the entire confidence of his Committee, and his affection for his patients and the extraordinary interest he took in their individual welfare were, at all times, predominant.

Dr. Smyth was a keen follower of all kinds of outdoor sport. A steady batsman and a good captain he did much for cricket in the Asylum; he also, in his younger days, played regularly for the Gloucester City team. He was a good game shot and fly fisherman, and his holidays were always spent in these latter

pursuits. He was a lover of dogs, and at one time he was a breeder and exhibitor of Irish Terriers, and on several occasions was the holder of the Irish Terrier Cup. He was a close observer of nature, and in recent years devoted much of his spare time to his garden and his roses. He was a member of the British Medical and Medico-Psychological Associations.

The funeral took place in Belfast, a short memorial service, attended by members of the Committee and staff, being held in the Asylum Chapel on the previous Thursday.

He leaves behind many to mourn his loss, and not least important among them are those amongst whom he lived for so many years, his colleagues, his staff, and patients.

THE LIBRARY.

MEMBERS of the Association are reminded that the Library at 11, Chandos Street, W., is open daily for reading and for the purpose of borrowing books. Books may also be borrowed by post, provided that at the time of application threepence in stamps is forwarded to defray the cost of postage. Arrangements have been made with Messrs. Lewis to enable the Association to obtain books from the lending library belonging to that firm should any desired book not be in the Library. In addition, the Committee is willing to purchase copies of such books as will be of interest to members. Certain medical periodicals are circulated among such members as intimate their desire to be included in the list.

The Library Committee thanks Dr. Maurice Craig for the gift of the third edition of his book on *Psychological Medicine*.

Members reducing their private libraries are requested to bear in mind the library of the Association.

Applications for books should be addressed to the Resident Librarian, Medico-Psychological Association, 11, Chandos Street, Cavendish Square, W.

Other communications should be addressed to the undersigned at the City of London Mental Hospital, Dartford, Kent.

R. H. STEEN,

Hon. Secretary, Library Committee.

NOTICES BY THE REGISTRAR.

Dates of Examination.

The examinations for Nursing Certificate will be held as follows:

Preliminary	. . . . .	May 7th.
Final	. . . . .	May 14th.

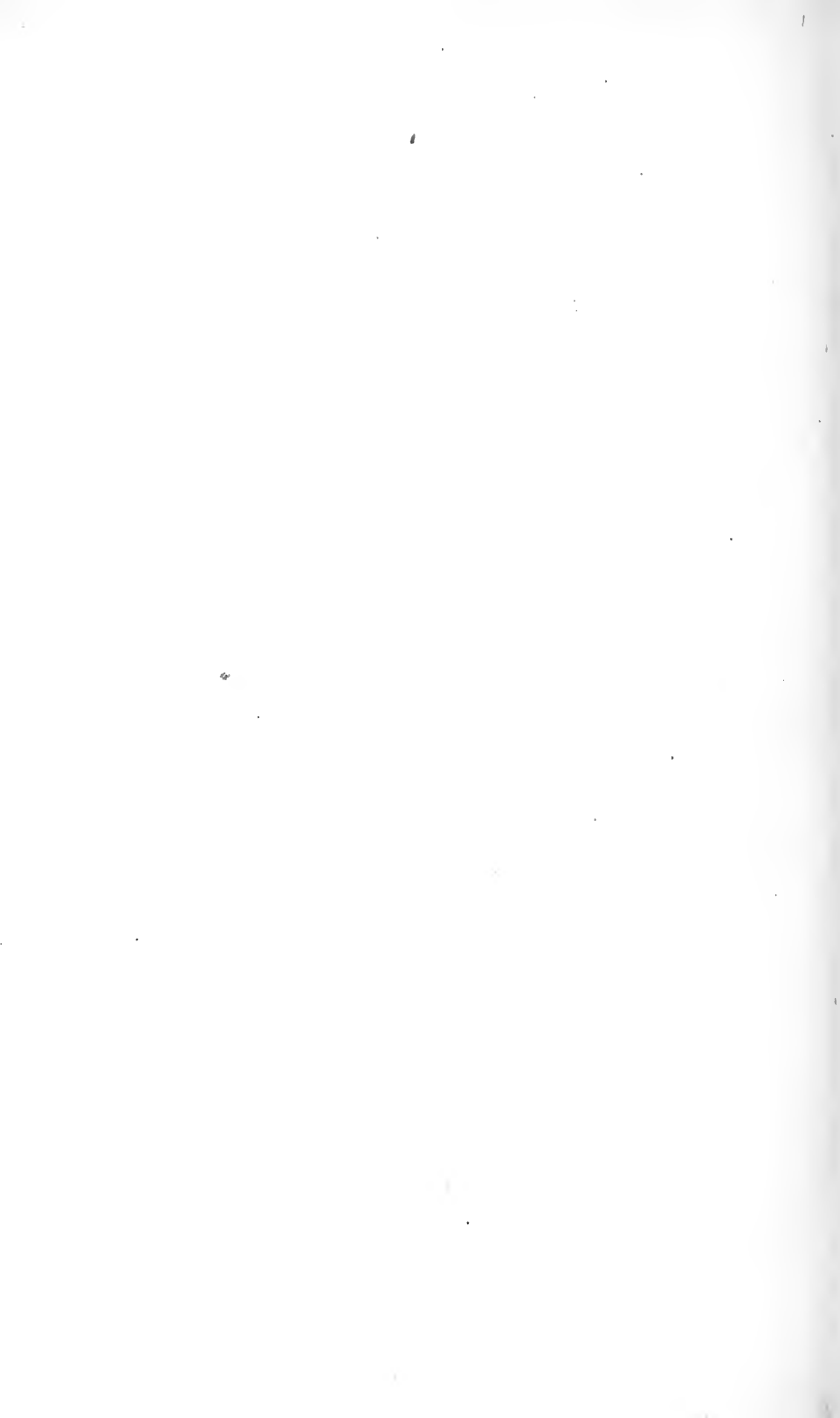
The examination for Certificate in Psychological Medicine will be held in London early in July. For particulars, apply to the Registrar, Dr. A. MILLER, Hatton Asylum, Warwick.

NOTICE TO CONTRIBUTORS.

N.B.—The Editors will be glad to receive contributions of interest, clinical records, etc., from any members who can find time to write (whether these have been read at meetings or not) for publication in the Journal. They will also feel obliged if contributors will send in their papers at as early a date in each quarter as possible.

Writers are requested kindly to bear in mind that, according to LIX(a) of the Articles of Association, "all papers read at the Annual, General, or Divisional Meetings of the Association shall be the property of the Association, unless the author shall have previously obtained the written consent of the Editors to the contrary."

Papers read at Association Meetings should, therefore, not be published in other Journals without such sanction having been previously granted



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THE
JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.]

No. 262 [NEW SERIES
No. 226.]

JULY, 1917.

VOL. LXIII.

Part I.—Original Articles.

Dr. Hughlings Jackson on Mental Disorders. By Sir
GEORGE SAVAGE, M.D.

I HAVE long felt that the relationship of Dr. Jackson's teaching in reference to nervous disorders has not been sufficiently considered from the psychiatric side. I fear that I shall not be able to do justice to the subject, yet I believe it to be almost a duty for me to attempt it.

To begin with, I knew Dr. Jackson during the greater part of his professional life, for while I was holding resident appointments at Guy's, Dr. Jackson and Dr. H. Gawen Sutton were constantly at the hospital, where they were especially following the clinical teaching of Gull and the pathological work of Wilks. Then followed a few years during which I was away from London, but on my return I renewed my friendship with Dr. Hughlings Jackson, and not infrequently went round the wards of the London Hospital with him. Later still, he would come to Bethlem, and go into some of the wards with me. He used to say that the study of nervous disorders, particularly epilepsy, gave him endless interest, but as for insanity, he disliked it, and, unlike the neurologist of to-day, he would have nothing to do with insane patients if he could help it. His mind was one which needed order and precision, and the disorders of mind only perplexed him. He could understand losses of power and losses of control, but, as they showed them-

selves in the wards of Bethlem, they puzzled and upset him. At times he seemed to have a real physical dread of the patients, and failed to have anything like the human sympathy which he had for the epileptics. He looked upon many of the insane as rather useless cumberers of the ground.

Dr. Hughlings Jackson absorbed the writings of Herbert Spencer, and all his philosophy depended on the evolutionary theory. His name will always be associated with epilepsy, and the works of Hitzig and others abroad, and Ferrier in England, established his faith in the localisation of functions in the brain. As I shall have occasion to point out, the great principle which he insisted upon was that nervous, and most mental, symptoms were not the direct result of disease of particular parts of the nervous system. In fact, he looked upon disease in any part of the body as consisting of two very distinct factors: the one associated with the putting out of action of the function of the organ, the other—and generally the most evident—the effect produced by removal of the higher function, thus allowing actions which were controlled or directed by the higher function to show themselves. It will be seen here how evolution plays the part, for Jackson looked upon all the fully-developed functions as having passed through elementary states which, in fact, are represented in less developed organisms. We are all aware of the stages which man, for instance, passes, from a simple cellular existence through forms resembling the reptile or amphibian, before passing into the human. This is, of course, the extreme example; but in the education of the body and the mind, and the adjustment of the being to its environment many steps are taken. With complete development these steps are hidden, and it is only by inversion of the process of evolution that they are recognised. It is best seen, as Jackson has made plain, in the dissolutions of senility.

Jackson certainly goes very far in his explanations of symptoms in this way, but if all his views are not established, they are very suggestive.

The creed may thus be given: mental operations are simply the subjective accompaniments of sensori-motor processes. The incentives to volition are sensations received through the organs of sense, or the revived impressions of such sensations. The sensori-motor apparatus of the cortex is re-represented in the higher centres. He says they are represented in the pre-

frontal region, which he considered to be non-excitabile where they have the power of controlling and concentrating consciousness in definite directions, and deciding between courses of action.

Here we have plainly the basis on which his work is built. The organs of sense in their relation with their environment are represented in the brain in various degrees. This representation has to be considered in three grades, ranging from the automatic to the reasoned.

He looked upon the fore-brain as the highest representative part, as the part chiefly concerned in cases of mental disorder, or rather, in its manifestations, that is, its symptoms. Jackson maintained that the right half of the brain is the more automatic, while in the left, is the more organised, automatic acts become voluntary. He referred to the ability of some aphasic patients to ejaculate certain words, often of the interjectionary type, through survival of automatic power of the right brain.

Hughlings Jackson contributed two articles in the *Journal of Mental Science* in 1875 and 1887. He gave an address which was published in the *Medical Press and Circular* of June 13th, 1894, entitled "The Factors of Insanities," and he contributed to the discussion at the Neurological Society on "Imperative Ideas," which appears in *Brain*, parts 70 and 71. A very complete account of Jackson's views are given in Tuke's *Psychological Dictionary*, by James Anderson, under the heading of "Epileptic Insanities."

He says there are three doctrines as to the relationship of mind to nervous activities. First, that the mind acts through the nervous system (through the highest centres first). Here an immaterial agency is supposed to produce physical effects. Second, the activities of the highest centres and mental states are one and the same thing, or are different sides of one thing. A third doctrine—"one which I have adopted"—is, that states of consciousness, synonymously states of mind, are utterly different from nervous states of the highest centres. The two things occur together. For every mental state there is a correlative nervous state. Although the two things occur in parallelism, there is no interference of one with the other. Hence we do not say that psychical things are functions of the brain, but simply that they occur during the functioning of the brain.

It seems to me that the third doctrine, that of concomitance, is at any rate convenient in the study of mental disease. In a sense the whole body is the organ of mind, and Lewis considered that some degree of consciousness attends activities of even the lowest centres. He had no idea of showing how mind is evolved from the body. States of mind arise in relation with certain activities of the highest centres. Emotions, for example, which arise in connection with activities of the periphery, are re-represented in the highest centres. Fear is the mental counterpart of certain activities of practically every part of the body. These activities—for example, perspiration, urination, etc.—are represented for ordinary mental purposes. Dr. Hughlings Jackson was very fond of the expression “mental purposes” when referring to the organic functions.

Next, I wish to consider the relationship of his philosophy to mental pathology. He wrote a short article entitled “Factors of Insanities.” It is noteworthy that he prefers the term in the plural—insanities, rather than insanity; and he refers to Mercier, who, certainly thirty years ago, began to preach the difference between unsoundness of mind and so-called insanity. Hughlings Jackson seems to agree with Mercier in his general contentions. Included in insanities Jackson places a good many states of mind that are not generally considered under that head. Thus, he considers dreams and dreamy states as nearly allied to mental unsoundness, and groups them with the insanities. And when, later, we consider epilepsy, we shall find that there again he considers the earlier and threatening conditions of epilepsy as insanities, and yet as not to be considered, clinically, as lunacy. I believe it was Hughlings Jackson who said that insanity was “dreaming awake,” while dreaming was “insanity asleep.” As to the factors of insanity beginning with dreaming, he says—“Dreaming has long been likened to insanity. I suggest several degrees of normal dissolution of sleep: (1) Sleepiness, (2) sleep with dreaming, (3) slumber with actions (somniaambulism), and (4) deep, so-called dreamless sleep. At least (2), (3), and (4) ought to be considered as different depths of dissolution of the highest cerebral centres, with, in (2) and (3), and possibly in (4), lower ranges of evolution remaining in those centres.”

In considering Dr. Hughlings Jackson's philosophy, we have to recognise that he was an evolutionist and a follower of

Herbert Spencer to the very end ; that he looked upon every disorder as associated with a disintegration or dissolution. To this I shall have to refer later.

He proceeds to say that there are four factors in insanities. There are different depths of dissolution of the highest cerebral centres. There are different persons who have undergone that dissolution, and there are different rates with which that dissolution is effected. There is the influence of different local bodily states and of different external circumstances on the persons who have undergone this dissolution.

The first factor of insanities, then, is the different depths of dissolution. Hughlings Jackson points out that in all forms of mental disorder there are positive and negative states. First, there is the defect produced by disease, and that defect liberates, as it were, the lower functions. So that, taking his so-called "hierarchy," there are the three grades, from what might be called the simplest nervous centre, to the middle nervous centre, and to the highest nervous centres ; and if there is removal of function of the highest, then the lower centres are brought, more or less, into play. And the degree of mental disorder is, to a great extent, related to the amount of dissolution of the highest centre, so that the control may be but slightly removed with comparatively slight disorder, whereas if a greater amount of control is removed by the destruction of the highest centres, there will be, probably, a greater amount of disorder, or over-action, as he has called it, exhibited in the next lower centre. He has pointed out how, gradually, reduction and reduction may go on, till at last there is what he would call both physical and mental paralysis—a true palsy and true dementia—which are very near approaches to death. In this small book he gives interesting diagrams explaining his meanings.

The second factor in insanities is the person who has undergone dissolution. We all recognise the special tendencies of some individuals to break down along certain lines, and it comes to this—that the second factor, the person who has undergone the change, represents the liability to break down, which liability may be congenital, or may be acquired.

The third factor in insanities is the rate at which dissolution has been effected. He points out, very clearly, that when the changes have been slow and steadily progressive, the defective

control is not so marked ; in fact, it is a very gradual process, best marked in senility, so that very gradually the defective control is shown by defective power of one kind and another. If, on the other hand, the dissolution is rapid, as in alcoholic poisoning, then there would be, probably, a very marked, exaggerated action of the lower centres. In the same way, such over-action not infrequently occurs following the profound and sudden dissolution occurring in epilepsy.

The fourth factor in insanities is the influence of bodily states and external circumstances. This, of course, is a very wide subject, and is involved in what he gives as a kind of addition to his factors, namely, the complication of factors. For, as we all recognise, one cause is rarely efficient in producing the malady when it comes before us.

Although it is necessary, for clearness, to speak of the factors *seriatim*, it is evident enough that each must be thought of in association with others. As in different insanities there are different depths of dissolution of the highest cerebral centres, as the persons who undergo dissolution are different, as dissolution is effected at different rates, and as the bodily states and external circumstances of different patients are not the same, we may say that every case of insanity is a function of variables.

Passing now from the general factors of insanity, I think it is most important to consider his views in relationship to epilepsy—the subject which will always be associated with his name. It is at times somewhat difficult to make quite clear what Dr. Hughlings Jackson meant to teach, for his whole frame of mind was so careful and exacting that he scarcely ever dares to make a definite statement without qualifying it in some way ; so that in studying his writings one meets endless footnotes and parentheses, which are somewhat confusing.

The question of epilepsies and insanities has been carefully considered, more particularly in reference to Hughlings Jackson's teaching, by the late Dr. James Anderson in Tuke's *Dictionary of Psychological Medicine*, and I shall not hesitate to quote from that. And I think that probably the best way will be to give a certain number of dogmas or epigrams direct from Jackson's teaching, as they express in his own words and concisely what he means.

In his remarks on evolution and dissolution of the nervous

system, he says that "an epileptic fit really is an universal symptomatology of the discharges, or symptoms due to discharge, of the highest cerebral centres." He speaks of the different epilepsies, the scale of fits, and he says: "I continue, for the most part, to speak of epilepsy as if there was only one clinical entity, but there are really many different epilepsies. I mean what would be called varieties of genuine epilepsy, each dependent on discharging lesions of some part of the highest centres. I also use the term 'fits' advisedly, because I do not, as I should when working clinically, care as an evolutionist, to know whether any paroxysm is or is not a case of epilepsy." He speaks of different insanities associated with epilepsy as local dissolutions of the highest centres. "We should not," he says, "in strictness speak of varieties of insanity, but of insanities, for, obviously, there are different kinds, as well as degrees, of insanity; that is, there are dissolutions beginning in different divisions of the highest centres; melancholia, posterior lobes; general paralysis, anterior lobes, signifying different dissolutions of the highest centres. Evolution and dissolution always co-exist, or occur in alternation." So that with a varying amount of dissolution there is a varying amount of evolution. Perhaps there might appear to be some confusion in his use of the word "evolution." Sometimes I have thought a better term might have been found. The mere relaxing of control and allowing an exhibition of force to occur is hardly evolution, and yet that is the term used by Hughlings Jackson for the result of relaxation of control. He urges that in post-epileptic insanities the dissolution is local in the sense that it preponderates in the highest centres of one-half of the brain. The mania following a fit is the outcome of activities on the levels of evolution remaining, that is, that the mania is due to relaxation of control. In disease there is rarely, even in senile dissolution, an absolutely regular and formal process of decay; there is not a true reversal of the lines of evolution. As he says, in post-epileptic conditions you may get all varieties associated with temporary dissolution, but in various degrees. He remarks: "It is only in such dissolutions as those produced by alcohol that we can expect anything like uniform dissolution, a simply lower level of evolution." Again: "We have implicitly urged that in each case of the insanity, indeed in all nervous diseases, we have a problem of evolution, as well as one of dissolution."

He refers constantly to "the hierarchy of nervous centres." He points out clearly that there is a chain, if you like, or hierarchy, a developing association of the nervous centres, that is parallel to the development of the nervous system as seen in comparative anatomy: He maintains that the whole of the anterior lobe is (chiefly) motor, but he admits that the pre-frontal lobes are motor is a doctrine still held by few.

He puts very clearly—following other physiologists—the lines of evolution of the nervous system. First: Increasing complexity (differentiation), representation of a greater number of different movements. Second: Increasing definiteness (specialisation), representation of movements for more particular duties. Third: Increasing integration, representation of movements of wider ranges of the body in each part of the centres. Fourth: The higher the centres the more numerous the inter-connections of their units (co-operation). Thus—to recapitulate—the highest centres are the most complex, most special, most integrated sensori-motor complexes with most numerous inter-connections. He points out that it must be remembered that the development is not always by insensible gradations, but in the evolution there may have been occasional stoppages, with rebeginnings.

The doctrine of nervous evolution will not be understood unless it can be seen clearly that centres do not represent muscles, but movements of muscles. Jackson is constantly referring to this point; that in considering symptoms, we have to consider the physiological or vital actions much more than we have to consider the mere anatomy or the mere pathology. He says that psychical states are functions of the brain, the highest centres; they simply occur during the functioning of the brain. Thus, in the case of visual perception, arbitrarily simplifying the process there is an unbroken physical circuit, complete reflex action, from sensori-periphery, and ultimately through the highest centres back to the muscular periphery. The doctrine of concomitance I have already referred to. And in many of his writings he insists on the importance of recognising the independence of nervous action and simple consciousness, the inability of bridging the difference between the one and the other. As he says: "To merely solidify the mind into the brain is to make short work of a difficult question." "Our concern, as medical men, is with the body. If there be such a

thing as disease of the mind, we can do nothing for it." Negative and positive symptoms are, for us, only signs of what is not going on, or of what is going on wrong in the highest sensorimotor centres. Brain is to be considered purely as the organ of mind.

In studying the evolution and dissolution of the nervous system in relationship to fits, he gives a very full and complete analysis of the symptomatology of the slight fits of epilepsy. Thus he says: "There is often a warning crude sensation, a stench comes from the nose. Second, there is the emotion of fear (I do not mean fear of the fit, but fear which comes by itself). This is a very complex psychical state. Third, there is sometimes a dreamy state called the intellectual aura. There is often a stage of defect of consciousness before what we call loss of consciousness." In fact, he looks upon the dreamy state as one rather of a defect of consciousness than as absolute loss of it.

Next, there are convulsions—eyes, face, hands, and other parts. Then comes pallor of the face, arrest of heart, flow of saliva. But there are sometimes, in the slight epileptic paroxysms, movements properly so-called, clutching of the throat. A slight paroxysm, in many cases, may simply be confusion for a short time; defectively conscious. After a severe attack, there remains what is called loss of consciousness, with the unconsciousness a concerted series of elaborate movements of all parts of the body. This completes his symptomatological analysis of a fit.

After the fit, he says, there is often insanity. We make three degrees of post-epileptic insanity. And here I may refer to what I spoke of earlier, on his use of the term "insanities," for he speaks of the three degrees of dissolution; the first being associated with the *petit mal* or the aura; the second being associated with the true convulsions; and the third being associated with the profound unconsciousness. It is with the second stage, the ordinary epilepsy, that he is chiefly concerned; and he refers to the automatic conditions that may be met with there. He frequently refers to the coma of epilepsy as if it were to be looked upon as dementia. He says: "My contention is from a scientific—I do not say from a clinical—standpoint is that all these, one, two, three, are insanities. Three is temporary acute dementia. Each departure is a departure from

the patient's normal mental state. This is enough for us mental evolutionists. One and two do not approach the clinical standard types of insanity necessarily, and thus for the clinician, are not insanities. These degrees of insanity are to be compared and contrasted with degrees of physiological insanity of sleep. First, sleep with dreams; next, deeper sleep with actions (somnambulism); third, so-called dreamless sleep, also with degrees of drunkenness. That may be the three degrees of post-epileptic insanity compared.

Now, as to the positive mental symptoms. They make up, or are to us, the present signs of the patient's mentation or consciousness, and are the lower homologues of his normal mentation or consciousness. We have to try to show how sensori-motor activities, activities of the most complex sensori-motor or nervous arrangements, those of the highest centres, are correlative with states of consciousness. To do this, we shall accept the artificial analysis of object consciousness into will, memory, reason, and emotion, and try to show the anatomy and the physical basis of each, that is, what parts of the body the physical basis of each represents specifically. And I may say here that this attempt of Hughlings Jackson is distinctly original.

The following is an imperfect sketch, among other things, ignoring integration. What on the lowest levels are centres for simplest movements of the limbs, become evolved in the highest centres into the physical basis of volition. What on the lowest levels are centres of simple reflex actions of eyes and hands, are evolved in the highest centres into the physical basis of visual and effectual ideas. What in the lowest levels are centres of movement of the tongue, palate, lips, are concerned in eating, swallowing, etc., are, in the highest centres, evolved into the physical basis of words, symbols serving us during abstract reasoning. What on the lowest levels are centres representing the circulatory, respiratory, and digestive movements, are evolved in the highest centres into the physical basis of emotions. So to speak, the lowest level does the menial work, the highest level, evolved out of it, becomes, in great degree, independent of it, and is the anatomical basis of mind.

Shortly, I shall refer next to his article on post-epileptic states. He points out the difficulties of the subject, the need of psychological knowledge to the understanding of it. He

says a medical man's aim should be to deal with what are called diseases of the mind—really diseases of the highest cerebral centres—as materialistically as possible; but to be thoroughly materialistic as to the nervous system we must not be thoroughly materialistic at all as to the mind. I fear that Dr. Hughlings Jackson might not be quite in accord with some of the later Freudian developments. "The elements of the clinical problem are the anatomy, the physiology, and the pathology of disease." In using these terms, he means that the simple anatomy is important, the physiology is very much more important, and by pathology he refers rather to the disorders of nutrition associated with the nervous system than what we actually understand by pathology. In considering this matter again, he repeats what he so frequently insists upon—the duplex condition of nervous symptomatology. Some of his friends who took a deep interest in his work used to say, in a half-cynical way, "Has Jackson got no further than those two questions of positive and negative symptoms?"

The hypothesis in relationship to the duplex condition of the nervous system is, that the principle of duality of symptomatology applies, with a very obvious exception, to all nervous diseases with negative lesions, insanity included. The negative lesion alone is the result of a pathological change, and produces negative symptoms; the other symptoms completing the symptomatology are owing to activity—often over-activity—of healthy nervous arrangements, and are normal physiological states. Jackson, in writing on mental disorder, frequently speaks of the perfectly normal physiological action of the parts that have been relaxed from control; he says that the same relaxing of control does not necessitate any pathological change in the parts then acting.

It may be worth while to recapitulate here what might be called his creed. The lowest level, in comparison with the highest level, represents impressions and movements of all parts of the body, most nearly directly. It is a series of centres—properly segments—representing parts of the body in (1) few and simplest combinations (little differentiation); (2) in most general ways (little specialisation); (3) in greatest detail (smallest districts of the body, least integration "for local affairs"); (4) the centres on this level have fewest inter-communications (little co-operation). If we take note only of

the organic centres on the lowest level, I think it is plain that this formula applies closely. The cardiac and respiratory centre are most simple: they have few, if any, different movements; there is, indeed, practically a succession of similar movements at equal intervals. Second, these centres have little speciality. Obviously they are for most general ends: they serve the body as a whole, in essentially the same way at all times, from birth to death. Third, that most of the lowest centres represent limited regions of the body is plain (pupillary, respiratory, cardiac, bladder centres). Fourth, the interconnections of organic centres are certainly few; obviously pupillary activities, respiration, circulation, digestion, micturition, go on with the greatest degree of distinctness from one another.

The highest level differs from the lowest only in grade of Evolution. The centres of this level represent impressions and movements of all parts of the body, triply, indirectly, and in comparison with the lowest levels, in most complex combinations, in two most specific ways. Third, each represents very extensive areas of the body, if not the whole body—great integration. Fourthly, these centres have the most numerous intercommunications—that is, that this formula applies to the highest centres is in agreement with current doctrine.

It is certain that the organ of mind is (1) concerned with the most numerous different things; (2) of high degree of speciality; (3) that every single process is an act of a person, and therefore the inference is irresistible that they are, correlatively, activities of the most highly integrated centres—of centres each representing all parts of the body as a whole; and (4) that it is, by its most elaborate relations—very complex special and highly integrated combinations and impressions—that movements in co-existence and sequence are effected.

It is hardly necessary, after saying that, to refer to his remarks on the evolution of the physical basis of consciousness, or on the degrees of detachment and degrees of independence of the various levels of evolution.

So much, then, for the nervous and mental disorders associated with epilepsy and epileptic conditions. Beyond that, Dr. Hughlings Jackson communicated occasional articles on related subjects. Thus, he communicated an article to *Brain* on "Imperative Ideas," and there is something distinctly original in this short article. He refers to Dr. Hack Tuke's

address at Leeds, and he says : " I have suggested that certain absurd and persisting delusions are owing to fixation of grotesque fancies and dreams in cases where a morbid change in the brain happens suddenly and increases suddenly during sleep." This fixation of idea giving rise to an imperative or fixed idea is certainly, I think, original to him. He speaks, later, of it in this way : " We certainly have to account for the existence of these quasi-parasitic states in cases where general mental power is but little lessened." He says : " For my part I consider that illusions, delusions, and other positive mental symptoms and insanities signify healthy nervous arrangements of the highest cerebral centres, called organ of mind. What we call an insane man's illusions are his perceptions ; what we call his delusions are his beliefs, and, more generally, his positive mental symptoms sample the mentation remaining possible to him, a mentation occurring during activities of what is left of his highest centres, of what disease has spared. The physical condition of these positive mental symptoms is not caused—using the word 'cause' in its strict scientific sense—by disease, not caused, that is, by a pathological process. Disease is, I submit, answerable only for the co-existing negative mental element of insanity." Here let me remark that, to take one kind of mental symptom, an illusion, a positive mental state implies a co-existing negative mental state. A man sees a black cat where there is only a black felt hat. Not only is there for him a black cat, but this for him is a felt hat. Similarly, *mutatis mutandis*, for other positive mental symptoms sampling the positive element of a patient's insanity. " As to the physical, disease of the highest range of the highest centres, producing loss of its function or destroying it, answers to the negative mental element in a case of insanity." He says, in reference to the development of fixed or imperative ideas, that when disease of the highest range progresses very slowly, there may be no obtrusive positive mental symptoms (control slowly removed). When it is very rapid, the patient's mentation (the mentation remaining possible to him) diminishes at a great rate (control rapidly removed). In a way, he is somewhat inconsistent in leaving it to be understood that imperative ideas may so slowly grow, whereas he has said they might be parasitic ideas caused by fixation in sleep.

I cannot conclude this imperfect notice of Hughlings

Jackson's work without pointing out the great debt that both neurologists and psychiatrists owe to his work. I always feel, however, one regret, and that is, that his close, logical mind was not associated with fluency of expression, for, as I have already said, a great deterrent to those wanting to study Hughlings Jackson's works lies in the difficulty of following them. However, one has to be thankful that he has left so much, although he may have left no single volume as a record.

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Hallucinations in the Sane. By ROBERT HUNTER STEEN, M.D.Lond., M.R.C.P.Lond., Medical Superintendent, City of London Mental Hospital, near Dartford, Kent, and Professor of Psychological Medicine, King's College Hospital, London.

IN insanity hallucinations are frequently present. This is no recent observation and has been duly noted in the literature since the dawn of medicine. Hippocrates, Asclepiades, and Celsus make mention of them in their writings.

Burton in the *Anatomy of Melancholy* (¹) says: "If it [melancholy] be extream, they think they hear hideous noyses, see and talk with black men and converse familiarly with devils, and such strange chimeras and visions (Gordonius), or that they are possessed by them, that somebody talks to them or within them."

Different authors give varying percentages of those affected. Esquirol says 80 *per cent.* which is a higher average than most observers will allow, still, there is no doubt of the great

prevalence of the symptom. Seeing, then, that the insane are so prone to hallucinations, is it a fact that all those who have hallucinations are insane? Without giving due thought many might be inclined to say "Yes." When, however, the literature is consulted it is surprising to find how widespread is the existence of hallucinations among those whom no one would call insane, and it has been a matter of the greatest difficulty to keep this paper within moderate limits. Space also has demanded the exclusion of a detailed discussion on the fascinating subject of the theory of hallucinations. This will be referred to only in the summary at the conclusion.

Nevertheless, to present the matter in an orderly fashion several headings have been made and, though in a measure trespassing upon the province of theory, they must be regarded as only provisional.

Two main divisions are necessary: (A) Hallucinations the result of agencies operating upon the brain or nerves. (B) Hallucinations of mental origin.

The following table gives the sub-divisions:

(A) Hallucinations the result of causes operating upon the brain or nerves.

- (1) Toxins.
- (2) Disorders of the brain circulation, *e.g.*, anæmia, congestion, etc.
- (3) Disease of end-organs.
- (4) After-images.
- (5) Brain diseases of obscure pathology, *e.g.*, epilepsy, migraine.

(B) Hallucinations of mental origin: Those in which so far as our present knowledge goes a physical agency is unknown.

- (1) Suggestion.
- (2) Hypnotism.
- (3) Crystal gazing, clairvoyance and clairaudience.
- (4) Hysteria. Somnambulism. Multiple Personality.
- (5) Hypnagogic visions.
- (6) Dreams.
- (7) Hallucinations in history.
- (8) Collective hallucinations.
- (9) So-called telepathy.
- (10) Hallucinations the result of a complex.

(A) HALLUCINATIONS RESULTING FROM PHYSICAL CAUSES.

(1) Toxins may be introduced from without, *i.e.*, exogenous, or produced by the patient, endogenous.

(a) *Exogenous toxins*.—Probably the drug which has been used more than any other for the purpose of experimentally producing hallucinations is *cannabis indica*.

Brierre de Boismont⁽²⁾ describes a *séance* at which he was present in company with Esquirol and others when several men were given a drink supposed to consist principally of *cannabis indica*. One of these, B—, a painter and musician, besides other symptoms had the unilateral hallucination of hearing music in one ear while he heard ordinary speech in the other. Another of those experimented upon saw “objects which had no existence”⁽³⁾.

Mescal button is a drug largely used by the Indians of New Mexico. The effects produced upon himself are thus described by Weir Mitchell⁽⁴⁾. He saw all sorts of beautiful colours and then “a white spear of grey stone grew up to a huge height and became a tall richly finished gothic tower of very elaborate and definite design, with many rather worn statues standing in the doorways or on stone brackets.” He later saw an apothecary’s shop. “On the left wall was pinned by the tail a brown worm of perhaps a hundred feet long. It was slowly rotating like a catherine wheel nor did it seem loathly. As it turned, long green and red tentacles fell this way and that.”

The abuse of opium has also been responsible for hallucinations. Thus De Quincey writes⁽⁵⁾: “In the middle of 1817 this faculty became increasingly distressing to me; at night, when I lay awake in bed, vast processions moved along continually in mournful pomp; friezes of never-ending stories drawn from times before *Œdipus* or *Priam*, before *Tyre*, before *Memphis*.”

Lauder Brunton⁽⁶⁾ gives a good example of the influence of salicylate of soda. “In the case of an old gentleman who was taking salicylate of soda both his friends and I were much alarmed by the patient describing processions of people round his bed, when, with the exception of a single attendant, no one was in the room.”

The effect of quinine in producing singing in the ears is well known.

Quite a long list can be made of the different drugs which can produce hallucinations: Alcohol, absinthe, ether, stramonium, belladonna, hyoscyamus, nitrous oxide, chloroform, mercury, lead, and santolin.

(b): *Endogenous toxins: Toxæmias.*—There are numerous records of hallucinations occurring in diseases accompanied by pyrexia. These have been omitted as the hallucinations are only a part of the febrile delirium.

Gout may cause hallucinations. "I was called," says Dr. Alderson, "to Mrs B—, a fine old lady about 80 years of age whom I have frequently visited in fits of the gout. She complained of an unusual deafness, and great distension in the organs of digestion, leading her to expect an attack of gout. From this time she had visions. She was visited by several of her friends, whom she had not invited; she told them she was very sorry she could not hear them speak, nor keep up conversation with them; she would, therefore, order the card table, and rang the bell for that purpose. Upon the entrance of the servant, the whole party disappeared. She could not help expressing her surprise to her maid that they should all go away so abruptly; but she could scarcely believe her when she told her that there had been nobody in the room. She was so ashamed, that she suffered for many days and nights together the intrusion of a variety of phantoms, and had some of her finest feelings wrought upon by the exhibition of friends long lost, and who had come to cheat her fancy and revive sensations that time had almost obliterated. She determined, however, for a long time, not to complain, and contented herself with merely ringing her bell, finding she could always get rid of the phantoms by the entrance of her maid. It was not till some time after that she could bring herself to relate her distresses to me. She was all this time convinced of her own rationality, and so were those friends who really visited her, for they could never find any one circumstance in her conduct and conversation to lead them to suspect her in the smallest degree deranged, though unwell. This complaint was entirely removed by cataplasms to the feet, and gentle purgatives, and terminated a short time afterwards in a regular slight fit of the gout. She has remained ever since, now somewhat more than a year, in the perfect enjoyment of her health and faculties" (1).

(2) *Disorders of the brain circulation.*—*Anæmia.*—In

convalescence from acute illnesses when the patient is still weak hallucinations may appear. Also in cases of heart disease. "A non-commissioned officer with hypertrophy of the left ventricle imagined he saw white phantoms of strange and indefinite forms place themselves before him in threatening attitudes. Ashamed of his fears, knowing himself that it was only a phantasma, dreading above all things the jokes of his companions, he dared not confess how much he was under the influence of the strange malady which tormented him" (8).

An example from a case of drowning.—"A gentleman fell accidentally into the water and was nearly drowned. After being rescued he continued in a state of apparent death for nearly twenty minutes. After his restoration to consciousness he thus describe his sensations whilst in the act of drowning. 'They were the most delightful and ecstatic I have ever experienced. I was transported to a perfect paradise and witnessed scenes that my imagination never had in its most active condition depicted to my mind. I heard the most exquisite music proceeding from melodious voices and well-tuned instruments'" (9). Instances are on record in which apoplexy has been heralded by the appearance of hallucinations.

(3) Disease of end-organs are often the source of hallucinations. One example will have to suffice on the present occasion.

Mr. Tatham Thompson has recorded a most interesting case of a lady who came to him because she saw the head and horns of a goat constantly before her. On measuring her field of vision with a perimeter he found there was a blind spot corresponding to the figure she had described, and this was due to the bursting of a blood-vessel in the eye and consequent injury to the retina (10).

(4) *After-images.*—Dr. Hack Tuke describes some remarkable hallucinations which are difficult to place. Perhaps if they are called "after-images" without too much stress being placed on this as their explanation they will fit in here better than under any other heading. He records that a certain Dr. Lombard had for some years occasionally seen images of persons and things which he had been attentively regarding, but he took little notice of the circumstance. "On December 3rd, 1862, however, a much more decided visuali-

sation occurred. He was then in the Army and stationed on the West Shore of Maryland. A military man, his daughter, a naval officer, and Dr. Lombard were seated in the verandah of a house which stood within a stone's throw of Chesapeake Bay. The girl sat on the second of the steps leading down from the verandah. He himself was on the same step at the other end, there being about five feet between them, and her profile being clearly in view. For no particular reason he began to stare at her, at the same time concentrating all his attention upon the features. At the expiration of about twenty minutes, he turned his eyes towards the bay simply to relieve them, when he saw before him the image of the girl very distinctly, and also in like manner all the objects that had been within the range of his vision. The image began almost at once to fade, but he found that by fixing his whole attention upon it that he could retain it. To this power I particularly draw attention. He next looked over her head towards a wood of southern pine trees, and again saw the image. He had repeated this experiment four or five times when the girl turned her head towards him and asked why he was staring at her so. Dr. Lombard described what he had seen, when, to his surprise, she laughed, and told him he was only a beginner, and that he ought to be able to obtain in twenty seconds what had taken as many minutes. She then led him on the verandah to a point where the moon shone brightly, and asked the naval officer to take note of the time occupied in the experiments. She told Dr. Lombard to keep everything but herself out of mind, to look her full in the face, and then to run his eyes up and down her figure. In a few seconds she called "Time" and told him to look towards Chesapeake Bay, directing him to regard the image as attentively as he had regarded her previously. He then saw the image very distinctly. The time was twenty-two seconds. In the course of the same evening many more experiments were made. In reply to her father and Dr. Lombard she said that she had discovered that she possessed this power through a school-fellow two years before, who possessed the same faculty of voluntarily recalling spectral images. Dr. Lombard asked her whether this power would last any considerable length of time. She said she could only answer for two years from her own experience, upon which the naval officer spoke up, and said that he could answer for nearly

fifty years, having exercised it himself since he was fourteen or fifteen years of age" (11).

(5) *Brain diseases of obscure pathology.—Epilepsy.*—In the aura preceding an epileptic attack hallucinations are frequently met with. These may be sparks of light, noises, olfactory or gustatory hallucinations or strange sensations. Sometimes the hallucination is more definite. Thus the case is recorded of a patient who saw the apparition of an old woman in a red cloak who approached him, struck him on the head with her crutch, and then the fit took place (12).

Forbes Winslow⁽¹³⁾ mentions "the case of a young man, who, when his fits came on, thought he saw a carriage drive up at a gallop and with great noise containing a little man in a red bonnet; fearing to be *écrasé* by the carriage, he fell down stiff and without consciousness."

Migraine is supposed to be closely allied to epilepsy, and the visual hallucinations in this disease are well known.

DIVISION (B).—HALLUCINATIONS OF MENTAL ORIGIN.

The second division includes those cases which are in a measure of greater interest to workers in insanity. They are those in which our attention is fixed on changes in the mind rather than on changes in the brain.

(1) *Suggestion.*—Very interesting work in this connection has been done by Dr. Seashore. I quote from a review of the original article by Havelock Ellis in the *Journal of Mental Science*.

"The most striking experiments, however, are those which demonstrate the ease with which hallucinations of a definite object can be produced. A spheroidal blue bead two or three millimetres in diameter was suspended by a fine black silk thread in front of a black surface; by a concealed device the bead could be withdrawn and replaced without the observer's notice. The experimenter was seated at a table, ostensibly to keep record, but really to manipulate the apparatus. A tape line was stretched from the apparatus to a point some six metres in front of it. The observer was first shown the bead and then required to go to the further end of the tape line and walk slowly up towards the apparatus until he could see the bead distinctly. When he saw the bead he read off the distance

on the tape-line. The observer was put through this experiment ten times, the distance at which the bead was seen varying but slightly.

"Before the eleventh trial the experimenter pulled a cord which slid the bead behind the frame. The observer, not knowing this, walked up as usual, and when he came up to or a little beyond the point where he expected to see the bead, he generally did see it, and read off the distance as before. As a rule the eleventh, sixteenth, eighteenth, and twentieth trials were made with the bead withdrawn. About two-thirds of the persons experimented on were hallucinated. They knew when, where, and how to see the bead, and that was sufficient to project the mental image into a realistic vision.

"Somewhat similar results were obtained in experiments on touch, electrical stimulation, sound, taste, and smell, and these results are fully illustrated by charts.

"Dr. Seashore concludes that : (1) Such hallucinations and illusions are normal phenomena, which may be reduced to law ; (2) they are due to suggestion ; (3) the main element in such suggestion is expectant attention.

"It is clear we may rely upon hallucinations and illusion as a factor in daily life to a much greater extent than we have yet ventured to do. If a scientific observer, as Dr. Seashore points out in the bead experiment, sees the bead as real, although there is no bead, I do not think we can set any limit to what an excited imaginative person may really see under circumstances favourable for illusion"⁽¹⁴⁾.

Besides hallucinations caused by suggestion, illusions caused in a similar manner are not infrequent. For example, in reading a book or paper we rarely read each word letter by letter, we merely glance at a word or a sentence and divine the meaning. This is one reason why the reading of proofs is so difficult. Bergson⁽¹⁵⁾ quotes experiments made by Münsterberg in which a written word was exposed to the view of an observer and at the same time a word of different significance was spoken in his ear. For example, the written word might be "tumult," the spoken word "railroad," and the result would be that the observer stated he saw the word "tunnel."

(2) If hallucinations take place in waking suggestion it is little wonder that in *hypnotism* they are produced with ease in

suitable subjects. For example, it is suggested to the hypnotised subject that he can hear bells ringing, see lights, etc., and these hallucinations appear. A not infrequent experiment is to hand the subject a piece of plain paper and to state that there is a photograph on it. This is then at once perceived. An interesting experiment is that connected with negative hallucinations. It is suggested to the subject that someone present has left the room. Immediately the person is no longer seen. Though I have rapidly passed over the subject of hallucinations induced by hypnotism and suggestion, I do not wish it to be inferred that it is one of minor importance. In any theory of hallucinations these phenomena must occupy a prominent position.

(3) *Crystal-gazing and clairaudience.*—In crystal-gazing the subject gazes at a mirror or glass ball or any bright object, and after a time he distinguishes more or less definite pictures. "The first pictures are often simple—a portrait, bust, plant, animal, or house. Then they become more complicated—a complete moving scene, as in a theatre, a room, a street, a public thoroughfare filled with various people, who walk about, come in and go out just as in real life" (16). When a sea-shell or shell-like body is held to the ear a murmur is heard. In certain subjects definite voices are heard, and this is called clairaudience. Though I have no personal knowledge of the matter, I think that there is no doubt that certain subjects at times obtain hallucinations by these means. As an example I will quote from the "Dissociation of a Personality" by Morton Prince (17). It must first be mentioned that Miss Beauchamp is the name given to a lady who spontaneously changed into three different personalities: "When Miss Beauchamp looks into a glass globe she does not see the details of her vision as small objects reflected in the glass, but after a moment or two the globe and her surroundings disappear from her consciousness, and she sees before her a scene in which human beings—herself perhaps one of them—are enacting parts as in real life. The characters are life-size and act as living persons. When she sees herself as one of the characters of the vision she experiences over again all the emotions and feelings that she observes her vision-self experiencing, and these emotions she exhibits, all forgetful of her surroundings, to the onlooker."

(4) *Hysteria. Somnambulism. Multiple personality.*—Janet

says that in the somnambulism of grand hysteria "the unfolding of hallucinations is incomparable, and, except in some cases of alcoholic delirium, that are a little like hysteria, we shall never find in lunacy such abundance and such copiousness in the hallucinations of all senses⁽¹⁸⁾. To give one case as an example: "It is the story of a young girl, æt. 20, called Irène, whom despair caused by her mother's death has made ill. We must remember that this woman's death had been very moving and dramatic. The poor woman who had reached the last stage of consumption, lived alone with her daughter in a poor garret. Death came slowly, with suffocation, blood vomiting, and all its frightful procession of symptoms. The girl struggled hopelessly against the impossible. She watched her mother during sixty nights, working at her sewing machine to earn a few pennies necessary to sustain their lives. After her mother's death she tried to revive the corpse, to call the breath back again; then, as she put the limbs upright, the body fell to the floor, and it took infinite exertion to lift it again into the bed. You may picture to yourself all that frightful scene. Some time after the funeral curious and impressive symptoms began. It was one of the most splendid cases of somnambulism I ever saw.

"The crises last for hours, and they show a splendid dramatic performance; no actress could rehearse those lugubrious scenes with such perfection. The young girl has the singular habit of acting again all the events that took place at her mother's death, without forgetting the least detail. Sometimes she only speaks, relating all that happened with great volubility, putting questions and answers in turn, or asking questions only, and seeming to listen for the answer; sometimes she only sees the sight, looking with frightened face and staring on the various scenes, and acting according to what she sees. At other times, she combines all hallucinations, words, and acts, and seems to play a very singular drama. When, in her drama, death has taken place, she carries on the same idea, and makes everything ready for her own suicide. She discusses it aloud, seems to speak with her mother, to receive advice from her; she fancies she will try to be run over by a locomotive. That detail is only a recollection of a real event of her life. She fancies she is on the way, and stretches herself out on the floor of the room, waiting for death, with mingled dread and impatience.

She poses, and wears on her face expressions really worthy of admiration, which remain fixed during several minutes. The train arrives before her staring eyes, she utters a terrible shriek, and falls back motionless as if she were dead. She soon gets up and begins acting over again one of the preceding scenes" (19).

Jung (20) gives a lengthy description of another somnambulist, S. W.—. She once said, "I do not know if what the spirits say and teach me is true, neither do I know if they are those by whose names they call themselves, but that my spirits exist there is no question. I see them before me, I can touch them, I speak to them as loudly and naturally as I am talking. They must be real." Yet, as Jung says, "To everyone who did not know her secret, she was a girl of fifteen and a half, in no respect unlike a thousand other girls" (21).

Multiple personality is included by Janet as a hysterical symptom. Reference has already been made to Morton Prince's case under the heading of crystal-gazing. The following is another example of hallucinations in the same patient: "During the course of this study it will be remembered that Sally (one of the personalities) subconsciously induced in B. IV. and B. I. (other personalities) time and again hallucinations which were visual representations of her own subconscious thoughts. Sally thought of a snake and willed and straightway B. I. or B. IV. saw a snake. B. IV. had, indeed, another hallucination, similar to the one I have just described, as the prickings of her conscience. The vision was of myself, and upbraided her in language I had previously used for disobeying my expressed wishes. The words and vision were the expression of Sally's thoughts. The evidence is conclusive that subconscious ideas can excite hallucinations in the primary consciousness" (22). This remark by an observer so careful and trustworthy as Dr. Prince cannot be left out of account in any theory of hallucinations.

(5) Hypnagogic hallucinations are those which appear just before going to sleep and just before fully waking. These are most marked in youth, and, as a rule, disappear when adult life is reached. Some adults, however, have the power of seeing visions of hypnagogic nature. For example, "Dr. Weir Mitchell remarked that from childhood he has been able to summon visions before falling asleep, but that once present

they cannot be controlled, and change and disappear of themselves . . .” (23). “Mr. Greenwood, again, has recorded the hypnagogic visions with which he has been familiar throughout life. These faces are never seen except when the eyelids are closed, and they have an apparent distance of five or six feet. Though they seem living enough they look through the darkness as if traced in chalk on a black ground” (24).

De Quincey writes: “I know not whether my reader is aware that many children have a power of painting as it were upon the darkness all sorts of phantoms; in some that power is simply a mechanical affection of the eye; others have a voluntary or semi-voluntary power to dismiss or summon such phantoms; or, as a child once said to me when I questioned him on this matter, ‘I can tell them to go, and they go, but sometimes they come when I don’t tell them to come’” (25).

(6) *Dreams*.—The celebrated Bernheim (26), of Nancy, says: “La vérité est que nous sommes tous hallucinables et hallucinés pendant une grande partie de notre existence.” In making this statement he was thinking of dreams. Dreams may be considered as the best example of hallucinations existing in sane people. They occur so invariably in the life of every individual as to constitute a normal event. Occasionally one is met with who says he never dreams, but this is so exceptional that it is almost justifiable to assume that the speaker does dream but forgets his dream. Dreams have now so extensive a literature of their own that it is unnecessary to further consider them in this paper.

(7) *Hallucinations in historical personages*.—History, especially religious history, contains numerous examples, but space will allow only a few to be given.

Mohammed was 42 years of age when he first had his revelations. A tradition quoted from Spengel by Ireland (27) says that when “Mohammed was walking in the defiles and valleys about Mecca, every stone and tree greeted him with the words, ‘Hail thee, O messenger of God.’ He looked round to the right and to the left, and discovered nothing but trees and stones. The prophet heard these cries as long as it pleased God that he should be in this condition, then the Angel Gabriel appeared and announced to him the message of God in the mountain Hira, in the month of Ramadan.” Ireland appears to have believed that he was an epileptic, though he denies

epilepsy in the cases of Cæsar and Napoleon. Discussing the question of his sanity, Ireland says (²⁸): "He evidently possessed an intellect of the highest order for managing and controlling affairs, and was skilful both in conducting war and treating with his adversaries." "If Mohammed is to be called insane his insanity was of a very rare type" (²⁹).

Joan of Arc heard a "voice" say: "Joan, you must lead another life and do wonderful actions, for it is you whom the King of Heaven has chosen for the succour of France and the help and protection of King Charles expelled from his dominion. You will put on male attire, and, taking arms, will be the leader of war. All things will be ruled by your counsel" (³⁰). She had visions of the Angel Michael, and with him were St. Catherine and St. Margaret.

Martin Luther is stated to have had hallucinations and is said to have thrown an ink-pot at the Devil. It is, however, doubtful if the story has any foundation in fact. Still, there appears to be no doubt that he heard a voice say to him, "The just shall live by faith."

With regard to Napoleon. "In 1806, General Rapp, on his return from the siege of Dantzic, having occasion to speak to the Emperor, entered his cabinet without being announced. He found him in such profound meditation that his entrance was not noticed. The General, seeing that he did not move, was afraid he might be indisposed, and purposely made a noise. Napoleon immediately turned round, and seizing Rapp by the arm pointed to the heavens, saying, 'Do you see that?' The General made no reply; being interrogated a second time, he answered that he perceived nothing. 'What!' responded the Emperor, 'you did not discover it. It is my star, it is immediately in front of you, most brilliant,' and becoming gradually more excited, he exclaimed: 'It has never abandoned me; I behold it on all great occasions; it commands me to advance, and that to me is a sure sign of success'" (³¹).

Ignatius Loyola had visions of the Virgin, and one so different in character as George Fox, of the Quakers, heard a "voice."

The list of eminent men who are stated to have had hallucinations is a long one. It includes: Pythagoras, Socrates, Plato, Attila the Hun, Savonarola, Benvenuto Cellini, Hobbes, Descartes, Oliver Cromwell, Pascal, John Bunyan, Malebranche,

Pope, Sir Joshua Reynolds, Goethe, Sir Walter Scott, Krause, and Lord Byron.

(8) *Collective hallucinations*.—The story of the angels at Mons has excited widespread interest and has been the subject of many sermons and dissertations. It is disappointing to find that it rests upon no foundation in fact, and it is merely the figment of the brain of an imaginative writer in the *Evening News* (³²). Nevertheless, hallucinations have been stated to have been seen simultaneously by numbers of persons. For example, in 2 Maccabeus, chap. v :

1. About the same time Antiochus prepared his second voyage into Egypt.
2. And then it happened, that through all the city, for the space of almost forty days, there were seen horsemen running in the air, in cloth of gold, and armed with lances like a band of soldiers.
3. And troops of horsemen in array, encountering and running one against another, with shaking of shields, and multitude of pikes, and drawing of swords, and casting of darts, and glittering of golden ornaments, and harness of all sorts.
4. Wherefore every man prayed that that apparition might turn to good.

In the year 1686 a number of people on the banks of the Clyde below Lanark saw the trees covered with bonnets, guns, and swords, while at the same time one company of soldiers after another marched along the river bank in such a manner that one company passed through the other, whereupon the soldiers fell to the ground and disappeared. Immediately afterwards new companies appeared, marching in the same manner. According to the account which has been handed down, two-thirds of the persons present testified to their conviction of the reality of these apparitions, and this conviction was expressed not only in their words, but in the dread and terror shown in their countenances, which struck even those who had seen nothing of this warlike spectacle (³³).

(9) *So-called telepathic hallucinations*.—There are numerous well-authenticated cases of hallucinations which are difficult to classify. In books on supernormal phenomena they are termed telepathic, and, without the writer expressing any views on the subject of telepathy, may be mentioned under this heading.

One of my greatest friends, since deceased, told me the following story: He was in business and was ordered by his firm to go to Persia on a commercial matter. His sister at the time was suffering from phthisis and he was naturally unwilling to leave home, fearing he might never see her again. He was, however, obliged to undertake the journey. One day, as he was driving along in bright sunshine in a plain in Persia, he distinctly saw his sister's face. He later found that the time he had this vision corresponded with the hour of her death. My friend had told this to his father and one other person. The latter had laughed at him, and, fearful of mockery, he had never repeated it except to myself under seal of secrecy. The father, who was a clergyman, said he had had similar experiences. I am sure my dead friend would forgive my breaking my pledge to him were he alive, as the story is given and received in a serious manner.

A large number of similar cases can easily be found in the literature of telepathy, and are probably to be explained as a matter of coincidence. This is not the time or place to discuss thought transference, but the point I wish to make is that these are examples of hallucinations occurring in sane people and are instances of the fact that an idea when associated with great emotion can produce an hallucination.

This leads us to the next case.

(10) *Cases of hallucinations due to a complex.*—Dr. Coriat⁽³⁴⁾ writes as follows:

“Mrs. L—, æt. 46, who was referred to me by Dr. Prince, had been troubled for several years by peculiar visual hallucinations. She constantly saw coffins before her eyes; sometimes the coffins were lying near an open grave, sometimes one was open and in it she would see a person whom she did not recognise.

“These hallucinations never left her unless her attention was strongly distracted, and then they vanished for only a few minutes at a time. They were beyond her control. She was unable to make them appear or disappear at will except on some occasions, when they would vanish momentarily when she closed the eyes, after which they would appear in their original intensity.” On analysing the case it was found that “about four years previously, immediately before the first appearance of the hallucinations, she was in a state of worry and exhaustion

At this time the sight of dirt disturbed her a great deal, and she was constantly cleansing things about the house. When she saw dirt the word 'grave' would flash into her mind, at first as a mere idea, then gradually becoming more and more intense until it became visualised into the object itself. Finally, the word 'grave' suggested the word 'coffin,' and this, too, in turn became visualised into the object."

Freud (³⁵) records the following case: "As an example I shall cite one of my youngest hysterical patients, a boy, *æt.* 12, who was prevented from falling asleep by '*green faces with red eyes*,' which terrified him. The source of this manifestation was the suppressed, but once conscious, memory of a boy whom he had often seen during four years, and who offered him a deterring example of many childish bad habits, including onanism, which now formed the subject of his own reproach. His mother had noticed at the time that the complexion of the ill-bred boy was greenish and that he had *red (i.e., red-bordered) eyes*. Hence the terrible vision which constantly served to remind him of his mother's warning that such boys become demented, that they are unable to make progress at school, and are doomed to an early death. A part of the prediction came true in the case of the little patient; he could not successfully pursue his high-school studies, and, as appeared on examination of his involuntary fancies, he stood in great dread of the remainder of the prophecy. However, after a brief period of successful treatment his sleep was restored, he lost his fears, and finished his scholastic year with an excellent record."

In conclusion, it is to be hoped that the title of this paper has been justified. It was an easy task to collect a sufficient number of hallucinations in the sane. The main difficulty met with was to select suitable examples. Those which have been recorded here have been taken as types out of scores of similar cases which were available.

It may perhaps be news to some that the English Society for Psychical Research in 1894 presented a report on a census taken by them with regard to hallucinations in those in good health. The question which was put was the following: "Have you ever, when believing yourself to be completely awake, had a vivid impression of seeing or being touched by a living being or inanimate object, or of hearing a voice; which impression, so far as you could discover, was not due to any

external physical cause?" "In answer to this question 27,329 answers in all were received, of which 24,058 were negative, and 3,271, or 11.96 *per cent.*, affirmative; that is to say, 3,271 persons stated that they had experienced hallucinations"⁽³⁶⁾. It is possible that some of those who gave affirmative answers were insane, but such an eventuality was excluded as far as possible. Even if a few such did creep into the figures, the large percentage obtained is very surprising.

It may now well be asked what are the lessons to be learnt from the facts recorded above?

To summarise them as concisely as possible they appear to be as follows:

(1) Hallucinations *do* occur in the sane. I venture to think that such cases should be intensively studied, for, if any progress is to be made in our knowledge of hallucinations, results of value are more likely to be obtained in persons whose intelligence is neither dimmed nor distorted by insanity. Especially worthy of minute inquiry are hallucinations found in border-land or hysterical cases.

(2) There is no reason to believe that an hallucination occurring in a sane person differs in any essential respect from that which occurs in an insane person.

(3) If this be granted, then, seeing that hallucinations in the sane can be produced by toxins, no doubt hallucinations in the insane are also in some cases the result of toxins. In this connection it is noteworthy that hallucinations are most frequently met with in the insanities of alcoholic origin.

(4) It is, however, true that hallucinations can occur independently of physical changes such as might be produced by toxins or disease of the brain. An idea may be visualised or converted into a voice, smell, or other sensory phenomenon. The idea may be introduced from without, as in waking-suggestion, hypnotism, collective hallucinations, and, perhaps, crystal-gazing. Or the idea may arise from within, as in some phenomena of crystal-gazing, dreams, somnambulism, multiple personality, etc. In the so-called telepathic hallucination of my friend the idea of his dying sister was ever present with him, and it is not surprising that her face appeared before him. In the hallucinations of the religious ecstasies, *e.g.*, Joan of Arc, the mind was filled with overwhelming ideas which were converted into hallucinations.

If all the foregoing be granted, then it does seem probable that hallucinations in the insane can, in certain cases at any rate, be best studied from the psychological point of view. Such a study would make use of psychological terms only. The brain and nervous system would not be mentioned in the discussion. It is my belief that progress in the future must be expected on these lines rather than in approaching the subject from the physiological point of view.

(5) It is a very suggestive fact that hallucinations are met with in cases of multiple personality. This of itself does not prove anything, but I feel strongly that in every case presenting hallucinations some process of dissociation is at work. If this is so, then hallucinations would be expected in cases of multiple personality where dissociation is seen in greatest extent. A fuller discussion on this must be reserved for another occasion.

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The Psychology of Fear and the Effects of Panic Fear in War Time.⁽¹⁾ By Sir ROBERT ARMSTRONG-JONES, M.D., F.R.C.P., R.A.M.C.

It is an acknowledged fact that in the whole annals of mankind the most eventful period of a nation's psychology is that during which its people is passing through the crisis of war, and the history of nations, from the earliest dawn of society, presents continuous records of warlike operations. The present war, which has already lasted over two and a half years and which is without any immediate prospect of cessation, has disturbed the mind and altered the course of life of whole continents; yet all of us are agreed that it should never be possible for this “malady of princes” to occur again, and it is with the view of preventing its recurrence that civilisation (which means the united culture of all the Allies as well as of the “benevolent” neutrals) is now making a final and intense effort.

Having personal knowledge of the mental effects of the war upon the civil population, and having more recently, as Consulting Physician in Mental Diseases to the Forces in the London Command, some like knowledge as regards the military, I propose in the following paper to write on this subject in part from my own experience, in part also from that of others, as well as to record the effect of panic fear in more remote history. Looked upon psychologically, war is the manifestation of a biological law, it is the embodiment in men of a primordial and

deep-rooted instinct to be free. The present war is the outcome of resistance on the part of a ruthless and tyrannical militarism to the innately-organised determination of a people to be free, an instinct, as we shall prove, that is associated with the emotions of anger and hate as well as of fear.

The study of the emotions has commanded attention from both psychologists and physiologists, who have not only endeavoured to describe them, but to investigate their underlying physical basis. Such investigations show that the emotion of fear is closely related to the influence of the internal secretions. Prof. C. S. Sherrington has recorded experiments in which he cut off the nerve supply to the viscera in animals with the object of criticising the James-Lange-Sergi view that the emotions had primarily a somatic origin. Nevertheless, our chief indebtedness in regard to the study of the emotions still remains to Darwin and Herbert Spencer, the latter authority seeking to classify them upon their development from simple sensuous presentations of pain and pleasure; whilst Darwin investigated them through the natural history method, demonstrating the continuity of human with animal evolution both in mental and bodily characters, originating the doctrine that human progress and growth had evolved from subhuman antecedents, a view that has done more to unravel the complex mentality of man than any other.

Psychologists to-day all teach that the emotions have a physical correlative, and this aspect has been carefully investigated by Pawlow, Elliott, Cannon, and others, more especially in regard to the emotion of fear. More and more is it becoming recognised that conduct is influenced by the emotions; that in every emotion there is a cognitive, an active, and an affective experience, and that the emotions are the expressions of—or according to some are themselves expressed in—characteristic instinctive acts. Pawlow has shown the physical effects of fear upon the secretion of the digestive juices, and he concluded that pleasant æsthetic appeals to taste and smell assist digestion, the sight of appetising food making the “mouth water”; whilst vexations, anxieties, worries, and fright retard the secretion of saliva, as well as of the gastric and pancreatic juices and the bile; and it has been experimentally demonstrated that visceral responses through the sympathetic nervous system accompany all the strong emotions. During strong emotional excitement,

such as is produced by fear or pain, anger and rage, the movements of the abdominal viscera are inhibited, whilst under the influence of opposite or pleasurable sensations they are accelerated; and this is in accordance with the anatomical facts that there are two series of fibres to the visceral organs, *viz.*, one which accelerates their movements and the other which inhibits them, and it has been suggested that a scheme of classifying the emotions might be based upon their associated physical correlation. Fear, for instance, is expressed physically by the inhibition of all visceral movements; there is also a contraction of the blood-vessels, shown by pallor; there is a lowering of the surface temperatures, a "cold-sweat" pours over the body; the flow of saliva stops, "my tongue cleaved to the roof of my mouth"; the pupils are dilated; the hair stands erect; the heart beats rapidly, the respirations are hurried; there is also a trembling and twitching of the muscles, more especially those about the lips and face. A young officer, W—, who had obtained the Military Cross for bravery, told me that on one occasion when alone and in danger he was overcome by a sudden fear; he said, "Something within me seemed to pass right away," and his body began to tremble; but by an effort of will this passed off; otherwise, his feeling was to get away from where he was. Another officer, T—, who had also been decorated for valour, said that whilst he was hard at work in charge of a battery he realised that his men were falling one after another, and suddenly his legs began to shake, his body to tremble, and a "queer feeling" came over him which he hoped never to experience again, and he wished to know what this emotion was? In all danger the effect is the same, *i.e.*, protective automatic reflexes occur, and the whole effort of the organism is to obtain an "atmosphere," as Crile has called it, of "*a-noci-association.*" Precisely the same visceral results as are associated with the strong emotions occur after the injection of adrenalin or epinephrin into the blood-stream; sugar is reflexly liberated from the liver into the blood for the use of the muscles, the blood is driven from the abdominal viscera into the heart, lungs, and the central nervous system; the coagulability of the blood is raised, and the arterial pressure is increased. In all the strong emotions, experiments have shown a reflex increase of adrenalin in the blood, with all the protective responses referred to; the sugar liberated helping in the muscular struggle, which is either

to assist combat or to secure flight; a fuller circulation and a higher arterial pressure also favour this, whilst the more rapid coagulability of the blood is in anticipation of hæmorrhage during the life and death struggle. The flow of adrenalin during a strong emotion not only tends to augment the effect of the emotion, but it also helps to sustain and to prolong it, which is the very nature of our experience, as during the time we are feeling the emotion these diffused bodily changes set up by the organic and glandular activities further react upon the brain, and these reactions in their turn act as stimuli, encouraging the continued secretion of adrenalin, whilst the emotion lasts; and in this way sustaining the necessary bodily commotion until the emotional wave gradually dies away. In the records of shell-shock cases the blood-pressure taken soon after the men are seen at the dressing stations is found to be raised, whilst there is a lowering of 20 to 40 mm. after a short rest at the base hospitals.

It cannot be too strongly insisted, that the action of the central nervous system is of the syndromic variety, the cortex being built and activated to a high degree of perfection on this unified basis, yet, although human beings are integral organisms, the mind through fright, anxiety, disease, or shock, and also in pathological states, may become dissociated, and any of its elementary constituents may be abnormally presented, and may tend to overact in comparison with the others. It is a fact of experience that any stress or strain upon one of the elements may disintegrate the whole. It would follow from this, in regard to restoration, that every factor which contributes to the welfare or the improvement of one part may also contribute to the improvement of the whole. As to the predominance of any one element of the mind we know that in the delirium of grandeur, for instance, the ideas are more vividly expressed; they crowd the attention, although unreal; and they are sometimes critically and logically defended against every appeal to reason.

In the delirium of depression ideas of imagined faults, groundless apprehensions of sin-committal, of impending suffering and ruin, dominate the consciousness. In dissociated emotional or affective states some of the primary emotions may hold the mind and dominate conduct, and of these fear is probably the strongest and the deepest of all. It is one which man has

experienced and recognised from his earliest stages, and also one which he has tried to avoid and to control, lest it should seize his whole personality. The fear of solitude, of being without protection, of vast distances or of open spaces; the fear of closed places or of great heights or of darkness—all of use to our ancestors—are notable instances of inherited instincts that may be revived under stress or through pathological conditions. There are also abnormal disturbances of the will power, which acts through an extraordinary large series of circuits; on the one hand, as a sudden un-reflective discharge, on the other causing complete inhibition of voluntary effort; witness for example, the hesitation of the neurasthenic to cross the road, the irresolution of him who drinks, the lack of will power to initiate action, or the disregard of prudential considerations which characterise many affections of the will. Witness also, the impulsive tendencies of the epileptic, and the equally impulsive obsessions of the paranoiac; above all may be seen the inhibition present in some cases of shell-shock, who may be deaf and dumb, and who with every apparent effort are unable to phonate or even to whisper, but who through some sudden emotional stimulus will regain speech, voice, and even, when these are lost, hearing and sight. Quite a large number of these aphonic cases are met with in the various hospitals, who suffer from no wounds, but who have experienced what may be described as awe, or the fear of some unknown or vaguely contemplated event. C—, a Canadian, could not speak and his whisper was at first inaudible, but he could write his thoughts and express his reasoned judgment, and he corresponded with his family. He heard and understood everything that was said to him, and there was no intellectual defect, but he was miserable and he looked frightened and anxious. He enlisted at the age of 43, and there was no possible doubt of his valour and courageous behaviour. He was in the Somme advance, and he had a complete memory of a shell bursting near him, and remembered being taken to the dressing station. He was shaky, with marked tremor of the hands, and he complained of frontal headache, and he had a foul tongue, with marked digestive disturbances. He dreamed terrible dreams as many of these men do. After two months he was sent to another of the War Hospitals for examination, and he regained his voice the same day. This case is typical of many more,

and the question arises what is the pathology of this condition? Phonation and articulation according to the evolution theory, are a late accomplishment, and are only utilised to express the emotions and thoughts. The view taken by Col. C. H. S. Myers, R.A.M.C., is expressed under two heads, *viz.*, either the blocking up of paths subserving the mechanism of phonation and articulation and producing an apparent paralysis, or the blocking up of paths that control and co-ordinate them, thus causing an ataxic or clonic or spastic functional condition. It is believed by some that the condition may be due to a functional paresis of the "habit" of breathing, *i.e.*, of muscles which subserve respiration so far as sound production is concerned, and to be a bilateral cerebral lesion. At any rate, as we shall see later, this refractory condition in the psychic mechanism may be, and often is, removed suddenly by some unexpected stimulus or through the influence of suggestion. Captain Farquhar Buzzard refers to the rarity of this condition in officers as compared with the men, and he explains this by the better education of the officers who are more able to reason and to understand, and who are thus less liable to emotional shock. A complete temporary blindness, "struck blind" as it is called, has been noticed. A soldier, E—, who was in India, but never in action, suddenly lost his sight and memory. He was brought home, but he has no recollection of leaving Bombay or anything occurring before that; but his memory of subsequent events is good. He cannot see, he has photophobia and complains of a "white haze," there are no naked eye or disc changes reported by Captain Lee in charge of him. He cannot stand or walk and is "all of a shake." Another patient, P—, was in the Somme action, he "got knocked up by waggons" and fell, he states, on his head, after which he could not open his eyes. For three hours he was blind and he cannot now open his eyes without constantly blinking, and his sight is much impaired. There is no inflammation and no pain. His mother's father is in an asylum. B— pitched out of an aeroplane and had a false landing. He has had numerous attacks of complete loss of sight. Nothing abnormal is seen, but he complains of "falling about and my eyes are so dizzy." Both these men dreamed terrifying dreams. Captain Lee informed me that many of these cases get well on "bread and milk, no smoking and no visitors!" I am not able to

recall any specific instances of the loss of smell and taste—apart from delusions. The sense of smell (and with it probably taste) is the oldest and most fundamentally established of all the senses, and subserving it is the oldest portion of the brain; *viz.*, the rhinencephalon which in the lowest vertebrates, as in fishes, practically constitutes the whole brain. This sense, described as “the sense to get and to beget,” is therefore the oldest and the most organised and the least likely to become disordered: whereas the senses of hearing and seeing are the most highly developed, and therefore the least organised, and are for these reasons the most likely to become disordered by psychic shock. The same applies to the emotion of fear. It is the oldest as well as the most intense of the emotions; before it all the bodily functions bow; and it gives rise to the greatest amount of mental dissociation when present.

Another of the conditions essentially associated with fear, *viz.*, muscular trembling and inco-ordination, is very frequently met with among shell-shock cases, and this may pass on to general convulsive seizures bordering upon epilepsy, as will be referred to in the sudden fear brought on by the Silvertown explosion in many of those who heard the noise. There is no doubt of the fright here, nor of the disturbance of consciousness, nor, indeed, of the usual results of fear which dominate the mind and draw away all the nerve potential into different efferent channels—in this instance into the sensori-motor efferent tracts. Consciousness, as we know, is a continuous dynamic process. In health there are constant intercurrent stimuli flowing from one area of cerebral activity to another, and, as the whole consciousness is a resultant of the total equilibrium of all the conscious mechanisms from organic and external receptors, when a disturbing stimulus like fear arises, the co-ordination of all the cortical centres is affected, and a discharge is produced, the most facile being that of movement through the lower motor neurons, because the discharge through movement is the most elementary and the oldest and most accustomed form of discharge, and this discharge excites other areas in more distantly related centres of the brain. Normally, the cerebral cortex, as was maintained by Gowers, is in a state of constant nervous tension, ready at any instant to respond to any stimulus, and when the discharge is effected the cortex is left in an exhausted state precisely like a “run-down” accumulator. The form of

discharge actually occurring depends upon the temperament of the particular individual ; at any rate fear is the most powerful stimulus that can be applied to effect this discharge. The antithesis to fear is hope, which is the anticipation of pleasure, and hope has been a great national asset, the vital energy imparted in consequence—to the civilian population as well as to the military—has been a considerable moral factor in our fight for liberty and existence. The psychology of the war has brought us into contact with life in a manner that no national upheaval ever has before ; the emotions of disgust and anger have been more unreservedly expressed than possibly any other emotion in connection with the inhuman, barbarous, and revolting cruelties imposed by the Huns upon the vanquished ; yet the feelings of self-sacrifice, the tender emotions in regard to friends, the love of home and of patriotism, and pride in our race have all been kindled, and the world of idealism has been roused to a degree never before experienced in our time. The study of the emotions, therefore, justifies attention, and I agree with McDougall that the inherited instincts, with their emotional side, form the basis of our mental life, and that these innate tendencies in each of us afford the truest and best solution of conduct ; in fact individual action as well as social life depends upon impulses or instincts whose nature has been determined through long periods of evolutionary development, yet which have become modified through the influence of civilisation into organised and complex impulses. The war has certainly brought the emotions into greater and clearer relief, and it has given us all a much wider psychic experience. The teaching of psychologists has been very stimulating to me, and I should wish to be permitted to refer briefly and in general terms to the views of the emotions and their bodily accompaniments. The older psychologists took the various emotions as ultimate, and they were enumerated and described accordingly. William James has called such a classification the elaboration of the obvious ; it was the cataloguing, he says, of so many entities which led to no scientific end ; for there are so many synonymous terms for the same emotion, and there are so many possible combinations of emotional states, that different terms must refer to more or less identical states, *e.g.*, hatred, antipathy, resentment, dislike, aversion, spite, and abhorrence have all the same connotation, although they appear to denote different emotional states.

It is not surprising, therefore, that such a classification has been abandoned, and in place of this James has suggested, with much plausibility if not conviction, a "physical-reflex" theory of the emotions which has given rise to great controversy among psychologists. He states that an emotion is the reaction of the brain consequent upon the excitation of afferent nerves; a number of bodily changes are set up by some exciting factor, and as a consequence of the perception of this factor and of its mental representation an emotion is the result; the emotion, in other words, is the expression of the stimulus, and the order of events is, firstly, the perception of some "exciting fact;" which, secondly, sets up reflexly some bodily disturbance, and thirdly, this commotion is apprehended or realised. It is this "apprehension" that constitutes the emotion. If the emotion be regarded as the mental result of material changes, *i.e.*, if the emotion be the consciousness of bodily disturbances, there must be, especially in the turmoil and perturbations inevitably set up by the antagonism and conflict of sensations, an indefinite number of combinations of such perceptions, and the number of the emotions experienced must thus be infinite. In James' own words, "the popular way of thinking about emotions is that the mental perception of some facts or series of facts excites the mental affection called the emotion, and that this latter gives rise to the bodily expression. My theory, he states, on the contrary, is that the bodily changes follow directly the perception of the exciting fact and that our feeling of the same changes, as they occur, *is* the emotion. Commonsense says, we lose our fortune, are sorry and weep; we meet a bear, are frightened and run; we are insulted by a rival, are angry and strike. The hypotheses here to be defended says that this order of sequence is incorrect, that the one mental state is not immediately induced by the other, that the bodily manifestations must first be interposed between, and that the more rational statement is that we feel sorry because we cry, are angry because we strike, afraid because we tremble, and not that we cry, strike, or tremble because we are sorry, angry, or fearful, as the case may be. Without the bodily state following on the perception, the latter would be purely cognitive in form—pale, colourless, and destitute of emotional warmth. We might then see the bear and judge it best to run, receive the insult and deem it right to strike, but we should not actually *feel*

afraid or angry," *i.e.*, the arousal of bodily changes leads to the emotion which is their mental interpretation in the domain of feeling.

James enunciated his doctrine in 1884 almost simultaneously with Charles Lange, of Copenhagen, and later this was accepted by Sergi in Italy. They maintain that the emotion felt is either strong or weak, according to the amount of bodily disturbances set up by the exciting stimulus. Many shell-shock cases appear to support this theory, for many of them dream terrifying dreams of trench warfare and bombs, and in them the physical conditions are associated with fear, such as those already recorded—tremors, pallor, and a cold perspiring skin; and upon awaking they experience the emotion of fear or terror, which, however, quickly subsides when they are reassured "it's all a dream." Driver F. M. T—, who had at first no fear of shells, developed a terror whilst at the Front of any approaching aircraft or high explosives. He used to dream when in hospital that aeroplanes overhead were dropping bombs on him. The nurses state that he used to wake up in sudden frights, and with his personal linen and even underbedding saturated; his body trembled and his pupils became dilated. He was only calmed when told no aircraft was near and that he was safe. In his case it certainly appeared that the bodily disturbances preceded the emotion of fear, but it is open to any critic to suggest that some unusual noise or sound heard in the ward initiated the mental emotion, and that the explanation of this emotion was the dream, the emotion bringing about the bodily changes secondarily. Stout and others maintain that the first exciting factor is the mental disturbance and that this precedes the bodily commotion, which depends upon the estimate made by the mind in regard to any particular experience. Stout holds that in each of the other departments of the mind the order of events is the same; in feeling the physical stimulus is mentally appreciated as a sensation before the bodily commotion that results from the stimulus, and in the *will* the purpose aimed at is mentally realised before the movement to obtain the desired end can be effected. McDougall accepts the view of James with modifications, for he declares the emotions to be the mental representation of instinctive bodily tendencies, *i.e.*, the emotions are the mental side of the bodily tendencies, innate in the individual,

the result of a long evolution, yet modified by development and social customs.

The instincts have long been a debatable ground for controversy, and they have received during recent years much attention from workers in the field of comparative psychology, notably from H. S. Jennings, the Peckhams, J. Loeb, and Lloyd Morgan. It is claimed by some that the instincts are merely impulsive movements directed to some serviceable end not present in consciousness, and by others that instinct and intelligence have no real distinction. Herbert Spencer urged that all movements were originally reflex, and only when these had reached a certain degree of complexity in the evolution of the race, did consciousness intervene to direct the reflex movements to a useful end, and thus purposeful and conscious movements evolved from reflex ones. In support of the evolution of intelligence from reflex acts, it is claimed by some psychologists that movements originally carried out as an explicit act of attention may, in time, become automatic. Witness, for instance, the early difficulties of the raw recruit with his drill. As a result of attention and habit these movements, when frequently practised, become so familiar that they can be carried out without thought, and once the first of the series is initiated, the rest follow automatically. It is this "automatic" character that is induced in all the individual manoeuvres of military people at the expense of initiative. It no doubt tends to make a good machine a better and a more perfect one, which is an advantage, provided there is no lack of initiative on the part of the officers to issue directions; but when the plans that have been organised are interrupted, the machine then fails to be effective, for no over-drilled individual possesses the initiative or the originating capacity to reconstruct new plans. It has been the boast of our country that our army is composed of individuals who have not been dragooned into secondarily automatic machines, but that there is sufficient initiative left on the part of the men to form what we shall later call the "collective mind," and the collective mind is the one that tends to make for the safety of the whole.

PSYCHOLOGY OF FEAR.

Fear is a fundamental instinct, and James says the progress from brute to man is characterised by nothing more than a

decrease in the frequency of occasions for fear. Shand states that there are as many kinds of fear as there are types of behaviour initiated by it.

Fear is best described as the anticipation of pain, or a knowledge of danger which results in action. It is also described as a vestigial form of our ancestral type of mentation. The first fear must follow a preceding pain, and it presupposes a previous experience of pain. Fear thus connotes a mental state in which the future appears to dominate the present, whilst the actual present is a revived experience of the past, this experience being a painful one. It is this revival that constitutes the emotion of fear. It is fear that urges the organism to avoid a previous danger, and therefore fear has a definite biological value. The power to experience fear is necessary for self-preservation, and it is met with in early conscious life and in animals; the most easily frightened member of the herd has the best chance, *cæteris paribus*, of survival.

The apprehension of an impending danger in fear, that is, the feeling that there is a more painful state impending, is a very generalised feeling, and it has (as we shall see) a very definite bodily accompaniment. It is a very unitary and a very unique division of the affective life; too little of it leads to rashness, and too much gives rise to timidity. As S. G. Tallentyre has stated, it is not the desperado who is "careless, reckless, fearless, of what's past, present, and to come" that is brave, and it is not the man who is incapable of fear that has the highest form of courage. There are many people, like children with fire, that are not afraid, because they have never experienced fear, and there are others who are too stolid, too obtuse, or too unimaginative to feel fear. Many men in the present war, remarkable for daring, were timid and even shrinking as children, yet they became renowned for bravery in later life. Fear may be readily induced by suggestion, or by imitation, as has been seen in shell-shock cases, because there are such definite bodily commotions associated with fear, and it is certainly questionable whether many of these should be treated together, and a wise eclecticism must be exercised in arranging for their treatment together in a leper hospital! Fear may so stimulate the imagination that the mind may create fictitious objects of dread and terror, and it is these that have caused bodies of men and crowds of people to act in the

presence of danger as if infected. Cries, trembling, sudden starts, paralysis, and convulsions all form a part of the somatic picture of fear, and these are not infrequently conveyed from one to the other. Although danger may be a cause of fear, there are many instances of strong and adventurous persons who long to meet danger in order to conquer it. Peril in fact is an incentive and an inducement to courage. Captain Scott undertook to face the terrible Antarctic experiences to which he and his party bravely succumbed, because of the knowledge to be gained through peril and danger. There is no possible doubt that he realised the emotion of fear because he had made full preparations to meet it. He knew from his former Arctic travels the risks he ran and the dangers he had to face, and in spite of fear he dared to risk the voyage. To some natures fear becomes a mental tonic, but possibly other emotions, such as curiosity and wonder, help to create the motive for action. To many of our brave soldiers life without danger would be insipid and flat, and a man in perfect health does not trouble at the thought of death, partly because the uncertainty of its happening creates no fear. It is known that the weaker animals fight better when they experience fear and are driven to be at bay, and men often fight better when they are rightly afraid and have justice on their side. Fear may come on gradually or suddenly. The many slow grinding fears of a vague marginal subconscious kind are more characteristic of to-day than are the sudden isolated instances which occurred in the days of primitive man; but the stress experienced by our officers and troops was the origin of frequent instances of fear coming on suddenly and without warning; danger, therefore, more than pain, enters into the mind, and when fear is experienced either gradually or suddenly it has more power to effect dissociative dissolutions than any other emotion. It causes all other sensori-motor activities to cease; the normal inhibitions stop, and the normal reinforcements fail; immobility, irregular tremors, and in some cases complete paralysis and collapse are seen, and we can thus realise the truth of the phrase, "paralysed with fear." In the case of movements those that had become primarily useful and instinctive may become affected through the sudden shock of a strong emotion, and the mind becomes conscious of the state of tension brought about by the conflict between movements which subserve the emotion (in this

case agitation, tremors, etc.) and those which are being consciously initiated by ideas, so that an inability to move, to walk, or to stand, occurs. It is interesting to note that most of the shell-shock cases are without wounds, and these cases have almost all been "buried," "thrust," or "blown," or have been in the vicinity of suddenly bursting large shells. Incontinence of the bladder and rectum, due to stimulation of the sympathetic by a withdrawal of cerebro-spinal inhibition, have been recorded as a result of fear. In the slighter degrees of shell-shock motor phenomena, as stated, are very common, and in most of them the reflex guidance of movements is lost. Although we can rightly boast that our warriors are among the best troops in the world, there are instances within the knowledge of each of us where men in close proximity to high explosive shells which had burst have wandered away confusedly or unconsciously, and have lost their speech and memory for weeks or months, but under the influence of suggestion some have been able to recall fully afterwards the whole incidents. I have notes of cases in which Capt. William Brown, R.A.M.C., effected a complete restoration of memory through hypnotic suggestion practised early after the shock. To indicate the suggestibility of these cases I am allowed to mention the case of a patient (under the care of Major Tims, R.A.M.C.) who was out on parole one afternoon when he saw a horse fall, and without warning he himself also went down suddenly, and had to be helped back to the hospital. A sudden unexpected noise, such as an overhead train crossing the road, caused the same effect. The Silvertown explosion on January 23rd several miles away caused several patients in the same hospital to demonstrate the physical effects of fear. I consider an element of fear to be present in almost all functional nervous cases, and it is present to a slight degree normally in all actions directed by desire, and even those who read "papers" know the conflict that occurs between the wish to succeed and the risk of failure! Fear was formerly considered by our legislators to be the essential factor as a deterrent in the punishment of crime, but it is now discovered to be a wiser policy to improve the environment, and fear has also been abandoned as a deterrent in schools, for it was found that flogging lowered intellectual efficiency. Mr. Graham Wallas said that if war ceased Alpine clubs would have to be increased, as they added the zest of peril

and danger to life and assisted through fear in initiating energy and activity. Like Shand he appears to regard fear as the root-force of character. It is said that if the theologians are deprived of the use of fear as a moral agent and a deterrent from evil they would lose much of their influence for good, but Miss Mackenzie has said that the fear of exchanging this world for the unknown would lose much of its delightful sense of adventure if we knew whence we came or whither we were going. I feel most strongly that it is this fear of the unknown which is "unconscious" that is at the bottom of most, if not all, of our shell-shock cases.

One of the most painful forms of fear is the *pavor nocturnus*, or the night terrors of children between three and eight years of age, and the question has been raised whether it be somatic or of so-called idiopathic origin. Among soldiers suffering from shell-shock it is not at all uncommon in the early stages, when sleep is disturbed by horrible dreams of the parapet, of high explosives, and of Hun atrocities. So marked was this the case in one man whom I saw that he feared going to sleep—a condition named hypnophobia. The phylogeny of sleep suggests that early man may have been semi-nocturnal in his habits, and that dreams and *pavor nocturnus* were protective and prevented the long sound sleep which must have been a danger to primitive man, as he might at any moment need some sudden extrinsic call so as to act with promptness and energy.

The organic sensations enter largely into the emotions, as Bain asserts, who was one of the first to teach this, and particularly is this the case with fear. We now fear in our hearts, stomachs, livers, thyroids, and adrenals, the organic sensations being thus presented to consciousness, and a vulgar Scotch expression of the fear to act is—"I have no guts for it." Not infrequently there are met cases among soldiers where fear is associated with constantly recurring vomiting, and one was recently recorded by Dr. Colin McDowall.

We are familiar with the classical work of Sir Charles Bell upon the expression of the emotions, in which he associates fear with staring, startled eyes, dilated pupils, eyeballs largely uncovered, eyebrows elevated to the utmost, the convulsive opening of the mouth, when the tongue is seen, yet the lips conceal the teeth, and the nostril is inflated; these signs of fear

passing on to complete collapse and paralysis. He distinguishes fear from terror, which, to him, was an exaggerated fear, the appearance of Cain after the death of Abel by Metastasio being quoted as one of the best representations of these emotions in words. Terror and astonishment, in which the person is appalled and stupefied, and where he stands rooted and motionless, are contrasted with the fugitive, unnerved by fear alone, and in the act of flight. Homer thus describes horror: "Terror and consternation at that sound the mind of Priam felt; erect his hair, bristled his limbs, and with amaze he stood motionless." The fear of spiders, of snakes, or, as in the late Lord Roberts, of cats, are inherited phobias, of which about 140 have been described. They are not of the category under consideration.

RELATION BETWEEN MIND AND BODY.

It may be desirable in order to explain certain functional nervous states to consider briefly the relation between mind and body. This has always seemed to be an interesting speculative question, but we desire not to be drawn into any deep metaphysical discussion over it. Physiologically considered man only obeys his biological destiny, and physiology takes no view of intellect or of intelligent behaviour; these are outside its purview. Dr. F. Buzzard, in a very interesting paper recently published in the *Lancet* (December 30th, 1916), cites a case of functional paraplegia as the effect of a separate mental entity upon an equally separate body, and he sought for an explanation of this condition from the psychological aspect. He says these cases are "what appear to me to be essentially disorders of the *mind* in the present state of our knowledge." The suddenness of onset and the equally sudden disappearance of nervous condition certainly negative an organic origin, and tend to favour this mental entity. Dr. Buzzard states—and this is striking from a neurologist—"the more I see of these cases, the more convinced I am that an idea—a conscious idea—plays some part in the production of all these phenomena"; also, "hysteria has its source in the mind. It is a mental disease." The experience of many who have the care of mental and shell-shock cases upholds this view, and we are not prepared to say, with so many psychologists, that mental processes consist only of sensations in juxtaposition, or of

images (which are revived sensation) held in groups by "association," and that there is no such thing as mind by itself, although, on the other hand, there are no definite proofs of its existence. Man is a purposive being, with intelligence and volition, and we realise from such complex physiological conditions as binocular vision, as we also know from the experience of effort, used in thought or during attention, that there is some kind of independent entity. But, it is replied, if there be an independent mind, why should it appear to arise only in connection with cerebral processes, and not in connection with any other processes? All are agreed, however, that mental states are associated with the activity of the nervous system, but this does not prove that they are "functions" of the brain. To think of the mind as an epi-phenomenon, a something inert lying beside matter, does not explain mental states, and it is contrary to experience and to psychological knowledge to accept this view. The view that mind is something incidental to matter—a "spark thrown off by the engine," or "a mere foam thrown up by and floating on a wave"—although held by some psychologists, is not generally acceptable. This view holds that the mind has no reaction on the brain. There is a strong conviction in the minds of most persons that there is a definite reality in mental activity and in effort, and therefore to put the mind on one side as a mere inert series of phenomena, or an epi-phenomenon, is not only inadmissible, but is belied by the experience of all who have to do with mental cases. It is true that some thinkers suggest that the whole universe is ranged on the lines of, and through, conscious experience, and that, as we know nothing of the ultimate constituents of matter, it is not impossible that matter may in the end prove to be of a like nature, or even prove to be identical with, the ultimate "stuff" of consciousness. As to cause and effect between mind and body, it is impossible to state conclusively that either factor is a cause, for the two things are not comparable, and to try to explain as an effect anything that is not commensurate with the cause is inadmissible. It is not possible to explain consciousness or awareness in physical terms, which must be in terms of movement. Moreover, the consciousness that arises from cerebral processes is not consciousness of the cerebral processes themselves, but of something not only quite different, but also outside the brain itself, and even our own appreciation

of the functions of the cerebral cortex is a reflection. The facts as we know them suggest that a physiological process always accompanies a psychological change, but to say they are parallel is not warranted, for there is no continued "point-to-point" relation between them, and to suggest "parallelism" is to favour a *mechanistic* view, or an interpretation in terms of physical analogy. It would be more true to state there was interaction between them than to suggest there was a complete parallelism, *i.e.*, when changes took place in the cortex something else occurred which was over and above material change, but true correlation was impossible, and "interaction," or the vitalistic view as opposed to the mechanistic, seems of late to be gaining ground over parallelism as an explanation of the relation of mind and body. A young Australian soldier suffering from shell-shock, and under the care of Col. Hawkins, R.A.M.C., had not spoken for several months. One day in Whitehall he unexpectedly met his brother, who suddenly greeted him after an absence of seven years. The soldier spoke from that hour. A company of about twelve soldiers who had recovered from shell-shock set off one afternoon to witness a trans-pontine melodrama, a part of the plot being the explosion of a stage bomb, which was unexpected. Five of the men instantly lost the power of walking and had to be carried home, whilst another of the party became aphonic and aphasic. Both of these examples seem to indicate the power of some entity capable of reacting upon the body, and giving rise to functional (as opposed to organic) nervous changes.

PHYSIOLOGY.

I believe it would be correct to regard the emotions as the mental interpretation of physiological adaptations for survival, for they are capable of calling up certain powers of the body into action which help the individual to live. They are thus purposive, their end being to preserve the welfare of the organism and to safeguard it against hurt or injury. Upon this view the emotions are supplementary reflexes—few of them are under the control of the will—by means of which the body is prepared for protective action. In the popular view there are usually three ways in which protective action occurs: Firstly, external precautions against cold and storm, wind and

rain, by the adoption of clothing and shelter; secondly, action against pathogenic and other organisms and toxins through the chemical defences which are more or less innate in every individual, and thirdly, those adaptive mechanisms through the senses which help to guard the body against injury, and with these the special instincts of self-preservation through fight and combat, or flight and concealment; each of these bodily instincts being attended with a mental side signified by the term "emotion." In every emotion there are nervous currents discharging impulses to the various muscles, the viscera and the vital organs, and it is upon the nature of these reactions that we are able to observe and to classify the instincts which are the bodily accompaniments of the different emotions. After what has been said about the relationship between mind and body, we may state, without suggesting factors of causation, that each of the emotions has a bodily accompaniment. Indeed the emotions may be regarded not only as having associated bodily states, but also as being themselves special mechanisms for reinforcing the bodily activities, for in the hour of danger the emotions, acting in conjunction with the motor mechanism and certain glandular structures, prepare and adapt the body for protective action, and when these mechanisms have been discharging for long periods continuously, or for a short period intensely, a condition of exhaustion must occur, and it is this condition that we meet in so many "shell-shock" cases.

It has been ascertained that the visceral response is the same for all the strong emotions, and there appears to be so much physical uniformity and physiological similarity among all the emotions, complex and varied as they seem, that fundamentally they may all be identical. At any rate their special differentiation must be sought for elsewhere than in visceral changes, as it is impossible to discriminate between them from their visceral associations, which, after all, are only one side of the emotions. C. S. Sherrington writes to me saying that his experiments of severing the viscera and skeletal muscles from brain influences "tended to show that the suppression of the visceral and vascular accompaniments of the emotions of rage, disgust, and fear did not suppress the occurrence of the emotions, at least not to the extent that we should have expected were William James' view of their source correct," this view being

“that the visceral and vascular reflexes by a retro-pulsion to the brain and mind gave rise to the emotions,” or, in other words, that the physiological disturbances originated the emotion, or *were* the emotion, and that we are miserable because we cry and not that we cry because we are miserable. Sherrington's experiments tended to show that although the autonomic nervous system was the organic background of the conscious life, the viscera themselves were relatively unimportant in distinguishing between the different kinds of emotions, each of which would appear to have its own bed or track deeply laid already and ingrained in the central nervous system, and each having in connection with this track a separate group of co-ordinating neurones. It would be true to state that every stimulus, physical and mental, tends to awaken (along ancestral tracks in the nervous centres) some response, through various associations that may be peculiar to the individual. As we know, each group of neurones has its own characteristic expression, and the tendency for these upon stimulation is to act suddenly and to call up separate groups of voluntary muscles. It is ascertained that a nervous current may cause a contraction in a skeletal muscle in the two to three thousandth part of a second, whereas a stimulus through the autonomic system, acting upon smooth muscle or upon a gland, takes several seconds to react. If sufficiently intense the stimulus of an emotion overflows into the more diffuse discharges of the autonomic system, thus giving rise to vague cardiac, pulmonary, and visceral perturbations with muscular tremors, such as we find so often in “shell-shock” cases. We know that strong emotions of fear, grief, anger, or rage may inhibit the flow of saliva, of the gastric, pancreatic, and intestinal juices as well as of the bile; the normal movements of the stomach and intestine also cease, and the same in a minor degree is true of the less dominant emotions. In some cases of sudden joy or of intense fear the contents of the hollow viscera may even be rejected, which shows that the influence of a powerful emotion may overwhelm the normal action of the autonomic system, and may thus entirely reverse the functions of organs innervated by it.

It has been ascertained experimentally that when the emotions of fear and rage are experienced there is an increase of adrenalin and sugar in the circulation. The blood of a caged cat tormented by a barking dog will show an increased

percentage of adrenalin (which can be detected when the amount present is a dilution of one in a million), and precisely the same occurs when the nerves to the gland are stimulated. The physiological effect of adrenalin is to restore the organism after fatigue and to cause an innervation of all nerves in the autonomic system. The effect of increased sugar in the blood is to restore and renew muscular activity, and this, when present, prepares the organism for a supreme muscular effort. The combined effect of adrenalin and sugar is to excite the heart, to contract the walls of the smaller blood-vessels, and so to raise arterial pressure, to add tone to the viscera, and to release the sugar stored in the liver, and also to activate the sweat-glands in anticipation of violent muscular movements. The further effect is to dilate the pupil (possibly the ancestral instinct for seeing distant objects), all such phenomena being physical results that fully and completely characterise the emotion of fear, which is thus demonstrated to be a protective reflex, inasmuch as these physiological effects are precisely those that prepare the body for a strenuous effort, such an effort expressing itself in active combat, conflict, or flight, the latter being essentially a struggle to be free.

Of all the emotions, fear is probably the one that most frequently rouses the autonomic nervous system into activity, and it is through this emotion in particular that nerve-potential from the central nervous system overflows into the autonomic ganglia and inhibits the functions dependent upon them. There is thus during fear a rapid and probably excessive conversion of potential into kinetic energy, which must be at the expense of the energy stored away, in part the stored energy of the cytoplasm of the neurone, and in part also that of the liver cells, the thyroid, and the adrenals. Although we ourselves realise the marked psychological distinctions between the emotions, it is true that in spite of many complexities some of the emotions seem readily to pass into others and for this reason they have been described as ambivalent. There is much for instance that is common between fear and rage. William James even says they are the same, for "we wish to kill anything that wishes to kill us," and he adds that animals which fear and flee not infrequently turn to fury and fight. McDougall states that to thwart any emotion or instinct is to excite the animal to fight and combat, and Graham Wallas

makes a great point of the transformation of an instinct, by what he describes as a "balked disposition," in which there is the discomfort or pain at not securing the object of one's desire, and the merging of this feeling into the agreeable consciousness of being able to react against the cause of pain. It is with the view of "balking" fear that popular opinion urges a timid person to regain his previous confidence by repeating under assured and safe conditions the same act that caused his fear. If a boy falls off his horse and is afraid to try again the riding-master insists he should ride the next day, otherwise there is a risk that his fear may become fixed and he may thus permanently lose his "nerve." This accords with the experience of shell-shock, which only develops some time after the original "trauma," and unless treated becomes organised. This transformation of emotions is well seen in the passing of fear into anger, with the result that hatred is engendered.

It has been asked, if fear be a protective emotion, why is it sometimes physiologically depressing or of a paralysing character, and why is it sometimes associated with a failure of the circulation and with collapse; a condition which is incompatible with activity or combat? Why, in other words, do the same emotional states pass into two opposite physical states? The answer is, that the deeper and stronger emotions as well as severe pain are occasionally depressing because this condition is of biological utility to the organism, and it is then that concealment, and not combat or flight, must be adopted if escape is to be effected; for, owing to the injuries received, an effort at flight would not be in the interest of survival or protection; but would, on the other hand, only aggravate the damage inflicted. Under these circumstances it would not assist an injured animal to attempt to escape; collapse alone would favour survival, yet, when the need for action becomes necessary, the body can be roused to all its defensive and offensive activities, as occurs in the automatic pouring of adrenalin into the blood during a strong emotional experience, results which follow equally its experimental injection into the blood-stream.

It has been conclusively shown by G. W. Crile and those who collaborated with him, that a strong psychic stimulus produces some change in the conductivity of the cerebral arc, the effect of which is to lower the threshold of that arc; for instance, the sudden or unexpected strain which has produced

shell-shock brings about a condition of lower nervous threshold, that is, it creates an increased sensitiveness to impressions, so that a condition of marked nervousness is left, and after being "buried" or "blown up," or after hearing continuous loud sounds and unusual noises, or after a sudden fright, a lower receptivity is induced which will cause general bodily perturbation. Possibly of all the senses hearing is the most refined and delicate, certainly it is the most highly evolutionised in cultured people; and it is the one most frequently dissociated in insanity. Of all hallucinations in cases of mental disease the aural forms are the most common. This sense depends upon very specific receptors, *viz.*, the hair cells, to which the tectorial membrane responds; and there is an intimate association phylogenetically between tactile and auditory sensations; so that any sudden stimulation of the specific auditory epithelium is capable of reacting in a very general way upon the mental functions, and we find shell-shock cases to be very sensitive to any loud or unusual sounds. Moreover, the stream of impulses to the auditory nerve must also affect its vestibular branch which is closely connected with the static sense, and with the control of movement. Although the vestibular nerves give rise to no sensations, they are nevertheless closely related to the roots of the motor-oculi nerves, as well as to other motor centres in the brain stem and in the cerebellum. They thus serve to keep up the bodily balance and to keep the eyes fixed upon the same point in spite of movements of the head and body. All auditory impulses must therefore be continuously correlated with movements, yet there is no knowledge in consciousness that these movements are made or produced. I was greatly interested to see in so large a number of the cases shown on December 11th last at the Maudsley Hospital such sudden uncontrolled movement, especially when spoken to unexpectedly or loudly, and also the frequency with which one meets with nystagmus in these cases. We do not sufficiently realise how dependent bodily movements guided by habit are upon the auditory sensations, which are certainly the most highly evolutionised and the most important of all the avenues into consciousness.

As has been suggested a lowered nervous threshold is of a protective nature, being an adaptive reaction against future dangers, because in this way a minor stimulus elicits a major effect, but since a low threshold is lavish of nervous energy

recuperation must be slow, for there is in this condition of exhaustion a loss of efficiency. There is, therefore, great theoretical support for the treatment of shell-shock cases by prolonged rest. Several cases of this nature that have responded rapidly to treatment have returned in a short time when sent out again to the Front only to present the same symptoms in an aggravated form, and I am somewhat uncertain about their further utility in positions of great responsibility, although they may be an asset to the country in other spheres of action. P—, after four months at home arrived at the Front on September 29th, 1916, but three days afterwards was sent back stolid, aphonic and aphasic; and for several months since then he has required special care and treatment, and this case is only one example out of many.

It is now pertinent to enquire what the bodily conditions underlying shell-shock may be, and here at the outset I would suggest that to attribute their state to "funk" or "fear" in the cowardly sense would be as unfair as it would be untrue. A brave officer who was in the trenches for eighteen months, and who seemed to lead a charmed life, could not be accused of lack of courage when after being wounded and brought to hospital he wept without cause, and showed other signs of nerve exhaustion whenever spoken to. To state that shell-shock was the result of unconscious fright would be more correct than to attribute it to want of valour, yet this would not be the whole factor. It has been pointed out that the term shell-shock should be applied only to those cases in which there is a definite molecular nervous system lesion, the functional cases being regarded as "hysterical," but the term hitherto has been applied to all nervous states occurring among soldiers. I am personally convinced that the great and underlying cause in many shell-shock cases is to be found in the instinctive and innate sudden unreasonable fear of the "unknown" which characterises certain temperaments, often those of superior minds; certainly those whose nervous organisation is highly complex, and it is this type of mind that is soonest subjected to dissociation by fear. In them above all others does sudden fear, although not consciously realised by the individual, weaken and paralyse the functions of the body and mind, and in them also is this fear of the unknown "diversified and intellectualised." It is in this class that awe, reverence and wonder are so often associated

with fear in regard to the unknown, which to them also is mysterious, awful, and supernatural; and it is in this class that the description of the mental state—shell-shock—as one of “unconscious affectation” best applies. There is a record in many of these cases of excessive fatigue, intense anxiety, insomnia, and irregularity on occasions—inevitable under the circumstances—of obtaining proper food. In some there is a lowering of the defences of the body through infection, including venereal diseases, malaria and fever; there is in most of them an actual record of sudden fright from the effect of high explosive shells with physical concussion from the 9- and 12-in. artillery, as they themselves describe it, especially the former. All these are conditions antecedent to physical exhaustion; but in over 30 *per cent.* of the cases the sufferers are members of neurotic families, with a history of some “nervous breakdown”—depression, anxiety, apoplexy, epilepsy, paralysis, or insanity in the parents, and most often, I find, in the mother. Shell-shock cases have occurred among our men from all parts of the Empire; Australia, Canada, South Africa, and New Zealand have all contributed patients of this class who have served with the colours in Egypt, Gallipoli, France, and on the high seas, and all present symptoms of diminished nervous energy. It is a fact without any doubt that the store of potential energy is diminished by emotional and physical stimuli, and Crile has demonstrated changes in the neurones of the cerebral cortex, in the cerebellum, in the medulla, and in the cord. These neurones show a change varying from slight swelling to complete disintegration with vacuolation and atrophy of the dendrites, and although the living neurone exhibits no Nissl bodies and is of a different granular structure from that seen in microscopical laboratory preparations, yet these Nissl bodies are a convenient method of indicating the amount of destructive changes. These are described as hyper-chromatism passing into general decay with disintegration of the cyto-plasm, a rupture of the cell membrane and a dislocation of the nucleus which first becomes eccentric and then disappears. In addition to these changes in the nervous system there are changes in the thyroid, the liver, and the adrenals.

Pathological examination in an instructive case at Claybury of extreme neurasthenia with mental symptoms showed disintegration of the thyroid, with chromatolysis and a dissolu-

tion of the vagal roots, and microscopic slides of this case have been exhibited by the pathologist ; a case that in my opinion appears to bear some relation to cases of shell-shock that I have seen. The sympathetic symptoms of some of the cases examined with their rapid pulse, widely dilated pupils, precordial pains, disturbed breathing, vague abdominal discomfort and visceral perturbations, associated at times with sickness, appear to me to indicate a dissociation between the cerebro-spinal and the autonomous system of nerves. In some of the cases there has undoubtedly been an enlargement of the thyroid with the symptoms I have named, and Major Newton Pitt has mentioned to me similar cases from his own experience.

The physiology of the autonomic nervous system, distinctive as it is, still remains somewhat obscure. We know that there is an antagonism between the actions of the three great series of the autonomous ganglia within the body, precisely as there is an antagonism between the emotions that activate them ; the pleasurable emotions, for example (referred to in Pawlow's experiments), assist digestion ; whilst those that are painful, as are the strong emotions of fear, terror, anger, and rage, stop digestion. We also know, as Sherrington has shown, that in the cerebro-spinal nervous system there is in health a reciprocal balance of innervation between antagonistic flexor and extensor muscles ; so also there exists a reciprocal innervation in the functions of the viscera which are controlled by the autonomic system. As has been proved, strychnine and certain toxins, such a tetanus, can disturb this reciprocal balance of opposed skeletal adjustments, and similarly the strong emotions are potential to disturb the reciprocal action of the autonomic system. The functions of the heart, of many of the glands, and of some of the visceral muscles are performed automatically through their own intrinsic mechanisms ; whilst these and other organs also receive a further nerve supply, in part—through intercalary nerves—from the central nervous system, and in part also from the segmentally arranged autonomous system ; the latter being in three larger groups of ganglia. The first of these, related to the brain, is connected with the building up of reserve power ; the third is related to the sacral nerves, and is connected with the lower animal functions and the reflexes of the bladder and rectum, whilst the middle or the thoracico-lumbar, is connected with releasing power for

action and is antagonistic to the other two. Each of these three autonomic ganglia, has its own physiological characteristics, and each has its own special reaction to certain drugs, *e.g.*, adrenalin affects chiefly the thoracico-lumbar ganglion, which is nevertheless slow to react to atropin, pilocarpin, or muscarin, drugs which are found to have a marked influence upon the other two series of sympathetic ganglia. As the emotions act primarily through the cerebro-spinal neurones, and as their overflow runs through and flushes the autonomic ganglia, so a power is exercised from above to regulate the functions of these lower systems, along the nervous mechanism which runs down the cord in the intermedio-lateral tract. It is, therefore, possible to cause a dissociation of the two systems with consequent un-controlled, un-regulated action of the autonomic group and giving rise to the symptoms already named. One of the results of high explosives bursting with a sudden pressure of about 7,000 kilogrammes to the square centimetre, must inevitably be a percussion shock which would be conveyed with an intense mechanical force, through the cushion of the cerebro-spinal fluid upon which the central nervous system is resting, or in which it is suspended, and the injury in shell-shock cases—apart from its effect on the ears, eyes, and other organs—must be a definite molecular physical injury to the brain and cord, an injury which is super-added to that caused by the sudden emotional strain. Such a strain must be more deeply and fully felt, if the noise and mechanical disturbance were experienced for some length of time, as is often the case. To us at home it is unimaginable and inconceivable what proximity to the continued stress of high explosives must mean. We are terrified sometimes by the feeble back-firing motor car, or from the noise of a burst tyre, and we recoil petulantly and write to the *Times* if a maid whistles for a taxi—because of the strain and shock to our nerves! Let us try and faintly realise the terrifying strain that must be endured by our soldiers at the front!

It accords with the experience of those who have the care of shell-shock cases that motor inco-ordination and sympathetic disturbances are much more frequent than are sensory abnormalities. The delicate neurones of the anterior horns and those of the intermedio-lateral tract are also more liable to injury and are more likely to receive a definite trauma through per-

cussion than are the neurones of the posterior nerve root ganglia. Prof. Macphail, the Lecturer on Anatomy at St. Bartholomew's Hospital, further informs me that the protection of the spinal root ganglia is more complete against the effects of shock situated as they are in the intervertebral spaces and sheathed as they also are by dura mater extensions, than are the delicate neurones of the motor horns and the intermedio-lateral tracts. Moreover, the fine threads and fibril processes conveying afferent impulses from the periphery and connected with the spinal neurones are better preserved from shock within the cord than are the motor horn neurones with their network of anastomosing dendrites; all of which help to explain the fact that motor and sympathetic disturbances are more common than sensory.

Dr. H. Maudsley once said that all the symptoms of insanity could be witnessed in the effects of alcohol upon the brain, and I would almost venture to apply the simile to the symptoms shown in shell-shock and which may be witnessed in the course of general paralysis, caused by a definite injury to the cortex through spirochaetosis. The extreme cases of shell-shock are without doubt those with definite physical injuries to the cerebral neurones, although in the lighter forms there may be no appreciable anatomical lesion. How far these are produced by purely mental causes it is impossible to state, but to summarise the causes of shell-shock at least five views have been advanced: (*a*) Sudden fear, terror, or fright, acting as an emotional stimulus; (*b*) hypothyroidism; (*c*) hyperthyroidism; (*d*) the inhalation of poisonous gases such as carbon monoxide or phosgene (carbonyl), causing disintegration of the red blood corpuscles and hæmorrhages; and (*e*) an actual molecular physical lesion due to sudden and extreme pressure and resulting in a dissociation between the cerebro-spinal and the sympathetic systems. As Mr. Ernest Clarke has stated, this pressure may be positive or negative, and may cause acute compression or decompression, as was seen at St. Bartholomew's Hospital after a Zeppelin raid, when some windows were blown in whilst the others were blown out. Mr. Clarke has himself seen an eye completely destroyed at the front by being extruded out of its socket during the bursting of a shell. I do not wish to dogmatise upon the ætiology of shell-shock, and whatever the cause may be, the prognosis must depend upon the amount of

injury received by the neurons. The condition is without doubt one of acute exhaustion, and recovery should be complete provided the physical changes have not extended to the extrusion of the nucleus and to the destruction of the neurone.

We now come to the unreasonable fear which seizes upon one or more in an assemblage of persons, and to this the term "panic" has been applied. It is an infectious feeling of fear, experienced not infrequently when there is no real danger; yet an animal or a man seems to be endeavouring to escape from some apparent danger. A child is afraid of the dark or a man of ghosts. Something which cannot even be in consciousness may act as an instinctive stimulus of fear, or something which enters into consciousness but has not before been associated with fear or danger, such as a sudden noise or some rapid movement. The purposive end of all fear is to escape from danger, whether the feeling of fear be personal, or relating to property, or other objects we care for, and the fear continues, unless controlled, until the end is attained.

Panic, from *πανικός* (Liddell and Scott, p. 1170), has been defined as any sudden or unreasonable fear or terror without a visible cause, and at Sparta shrines were erected to *φοβός* (fear), *Γέλως* (laughter), two demons or spirits whose power was, nevertheless, not greatly felt in that city (*Manual of Greek Antiquities*, Gardner and Jevons, p. 15 *et seq.*). It is recorded that the people of Selinus, in Sicily, always ascribed a victory to fear (*Greek Votive Offerings*, Rouse, p. 96) and that Pan, like other gods who dwelt in forests, was greatly dreaded by travellers, to whom he sometimes appeared and whom he startled with sudden awe and terror. Hence any sudden fright without a visible cause was ascribed to Pan, and was called a panic fear (*Smith's Classical Dictionary*, Pan).

PANICS IN BATTLE AND WAR TIME.

In the earliest records of war, in which opposed armies came to actual personal conflict, it was extremely helpful to be able to rely upon the emotions of terror, and mysterious and hidden influences were frequently summoned to create these and to excite panic. We know from the Biblical records of antiquity, when war occurred about 1000 B.C. (II Chron. xxiv) between

Egypt and Assyria, how the effects of plague and panic destroyed the army of Sennacherib.

In the battle of Salamis, B.C. 480, a naval battle fought off the coast of Attica, between the Persians under Xerxes and the Greeks under Themistocles, Artemisia, the wife of Xerxes, behaved with such incredible feats of bravery that he exclaimed the men behaved like women but the women acted with the courage of men. Yet a panic seized upon Xerxes and his troops, for, as Grote says (vol. iv, p. 484), "and the Greeks themselves made ready for a second engagement, but they were relieved from this necessity by the pusillanimity of the invading monarch, in whom the defeat had occasioned a sudden revulsion from contemptuous confidence, not only to rage and disappointment, but to the extreme of alarm for his own personal safety." Artemisia, yielding to panic, escaped in one of her own vessels, sailing under the Greek colours, and in order to deceive her pursuers she set fire to one of the Persian ships, so that the enemy chase was relinquished. Another later instance of a naval battle was at Actium, B.C. 31, between Cleopatra and Marc Antony on the one side and Augustus Cæsar on the other. The fleet of Cleopatra was twice as numerous as that of Cæsar, but just at the decisive point panic-fear seized upon Cleopatra while in no actual or personal danger, and she took to flight. The whole Egyptian squadron followed suit, and Antony, seeing Cleopatra pursued, yielded the victory to Cæsar. The effect of this panic proved to be the ruin of Antony and Cleopatra, and Egypt from that time became a Roman province.

At the battle of Marathon, a village in Attica, B.C. 490, an epoch-making victory was gained mainly through the intrepid valour of the Greeks under Miltiades, led by Aristides and Themistocles against the Persian army. The Persians outnumbered their antagonists by more than ten to one. The aid of the god Pan also greatly contributed to victory, for according to Herodotus, Pan assisted the Athenians to strike causeless fear and terror into the Persian forces, who fled to their ships to escape the pursuit of the Athenians. So pleased were the Athenians with their god Pan that they dedicated a grotto for his worship, and they established the Lycæan festivals to commemorate the victory.

At the battle of Cunaxa, near Babylon, B.C. 401, between the rothers Artaxerxes, who led the Persians, and Cyrus, the

younger, who commanded the Greeks, the Greeks, although victorious, lost Cyrus their leader, and this led to the "retreat of the 10,000." We have it recorded by Xenophon (*Anabasis II*), who was not only present, but who organised and led this marvellous retreat (caused by the inutility of the expedition—now that Cyrus was dead—to try and replace Cyrus on the throne of Persia) that a panic occurred at night during the commencement of the retreat. The whole camp was a scene of clamour, dispute, and even of alarm. Early the next morning Clearchus ordered them under arms, and, desiring to expose the groundless nature of the alarm, caused the herald to proclaim that whoever would denounce the person who had let the ass into the camp on the preceding night should be rewarded with a talent of silver. This seems to have been a standing military jest in order to make the soldiers laugh at their past panic. The battle of Cunaxa brought the Persian Empire to the brink of destruction, and in this battle, probably more than any other, the dominant influences of conflicting emotions are seen in their unreasoning effects upon conduct, *viz.*, the over-weening ambition of two brothers and the retreat of a victorious army.

A useful psychological stimulus was practised by the Greeks as is now done by our more modern warriors. They shouted maxims or songs to animate themselves, and their commander had to possess a loud voice in order to strike terror into his own troops or into the antagonists. Some of us may have experienced the help which is obtained by thus diverting trains of thought from sombre to gay, as when our spirits are down or our minds are preoccupied with serious thoughts we seek other attractions, or turn our minds to some diversion. Since the war the theatres and cinemas have never declared such dividends, and history only repeats itself, for the night before Waterloo we have the record of a grand ball, at which our war chiefs were present.

Following the evolution of Greek warfare came Roman methods, and the latter were warriors even from the earliest days of the Roman Republic. The Romans appear to have been nearly always at war. During the first five hundred years they were at war with the different states of Italy, and for the next two hundred with other nations. Every Roman citizen had to enlist for the public service, and the ages of recruits varied between seventeen and forty-six. In order to kindle enthusiasm before going into action, the Roman generals

harangued their soldiers from a tribunal of earth heaped up locally and the trumpets sounded the march, to which the soldiers responded "To arms," the shout being useful for the rush to the charge as well as for the purpose of terrifying their opponents. Our own brave warriors to-day relate similar tactics when clearing the parapet for the forward rush, and the Anzacs had the same methods in the Dardanelles.

ENUMERATION OF WAR PANICS.

Many of the battles recorded in ancient history demonstrate the great part taken by the emotions in war.

At the battle of Chæronea, in Bœotia, B.C. 338, when Philip of Macedon was victorious over the confederate armies of Athens and Thebes, two points of great interest may be mentioned: firstly, the infectious courage and the striking valour and intrepidity of the young boy warrior Alexander, who afterwards became Alexander the Great, the master of Europe, Asia, and Africa, and who died at thirty-two; secondly, the effect of panic-fear even upon the greatest orator and statesman, Demosthenes, who, when he saw the rout of the Athenians, threw down his arms and fled with the rest. He was unable to practise what he preached, and it is said of him that when, in his flight, his robe was accidentally caught in a bramble, he imagined some of the enemy had laid hold of him, and he cried out, not "Kamarad," but its equivalent, "Spare my life"!

At the battle of Plataæa, a town in Bœotia, B.C. 479, when the Greeks delivered Greece for ever from Persian invasion, the whole Persian army, on the death of their general, Mardonius, was seized with panic and took to flight, and it is stated that panic either "flees or it breaks." No Persian king ever appeared with a hostile force beyond the Hellespont after the battle of Plataæa.

At the battle of Issus, B.C. 333, a town on the borders of Syria, in Silicia, fought between Alexander the Great and Darius, King of the Persians, Darius leapt from his chariot in a fit of panic, fearing to fall into the hands of the enemy. The troops, observing this, also fled and threw down their arms and made off. In this battle was decided not only the fall of Darius, but also the ruin of his empire.

At the battle of Pharsalia, in Thessaly, B.C. 48, between

Pompey the Great and Julius Cæsar, Pompey's great army was defeated. The cry of Pompey's troops was "Hercules the Invincible," while Cæsar's men called out, "Venus the Victorious." Pompey, who had adorned the temple of Venus with many spoils, feared that Cæsar would be aggrandised at his expense and he forced the battle, but through a panic-fear that Cæsar had ordered the enemy's face should be attacked, and seeing the visages of his troops wounded and disfigured, the panic ended in a rout, and Pompey's army fled in great disorder.

Three other and great decisive battles of antiquity may be quoted in which the great Carthaginian general was engaged. The first was the battle on the margin of Lake Thrasymenus, B.C. 217, when the Romans were trapped and terrified by the clash of arms and the shouts of Hannibal's men, and could not escape from the enemy or flee on account of the mist. The second, the battle of Cannæ, B.C. 216, where the Roman troops under Æmilius and Varro, although twice as numerous as the Carthaginians, were surrounded and defeated after unparalleled bravery; and the third, the battle of Zama, near Carthage, B.C. 202, when Hannibal at the end of the second Punic War, was overthrown by Scipio after a struggle lasting over seventeen years. The panic, the rout and the confusion caused by elephants and horses and war chariots, and the final scene when Hannibal attacked the enemy in front and his own troops in the rear, presents a picture to us of the terrible destruction of the Carthaginians and the complete desolation of the highest seat of learning and culture, as well as of the most prosperous commercial city of the ancient world. Standing on the Byrsa, or citadel of ancient Carthage, the writer felt that the world had lost invaluable treasures, noble buildings and a world-famous library through the supremacy of Rome, and that the tender emotions had undergone an enormous strain when it was contemplated that the home of St. Augustine and the first and greatest seat of Christianity in North Africa had been razed to the ground, practically nothing remaining of what was once the mightiest city in the world. As Lamarck has said the least progress cannot be realised without causing panic and pain among the people, and in the history of the wars of our own country, we have specific instances of the occurrence of panic-fear. In Holinshed's *Chronicles of England, Scotland and*

Ireland, vol. iii, 1808, pp. 54-5, it is stated that panic seized the French army in the Battle of the Spurs, 1513. This was fought at Guinsgate, near Terouenne, in the campaign of the English under King Henry VIII in person and King Maximilian of Flanders. The allies had formed the siege of Terouenne and a body of French cavalry came up to relieve the town. The allies advanced in order of battle but the French seeing them were seized with panic, put spurs to their horses and fled without a blow. At the battle of Gravelotte in 1870, there were no less than three serious panics which resulted in the French army being surrounded.

There are numerous records in Mommsen's *History of Rome* of similar panics occurring in classical literature, and Macaulay, in his "Lay of the Battle of the Lake Regillus," a legend of ancient Rome, which portrays the panic-fear caused by the sudden appearance of Castor and Pollux upon white horses, describes the physical effects of fright in his well-known stanzas.

PANIC IN TIME OF WAR AND PESTILENCE.

As Dr. Leonard Guthrie writes to me, "panics and orgies of every kind occurred in the time of great plagues as well as during war and amongst the inhabitants of countries during political crises or upon invasion." Grote, in his *History of Greece*, vol. iv, p. 276, gives the record of panic in Athens during and after the plague, B.C. 430, which occurred during the Peloponnesian War. Fifteen years previously a similar visitation had been witnessed in Rome.

The plague in 1499 in our own country caused such a panic that Henry VII moved his Court to Calais, and the plague which depopulated Oxford in 1506 and described as the "sweating sickness," caused the same panic-fear.

The Plague of London, a description of which by William Boghurst, apothecary, in 1665, edited by Dr. Frank Payne in 1896, gives details of this devastating epidemic, which began in 1664 and only ended with the Great Fire in 1666. Out of a total population in London of under half a million, one-fifth was removed by the pestilence. Pepys gives an account of the panic which ensued. He remained, he says, at his official residence, the Navy Office, in Seething Lane, as did the Lord

Mayor at his, and he met "hardly twenty people from one end of Lombard Street to the other and not more than fifty on the Exchange." A week later, Evelyn, coming up from his house near Deptford, found the line of streets through the City to St. James' Street nearly empty of people, the shops shut, and many coffins at the doors of houses awaiting burial. Nearly all the clergy, magistrates, and (sad to relate) every doctor are said to have fled along with the richer classes in general. Among the doctors who remained were two men eminent for their investigations and research, *viz.*, Glisson (of Glisson's capsule), and Wharton (of Wharton's duct). As would be the case to-day, several high personages of the Court stayed in town to carry on the public business and were afterwards presented with silver cups by the King. As we know, the educated man is less subject to blind panic than the ill-informed, for, as one's experience widens, fewer circumstances excite us; as we build up our conceptual system, we gain the mastery over our outer world, and the means at our disposal for modifying situations which thwart our activities and which give rise to emotions of anger, fear, grief, and pain are infinitely increased. Moreover, as we gain knowledge the situations which further our tendencies to react quickly and impulsively to outward stimulations do not excite us as they did through lack of knowledge. When our conceptual system, so to speak, was less determinate we acted impulsively and suddenly. The educated and experienced learn to expect less of the world, and there is the compensation that as we continue to learn, our emotions tend to take on subtler forms, which do not involve bodily commotion or the physical accompaniments of emotions, to the same degree.

Possibly there is no argument that conveys so much conviction to the average mind as the arithmetical argument, especially when an appeal is made to the pocket. This is possibly the reason why financial crises cause so much fear and anxiety. We have many records of commercial panics, so often caused by over-speculation, as in the South Sea Bubble, and in the crash following John Law's banking scheme in France, both in the year 1720. Since then, in 1879, the City of Glasgow Bank failure brought ruin upon many families, and in 1890 the Baring crisis occurred, when the financial stability of the city was saved by the Bank of England, and in this war when the present Prime Minister, then the Chancellor of the

Exchequer, saved the country by his "moratorium." Minor panics have quite recently occurred among the lesser people through the suspension of the Birkbeck and the Penny Banks. Ever since the beginning of the war there have been several small panics, the last being the depression in industrial securities on the American Exchange, when Germany made her sinister offer of peace. Political crises are always attended with some degree of panic-fear. Revolutions, whether in empires, kingdoms, or republics are all accompanied by their special panics, as we frequently witness in the Republics of South America.

Dealing with the electoral franchise is always a sensitive task, and even in Athens when the franchise was restricted during the reign of the oligarchy, this gave rise to acute panic and terror; private assassination was practised on such an extensive scale that important persons perished by a special and secret systematic murder, carried out by unknown hands, and so great was the fear that no man dared to demand an inquiry into the death of his nearest and dearest relative; dismay and disturbance became general and panic-fear became universal (*Grote's History*). The Reign of Terror in France in 1793, when Robespierre demanded the death of the King, and when, in his triumph he established the Convention, witnessed the sacrifice of the lives of hundreds of the most eminent men and loyal citizens. The cruelties and the terror and the savage unreason during this short administration of which Robespierre was the head, terminated in his own destruction and it ended when he himself was guillotined.

In civil life Col. F. N. Maude, in *War and the World's Life*, p. 408, relates how at the crisis of the Fashoda incident, for instance, some one in Portsmouth incautiously dropped a remark as to what might happen, if war really ensued, to the inhabitants of Shanklin and Sandown in the Isle of Wight. As Col. Maude says, the facts had been apparent to everyone ever since the batteries for the defence of the Bay were erected, but no sooner was the suggestion of danger made than it was taken up by the local press, when a complete exodus of ultra-nervous residents occurred from these favoured spots. As compared with this may be contrasted the behaviour of Portsmouth itself with its inhabitants better educated in military and naval affairs. A particular group of dwellings placed directly

behind certain batteries never lost their selling price nor lowered their rents, although every shell fired by an enemy and passing over the guns of the battery would of necessity find a final billet in the drawing-rooms or best bedrooms, yet no one can suggest that Portsmouth is not kept sufficiently alive to the possibilities of modern warfare. Col. Maude also refers very aptly to the "resultant thought wave" of Gustave Le Bon, who stated that the latent consciousness of what is best for the race generates the crowd impulse, and though Maude wrote before the war, he very clearly anticipated what has come on since. This "dominant thought wave" is the voice of the crowd, and is not often possessed or appreciated by the ordinary leaders of men, although Napoleon possessed this instinct of quickly appreciating national instincts as well as the power to sway the multitude, and he had the gift of "tuning up" his army to receive the "resultant thought wave" and to act in the presence of the enemy in the name of the national instinct and without panic. It is given to few men to seize the "dominant thought wave" and to impress this upon a people. Oliver Cromwell, Wellington, and Grant, in addition to Napoleon, possessed this gift. This "collective will power" in my opinion, based only upon my slight reading of history, is the most uncertain and unreliable instinct, and it has well deserved the opprobrium attached to the conscience of a committee which is described as a mathematical paradox, "the result being less than the sum total possessed by its individual members." Rightly has a "crowd" or in other words a "fortuitous assemblage of individuals," earned the reputation of being the most cowardly thing conceivable, the most unstable unit; as under the influence of panic, otherwise its "dominant mental state," men will commit acts of almost unimaginable tyranny, cruelty, or poltroonery. Indeed, the perpetration of an act of cruelty tends to continue the emotion of anger and rage which kindled it, because this perpetration is the bodily accompaniment of the emotion; and the bodily commotion which constitutes the expression of the emotion, being continued, tends to prolong the emotional situation. It is upon this theory of the irradiation of an emotion by bodily changes that panic is increased by flight and grief is intensified by sobbing. It is in order to avoid the occurrence of panic that a "crowd" is disciplined and trained to be cohesive, recruits are taught to give attention, to shoulder arms, and to

obey at the word of command, and as all military commanders insist the behaviour of a "trained" crowd is absolutely predictable, whereas the conduct of the other is uncertain and may be demoralised. It is a mere matter of changing emotions; and this fact is perfectly true, for during the Reign of Terror some who were the most odious as well as the most ferocious relapsed afterwards into becoming the most innocuous and peaceful; quite unable to explain their temporary aberration. There are, therefore, two kinds of crowds, the one organised into a solid cohesive whole, and the other whose units remain a mere collection of fortuitous and separate items, ready to form dissociated, uncertain, and disconnected "will powers." It was the boast of Napoleon about his trained army that it was more noted than any other army in the world for extraordinary heroism displayed by its individual members under the eyes of their comrades. Again and again, surprises were effected; bridges were crossed under fire, although only a couple of beams would be left of them and positions would be taken which neither the British nor the Russians nor the Austrians believed to be assailable by mortal man. Even the psychology of a trained army is to some degree a variable factor for some commanders, as do the Germans, instil into their battalions the dominant thought of cohesion by orders from without and not from among the troops themselves, whereas it has been our boast and that of the French that when our men are face to face with a great difficulty, their resourceful intelligence instinctively sees what should be done and there is thus created at the time from among themselves and from within the essential and successful "collective will power."

As a "corrective" to the panic-fear, the so-called "*serre files*"—*i.e.*, non-commissioned officers in rear of the fighting lines—had absolute orders in the old Prussian army to drive their halberts through the body of any man who attempted to quit the ranks and we hear of something similar to this to-day in the German lines. It is the knowledge of certain death behind them that keeps some of the Germans forward under the stress of fear and terror. As Col. Maude with a true insight into psychology says, the best method of preventing panic, and of dealing with it when it has occurred, is to present to the imagination an even greater danger if the moment of terror is yielded to, and the lines tend to falter or break. As all of us know, panic not only

occurs among men but also in animals, from the Gadarene swine to the prairie cattle, and this takes place when the "herd instinct," as Wilfred Trotter calls it, becomes weakened or injured. As in men, it is not necessary that each member of a crowd should see or scent the danger; one does this and gives the warning note to the rest which rush and follow it. Among the civil population there have been many exciting causes of fear since the outbreak of the war in August 1914. My experience at the London County Asylum at Claybury has been territorially to the East of London, and therefore the part first traversed by Zeppelins, and I have noted a considerable number of patients—both men and women—whose relatives and friends assign the cause of mental breakdown to the fear of conditions brought about by the war. The sudden shock and the fright and terror experienced from Zeppelin raids have contributed their quota of mental breakdown. At any rate during the first two years of the war out of over one thousand admissions into Claybury, there were received over ninety women and more than half this number of men who were suffering from various forms of insanity associated, I think, definitely, with the war. Of 130 cases at least 21 patients were ascertained to have their insanity connected with Zeppelins. The form of insanity mostly associated with the Zeppelin raids was of the depressed variety, and some of the sufferers were semi-stuporose and rigid, as if from fear, and almost all recovered that were of this type. In one case the house the patient lived in was burnt down, in another a house near to the patient was destroyed by an explosive bomb, one patient was elderly and without protection, and could not face the danger or the noise of which she was most apprehensive; one had lost her mother through the explosion, and another fell into a hole made by a bomb whilst returning from an adjoining theatre, all due to fright. A not infrequently assigned cause was the "enlisting" of a *fiancé* or of a son or husband, but this, of course, was before compulsory service, and it is interesting to relate that compulsion put an end to "joining the forces" as an assigned cause. I am convinced that apprehension or an anticipated fear, which constitutes worry and anxiety, is far more frequently a cause of insanity than a sudden shock may be. The one is an enduring stress and the neurones do not get a chance of complete restoration as they might do in most cases of sudden shock. "Nervousness about

the war" was an expression much more frequently used as causing a mental breakdown than was a "sudden shock."

In addition to panic from disaster on land and in the air, there are panics through losses by ship-wreck on lee-shores, and there are disasters in the open sea that have their panics and possibly some of the worst of these were due to fires at sea. The panic that ensued on board the "Princess Alice," when so many lives were lost in consequence, is an instance of a pleasure steamer going down in the Thames with a loss of life of about 700, most of whom could have been saved had it not been for the panic-fear. The sinking of the "Titanic" is an example of the opposite mental state, perfect order being maintained, and "ladies first" was the last order which the cool captain and a disciplined crew and collected passengers all respected. The sea when giving up its dead will have many tragedies of "courage as well as cowardice" to relate.

The theatre panics are too well known to need a reference. Public authorities realise that theatre audiences are among the worst material to yield to panic-fear, and they have insisted upon adequate means of escape under penalties. The feelings of the audience in a theatre are often so worked up by plays, dramas, and tragic performances that panic-fear soon spreads beyond any control or direction. Fires in public places, on account of the concomitant distress, excite much fear; such as occurred in a house at Eton College (after which a sympathetic message was sent by the King and Queen), at Colney Hatch Asylum, and the great City fire at Cripplegate in 1898.

Earthquakes are always accompanied by panic because the disturbances are on so vast a scale, and so uncontrollable through human agency, that means of relief are inefficient to cope with the distress, and instances of these are familiar to all. Mrs. Somerville relates how thousands of persons passed the night on which an earthquake was predicted in London in their carriages and in tents in Hyde Park at the beginning of the last century.

I have been interested to know how far the emotions, especially those of fear and terror, have been portrayed in art, for Lecky states (*Rationalism in Europe*, p. 250, one of the most subtle, and, at the same time, most profoundly just criticisms), that it was the custom of the Greeks to enhance the perfection of their ideal faces in sculpture by transfusing into them some

of the higher forms of animal life, and in the origin of the emotions and their proper study we must proceed to their earliest appearance in animals. It is in the god Pan that the human features approach as near as human features can to the characteristics of the brute. Busts of Jupiter manifest a resemblance to the lion, and this is one of the distinctive marks of Greek sculpture; the two natures, human and animal, are fused into a harmonious whole, quite unlike the Egyptian methods where no effort was made to soften this incongruity. On the other hand, Mr. Arthur H. Smith, of the British Museum, writes to me: "The Greeks were very reticent in the expression of emotion and feeling. In the various friezes of combat the scales are small, and the treatment of the faces is on conventional lines. The exception to this is the great frieze on the altar of Zeus at Pergamon." The original is in Berlin, but I have had access to photographs which depict with marvellous expression the whole of the emotions of terror, fright, fear, anger, and hate upon these colossal figures.

In the Uffizi at Florence there is the sculptured representation of the destruction of Niobe's children, showing all the tender emotions as well as those of terror, pity, grief, sympathy, appeal, repulsion, fear, and terror, but possibly in the main more sorrow than fear. The sculptured Laocoon in the Vatican also represents the emotions of fear, pain, and convulsive struggle. In this piece of statuary, as Lecky states, are "traces of mental anguish exhibited with exquisite skill, and without contorting the features or disturbing the prevailing beauty of the whole." In the "Dying Gladiator" of the Capitoline Museum there is also portrayed the last agony of a brave warrior repelling the adversary to the last breath.

Because the facial expression so often reveals the emotions better than do spoken words I recently wrote to Mr. C. H. Collins Baker, the Director of the National Gallery, asking him what pictures in the National Collection in his opinion best represented the views of painters upon the Emotion of Fear, and he very kindly gave me much assistance. He referred to a study called "Horror," by Reynolds, painted from himself for Mrs. Siddons' "Tragic Muse." In this picture the eyebrows are drawn, the eyelids somewhat contracted, and the face is tense, the mouth is open and fixed, as if hissing the "Hymn of Hate." A picture of the destruction of Niobe's children by

Richard Wilson shows almost a complete scale of the sadder emotions, fear passing into resignation, complete collapse, and paralysis. Some of the figures are in a beseeching and suppliant attitude, the others crouching and terrorised, guarding themselves with uplifted right arm, and others serene but with clenched fists. Another picture is the "Plague at Ashdod," by Poussain, representing this city, which belonged to the tribe of Judah, and was on the south-east coast of the Mediterranean. To the right of the picture are the steps of the great temple of Dagon, in which the image of Dagon fell when the Ark of the Lord entered. The shattered idol is seen on the ground. It was here that the host of Sennacherib was practically wiped out, his army of 185,000 Assyrian troops being destroyed in one night, through the intervention, we are told, "of an Angel of the Lord." In the middle of the picture is the dead mother and child lying on the ground over whom the father is weeping. One figure is a suppliant on the steps of a temple, another is a fleeing child, and the others exhibit fear, terror, horror, and disgust, whilst another figure is compassionate and pitying.

In Carracci's "Christ bearing the Cross and appearing to St. Peter" there is a mingled representation of awe, surprise, and fright, or as Mr. Collins Baker states some emotion between fear and amazement. St. Peter is rigid with fear, "petrified" would be an appropriate term; the eyes are staring, the hair rough and bristling, and the face stern and fixed; the uplifted left hand appears to half repel the object of his surprise and terror, yet the bent knee indicates an attitude of humility and reverence. In the *Transfiguration* by Duccio are shown the central figure self-realised, but with Moses and Elias on each side, and the expressions are characteristic of awe, wonder, and fright, whilst the surprised disciples are painted underneath with expressions of curiosity commingled with deep reverence and fear. Lastly, there is a work by Ercole Grandi, dating back to the fifteenth century, of the Conversion of St. Paul, with Jerusalem in the distance. The apostle in the centre of the picture is dismounted from his white horse, but is gazing at the vision of the Christ in the skies. He is in an attitude of fright or of shock, possibly of resignation and collapse through fear. The group round him shows the crowd to be in a panic of awe, some of the figures appear to be attempting to escape in bewilderment and others to be in attitudes of amazement and fright.

Some of the pictures in the Guildhall Collection which I visited through the courtesy of Curator Mr. Temple showed fear in a marked degree. The murder of David Rizzio, painted by Opie, shows Rizzio being murdered in 1566 by the Scottish nobles in the Queen's room at Holyrood at the instigation of Darnley, who holds the Queen back. The approval and surprise of Lord Douglas, the anger and determination of the murderer, the beseeching attitude of Rizzio and the horror of the Queen, the fear of Darnley who restrains the Queen from intervening are all the portrayal of strong emotions. Another picture by Opie, the "Assassination of James I of Scotland" is a strong portrayal of the murder of the King in his own house at Perth by Sir Robert Graham and his fellow conspirators. The horrified and terrified aspect of the Queen with wide staring eyes of horror and surprise, the fearful resignation of the King, with fixed eye, rigid attitude and the left arm stretched out in self-defence; the clinging affection of the collapsed Lady in Waiting who had placed her own arm through a bolted staple as a bar, to prevent the entrance of the murderers, are all pictures of the emotions. The banquet scene in "Macbeth" by D. Maclise shows Macbeth fearful and pallid, the right hand clutching the seat, the left flaccid yet repelling the ghost; Lady Macbeth, the stronger mind of the two, defying the audience and fearless whilst the spirit of Banquo is appearing; and, lastly, there is the picture of Edward III at the siege of Calais in 1347 after the surrender of the city, when the lives of the citizens were spared at the express wish of the Queen. The need and want, the suppliant attitudes, the kindly doles and help, and on a mild scale some of the horrors of war, are shown by the brush of Sir John Gilbert; this and another by him "The Fight for the Standard" picture the *mêlée* of an actual combat which does not occur in the warfare of to-day.

I have carried on this paper to a greater length than was anticipated, because of its historical application and the reference to the views of artists and sculptors. It only remains for me to repeat in conclusion that fear is something more than an avoiding reaction or an elementary reflex. It is a protective emotion and the most fundamental of the emotions on account of its highly self-guarding value, and it is common to man and animals. It is of two kinds, one kind may be induced by

suggestion and imitation, and is then unreasoning and impulsive in its effects; this form may, by suggestion—often unconsciously—infect whole groups or assemblies of people or crowds; another kind is in part under the control of the reason. During fear the free flow of all other nervous activities are interrupted, an adjustment or adaptation which may be necessary in order to protect life. As to the locality of fear in the brain there is reason to believe that the reasoned fear out of which the most courageous and noble deeds of heroism arise has a cortical origin, whilst panic-fears are probably thalamic in origin or, at any rate, subcortical. The whole question is now being studied by a number of eminent and thoughtful men in the department of psychology as well as in that of medicine, and it is not improbable that a reconstruction of views as to the relationship of mind and body is within sight from this study.

(¹) Read before the Medical Society of London.

The Management of Confusional States with Special Reference to Pathogenesis.(¹) By TOM A. WILLIAMS, M.B., C.M.Edin., Washington, D.C.; Neurologist to Freedmen's Hospital and Howard University; Corresp. Mem. Soc. de Neurol. de Paris et de Soc. Med. Mentale Clin., etc.

CONFUSION is a hallmark of the effects of toxin upon the cerebrum. When very slight, special tests are required to elicit it. Interference with neuronal conductivity is the chief pathogenetic factor. The topical incidence of this is one of the determinants of the form taken by the psychosis, whether hallucinatory, disorientative, depressive, delusional, or what not. Another factor is the state of the body secretions as affected by the toxins; a third factor is the patient's psychological status, as determined by the capacity and the opportunity for experience.

Toxin may be exogenous, whether from living parasites or not, or endogenous, as from vascular stasis, malnutrition, exhaustion, endocrin disorders, or it may be dynamic, as when psychogenetic.

Bodily signs are usually present, such as reflex disturbances, tremor, circulatory disturbances, and vegetative disorders. Headache and insomnia also almost always occur. Of the latter, onirical delirium is usually a feature; it is a kind of somnambulism with partial amnesia, often of mystical character. The perceptions are feeble, and motor reactivities usually dull. That structural changes may occur when the cause of confusion is long maintained is manifest upon histological examination of the brain. But that these often permit of repair seems to be shown by apparently complete recoveries, even after years.

The management of the patient consists of, firstly: The avoidance of adding the toxicosis of the imperfectly elaborated protein which is prone to occur even with a moderate diet, because of cloudy swelling of hepatic cells induced by the causative toxin or by a similarly induced interference with renal elimination causing retention of nitrogenous substances. Lack of proper adjustment of the diet, especially in the matter of carbohydrates, leads to an acidosis which further aggravates the toxic state by interfering with proteolysis as well as with proper catabolism. The remedy for this is, of course, adequate ingestion of carbohydrate substance. The giving of alkalies, after all, has only a neutralising effect, although it is necessary in some cases. But the assistance to metabolism of the alkaline salts, especially in the combinations naturally occurring in most fruits and many vegetables is invaluable, so that these should be copiously added to the diet. Of course, sufficient water should be given, but the idea that abundance of water will either neutralise or favour excretion of toxins is untenable.

Violence, distress, or agitation should never be met by narcotics, which merely increase cerebral toxicity. These symptoms are quickly mitigated by hydrotherapy until the full effect of metabolic improvement from proper diet can show itself upon them.

Some of the cases (*International Clinics*) illustrate both the symptomatology and management of confusional states of different ætiology. The first of these illustrates a post-infectious toxic state in an individual predisposed by sclerotic blood-vessels, feeble heart, and a lack of constitutional robustness, as well as previous over-indulgence in alcohol. The toxic confusion was maintained and aggravated by the ingestion of pharmaceuticals and an excess of protein. Recovery was

accomplished by means of the afore-mentioned principles after several consultants had failed to benefit the patient.

Post-influenzal confusion, with exhaustion.—In May, 1915, a judge, æt. 64, after a severe attack of influenza, remained very weak, and confused in mind, and began to develop hallucinations and delusions of a vague character. Several consultants were seen without result, and he became weaker and less clear mentally. The patient was in a typical condition of mental confusion. Deep reflexes were very faint, abdominal reflexes were absent; there was plantar flexion. There was no paralysis and no anæsthesia, so far as could be ascertained. The optic disc was not œdematous and showed no arteriosclerosis, but the superficial vessels had thickened coats, though the heart was small, the apex reaching only to the lower border of the fourth rib, 1 in. inside the nipple line.

Systolic blood-pressure was 102, the diastolic 60. The kidney function had been ascertained by Dr. A. Hooe to be normal, phthalein appearing in ten minutes to the amount of 30 *per cent.* and 34 *per cent.* in the first and second hour respectively. But there was a large quantity of indican and a slight trace of albumin.

The patient was taking the following diet and medication: 2 a.m., beef-juice; 3.20, ammonia; 4, red solution potassium iodide; 5.30, grape-fruit juice; 6.15, three tablets, egg, whisky, milk; 7.30, ten drops B.P., adrenalin solution; 8, ten drops solution iodide potassium; 10.20, soft toast, coffee; 11.15, three tablets caffeine, strychnine, sparteine; 12.30, ten drops B.P. solution; 1.30, beef-tea; 2.30, ammonia; 3.30, three tablets; 4, custard, cream; 4.30, ten drops B.P.; 4.45, ammonia; 5, ten drops solution; 7, egg, whisky, milk.

I considered this a case of acute exhaustion psychosis, partly toxic in character. The treatment prescribed was embodied in the following report to his physician.

As the patient is suffering from exhaustion, stimulants are contra-indicated, as the tired organ is incapable of further response to them; therefore, I think it wise to omit caffeine, the secondary effects of which increase the exhaustion.

Strychnine should not be further given either, for it merely increases the discharge, that is, the exhaustion of energy of medullary neurones.

Sparteine is a nerve-muscle poison, the effect of which in

improving cardiac activity cannot be maintained for long without greater nutritional capacity than the patient possesses.

I see no advantage in the iodide of potassium. Furthermore, the basic element of this is a strong cardiac depressant. Nor should I give the bromides during the effort to build up the patient, as they diminish metabolic processes and diminish resistance. Ammonia should be kept for emergencies only, as its effect is evanescent.

The *régime* I prescribed is as follows: 6 a.m., five grains of sodium bicarbonate in four ounces of hot water; 6.15, one orange; 6.30, breakfast, cereal and milk, one egg, crisp bacon; 8.30, massage, consisting of slow, deep pressure without friction; the purpose of this is to increase the *vis a tergo* of the circulation and thus aid the heart by saving its *vis a fronte*. Sleep, if possible.

On waking, about 9.30, five grains sodium bicarbonate in four ounces of water; 10 to 10.30, lunch, one banana, cereal, and milk; 12 to 12.30, massage, sleep: 2 to 2.30, dinner, meat and potatoes, green vegetables; 4.30, massage, followed by five grains sodium bicarbonate in four ounces water; 6.30, supper, unpolished rice and milk, one banana. Between that and midnight, massage again when the patient is awake. For midnight lunch, Graham crackers (*i. e.*, bran biscuits) and milk are desirable. The quantity of milk at one meal should not exceed five ounces. After meals, the patient should be given one capsule of "Phytin," an organic phosphorus preparation of the Society of Chemical Industry of Basle.

Beef-tea and gelatin should be omitted as containing too much excrementitious materials, which are cardiac poisons. Coffee and tea should be omitted also. A small piece of bread, with or without butter, may be taken with each meal if so desired. Water should be the drink, and should be given about one hour before each meal, but should not be restricted to that time if the patient desires it at any other.

The adrenal principle should be continued; and I think it is better given as the dried gland, say three tablets a day to start with. I think that its effect might be improved by being taken along with one tabloid of "Hormotone."

If this diet is found to be too heavy, diminish the quantities at the commencement. If the patient suffers from the heat,

cool sponging should be beneficial ; and in any case its effect upon the innervation of the vascular system is usually most beneficial : the water should be used lukewarm. The best cereals to give are puffed grains, with an occasional change to oatmeal and the brown prepared wheats, such as Ralston's. If the patient should desire any one article of food, let him have it occasionally.

When these measures were carried out, improvement was rapid ; so that in four weeks the patient was able to be about, and the following term took his place on the bench, and remains well at this time.

A case seen with Dr. Hardin illustrates the fact that old age, weak heart, and debility need not denote unfavourable outcome.

The exogenous poisons, such as alcohol, may produce a confusional condition which resembles paresis. A case of this kind was sent by Dr. Aymer, of Charleston, in 1909, because of hallucinations, delusions, and violence, the result of eight days of alcoholism. The distinction was very simply made by examining the spinal fluid, so that the patient was sent home well in two weeks, even although he had shown slurring and reduplicated speech, and gross impairment of calculating power. Seven years later the patient remained well.

It is true that an occasional case of paresis very rarely has as low a lymphocytosis, but never during an acute attack of the period simulated by this patient.

The distinction was similarly made in a case due to morphine to which I was called in consequence of an alienist's diagnosis of paresis. This patient's morphinism was perhaps due to marital infelicity, for he is now remarried, and five years later remains well.

(3) The endogenous sources of confusional states are most clearly seen in hypopituitarism, as the following case shows :

Narcolepsy from hypopituitarism.—A clear-out example of the confusional state of pituitary insufficiency is that of the girl, æt. 25, referred by Dr. John Dunlop in 1911, to whom she had been sent on account of the pains in the back and dragging feeling and tenderness in the legs, in the belief that she had sciatica. There were absent-mindedness, severe amnesia, dull, heavy headache, which was sometimes bursting, and was

located deep and low in the middle of the head. Torpor would occur often suddenly, even causing her to fall. The mental confusion was most marked in these attacks, in which she felt as if intoxicated, singing and speaking absurdities. Although there was no vertigo, lines would look blurred when reading.

General and neurological examination was negative, except for increased reflexes, hypertrophy and tenderness of the subcutaneous fat, the weight having increased from 131 to 184 lb. in three months. The limbs were irregularly asymmetrical; for instance, the left knee was 16 in., and the right $17\frac{1}{8}$; the thighs respectively were $38\frac{1}{2}$ and $38\frac{1}{4}$, and ankles $9\frac{3}{4}$ and 9 in. in circumference. The femoral veins were congested, so was the conjunctiva. A neoplasm around the pituitary was diagnosed on account of the situation of the headache, torpor, the adiposis. Confirmation was obtained by the finding of visual field contractions, and deepening of the Sella turcica, as shown by the X ray.

The treatment of the case consisted of the exposing of the pituitary region to radiotherapy, applied from four different temporal points, about ten minutes every week.

Six months later, although the weight had not diminished, the headaches had, the visual field had enlarged, the reflexes had diminished, and the narcolepsy had ceased. We expected to give thyroid gland (3) in order to diminish weight, but the patient passed from observation, so we do not know if her relief continues, and are unable to supplement the preliminary report of the case made in January, 1912, in the *Journal of the American Medical Association*.

(4) Psychic disturbances, such as a powerful emotion, may cause temporary confusion; but it is doubtful if this can be prolonged in the absence of secondary somatic factors, such as impaired metabolism, circulation, and internal secretions (4).

The case which follows, however, was purely psychic when dealt with by me.

Post-onirical fixed ideas removed by re-educative psychotherapy.—A clerk, æt. 21, was referred by Dr. J. J. Richardson for advice and treatment on account of a state of mental confusion, impossibility of concentration on work, extreme depression of mind, and nocturnal hallucinations.

After he had given his name and address he began by

saying: "Do you believe in God and Christ?" and when I asked him what was the matter, he said: "It is dreadful, awful. Where am I, and what is right? It seems desecration to speak of it: if you can't help me I do not want to speak of it. Everything seems blended into one thought: all else is confusion." I then asked him how the trouble had begun, and after much questioning he succeeded with difficulty in revealing to me what had transpired.

During ether narcosis he had felt that the world had reverted to nothingness: that in consequence he could not reach God and Christ, and longed for death, so that he could escape this terrible nothingness. Everything seemed blurred in that one thought, which kept recurring in spite of his prayers to God. "It seemed a curse to be brought into the world to suffer that awful mental pain; it seemed like after-death lasting a million years."

For the next week or so he had gone about suffering terribly seeming as though he would go insane if he could not return to God. A lecture on evolution seemed a desecration. He would wake at night, having dreamt the experience again, trembling with fear of his future.

Examination showed no physical disturbances.

Therapeutics.—He was treated by a full, though concise explanation of how thought is disordered by the perversion of brain chemistry during narcosis (1); how the feeling-tone may also be thus depressed, and how the distortion of impressions during a sad feeling-tone phase resulted in his hallucinatory concept of chaotic annihilation. It was explained that this concept was based upon morbid percepts caused by the ether, and therefore should not prevail over rational explanations of common experience and good sense. Many illustrations of toxic and mystic thought were related, and comparison drawn with his own case (1). He was asked to write out the inferences he drew from the facts presented to him, and he was referred to a clergyman for an explanation of his theological doubts. This, however, he did not receive, and I had to resume treatment without this assistance.

He made a rapid recovery (2).

Anxiety causing exhaustion, which produced mental confusion.
—A woman, æt. 35, was referred by Dr. Ada Thomas because she became disturbed about some botanical investigation she had

conducted successfully, which she could not apparently finally formulate, although she had made a preliminary report to the satisfaction of superiors. She would keep on starting experiments, but they did not seem to go right. She felt dazed and as if everything was out of joint. The work seemed easy, and yet she could not accomplish it. As there was neither insomnia nor loss of weight, she felt that her trouble was psychological. But her reflexes were exaggerated, her hand trembled, her eyeballs were prominent, with congested lids, and the breath was very foul. However, she persisted that it was temperamental, as she had had an attack as a teacher some years before, and thinks that she was prone to it as a child. She was hyper-conscientious, and had too much ambition for her strength.

Though her blood-pressure was only 128, her diet was lacking in succulence, and she had been taking extra milk, but without causing constipation. Thinking that improved metabolism might help her, I prescribed a week's vacation, with golf, a more succulent diet, and a mixture of hormones. In a few days the blood-pressure fell to 105, diastolic 55, and she "felt like doing nothing at all and without mind," so that the golf was stopped and she was put to bed. Whereupon the blood-pressure, after five days slowly rose to normal, the reflexes diminished, the tissues were firmer, but the pulse-rate mounted to over 100, going to 120 sometimes, and slight exophthalmos appeared, with the sign of Mœbius. There were no sweats, the breath was less foul; she felt clear mentally. Mixed hormones were stopped. She was then given secretogen and advised to return to work the next week, which she has accomplished satisfactorily since (5).

CHRONIC CONFUSION.

(5) That a great many cases of *chronic* mental alienation supposed to be idiopathic are in reality toxicogenetic is becoming clear (9). Most significant is the autopsy material of the Massachusetts State Hospital, in which every case of 100 carefully studied showed kidney lesions (10).

When confusion becomes chronic, internment is usually imposed, often with a diagnosis of *dementia præcox*, which is regarded by Régis as merely the chronic form of the mental confusion of Chaslin. From Kraepelin's rubric, Régis (11)

excludes cases of constitutional origin, usually the hebephrenics, which undergo rapid involution at puberty. The others, he maintains, begin with an acute attack of mental confusion due to toxin, usually show catatonia, and often end in dementia. Otherwise, there is a gradual failure, with delusional formation, inversely proportional to the rapidity of the dementia, and, finally, a permanent defect.

The recovery of some of these cases, even after long periods, is in harmony with the conception of Régis that a factor outside the cerebrum itself is at work. This is in no way antagonistic to the finding of lesions in the brain itself by Southard (6), for we know that toxin can produce neuronal damage. A most remarkable recovery of a confusional state of seventeen years' duration was recently reported by a Pennsylvania psychiatrist; and I myself (12) have reported one of recurrent maniacal confusion of toxic causation, which was completely removed when we prevented the auto-toxæmia of excessive eating, which at each alternate menstrual period produced an acute confusional attack, with rise of temperature, leucocytosis as high as 30,000, lasting for ten days or so, and leaving the patient quite normal in the intervals.

(6) It is less well known, however, that an acute mental confusion sometimes occurs in consequence of secondary syphilis (14). In this there is always found an intense congestion of the meninges, and there is consequently an abundance of lymphocytes in the cerebro-spinal fluid, which is not always the case in chronic endarteritis; although even here some meningitis is the rule and the fluid shows an increase of cells (15).

(7) In this place I do not consider in detail the mild, recurrent chronic confusion which is often an accompaniment of, and sometimes substitute for, recurrent headache. That it is also a toxic phenomenon seems clear from the study of a considerable number of cases (17) where successful management is based upon a view of their pathogenesis more precise than those hitherto set down without adequate thought by most authorities. The following is an example:

Marked confusion due to metabolic migraine resembling petit mal. (7).—A bacteriologist, æt. 30, was referred to the writer in the spring of 1912, by Dr. Paul Johnson, because of attacks he called "bilious" (but not preceded or accompanied

by constipation), which produced headache, preceded by numbness and prickling in the fingers, followed by dizziness, mental confusion, and foolish talk of paraphasic type, without loss of consciousness. These attacks had occurred every two or three months since the age of twenty-two; they were of very short duration; there were no scotomata, but they were formerly accompanied by vomiting. The headache was of the splitting kind, lasted all day, and was followed by dulness and slowness of thought the day following. The capacity to concentrate his thoughts was increasingly impaired, even between the attacks. He was at times irritable. He had no bad habits, and, apart from these attacks, he was well and strong. He received a blow on the left side of the head as a boy, and there was still a dent in the left parietal region, upon which side the headache more often occurred. He had a large appetite, which he said he controlled, but he ate meat thrice a day, although, he said sparingly. The blood-pressure was not raised, and reflexes and sensibility were normal.

Treatment and progress.—He was given the low protein "standard" diet. He wrote the writer the following winter: "Since I have reduced the amount of protein in my diet and, increased the quantity of vegetables, I have had no recurrence of those spells." Dr. Johnson informed the writer that he remained well to date, over five years later.

THERAPEUTIC SUMMARY.

(8) The treatment of confusional states should be easily gathered from the foregoing. It should not be a merely empirical dietary and effort at elimination, but should ever be directed towards combating the ætiological factor of the confusion. Thus, when the kidney is at fault, nitrogenous food must be diminished; so, also, when the liver (8) is disturbed. When exhaustion has occurred, nutrition must be ample. When the internal secretions are disordered, it is to these that attention must be directed (13). When psychological factors are at work, they must be met with psychotherapy. Physiological irritability must be counteracted not by depressants or narcotics nor by forcible restraint, but by hydrotherapy, fresh air, and non-stimulating food. Even in patients violently disturbed, the death-rate where narcotics are used is much greater than when psychotherapy is employed alone, *e. g.*

Gregg says, in recounting their experience at the Boston Psychopathic Hospital :

"The result of the eliminative treatment of the delirium with relative freedom and hydrotherapy, and a minimum amount of medication, far excels in effectiveness the usual treatment by restraint and depressant drugs in cases of the symptomatic psychoses, including alcoholism.

"Every general hospital should be provided with the facilities for treating properly cases of delirium. Such facilities should include isolation wards where quiet is not essential, and continuous bath apparatus for hydrotherapy."

Very striking is the difference in the death-rate among fifty cases of delirium tremens in five general hospitals, comprising ten cases from different hospitals in New York, Philadelphia, Baltimore, and Boston. These were treated by depressants and showed a mortality of 26 *per cent.*, while ten cases from the Boston Psychopathic Hospital were without mortality, in spite of the fact that they were older and more complicated.

In the acute and grave cases measures may be required more drastic than those employed in the cases I have related. Such are: rectal irrigations, saline injections, intravenously or *per rectum*; but these with caution, lest chlorine retention on account of renal hypofunction, by causing œdema, should aggravate cerebral incompetence; hyperhydrosis by electric-light baths or hot-packs; or even bleeding or rachiocentesis.

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(4) See author's "Psychogenesis and Internal Secretions," *Month. Cyclopaed.*, 1911.

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(7) "Treatment of Epilepsy in Accordance with Pathogenesis," *Interstate Med. Journ.*, April, 1915; *Rev. Neurol. and Psychol.*, March, 1915; *Med. Record*, 1915.

(8) *Soc. de Biol. de Paris*, 1903-1906.

(9) *Massachusetts State Hospital's Reports*, 1915.

(10) *Ibid.*

(11) *Congrès des alienistés*, Paris, 1904, and in *Précis de Psychiatrie*.

(12) "Concerning Diet in Nervous Disorders," *New York Med. Journ.*, 1912.

(13) *Med. Record*, 1917.

(14) Author, *International Clinics*, 1909, Ser. 20, vol. i.

(15) See Vincent, *Thèse de Paris*, 1909, and author, *Med. Record Path.*, "Progress of Tabes and Paresis," 1909.

(16) At Detroit Session of *Amer. Med. Assoc.*, June, 1916; *Therapeutic Gazette*, April, 1917.

(17) *Journ. Amer. Med. Assoc.*, 1916.

(1) Condensed from paper read before the American Medico-Psychological Association, 1916. Published in full in *International Clinics*, 1916.

Clinical Notes and Cases.

Some Notes on Battle Psycho-neuroses. By E. FRYER BALLARD, Captain R.A.M.C.(T.), Medical Officer in Charge of Mental Observation Wards, Second Eastern General Hospital, Brighton.

THERE is nothing new in the symptoms comprising the syndromes—generically dubbed "shell-shock"—arising from the circumstances of battle. But to those of us who have had large numbers of these cases passing through our hands, new ideas have been suggested, or the confirmation of old theories brought home.

It is not proposed to describe symptoms in detail in this paper, nor to give statistics as to the percentage of cases showing tremors, mutism, or what not—we are all familiar enough with the symptoms of hysteria, neurasthenia, etc.—but to study the question broadly, if briefly, from the ætiological standpoint.

First of all it may be said at once that loss of consciousness from physical or atmospheric concussion due to "blowing up" or burial is, in the vast majority of cases, merely the last straw in the production of the psycho-neurosis.

A considerable number of cases break down without any such incident, or, if such occur, subsequently "carry on," to break down later without a second concussion. Concussion in civil life does not result in psycho-neuroses in normal persons. It is not the blow on the head nor the loss of consciousness that is the root cause of "shell-shock"; this accident simply "knocks out" the control—that is to say, the "censor" is thereby broken through.

Let me hasten to deny the impeachment that the writer is a sexual psycho-analyst—a suspicion likely to follow upon the use of the term "censor"! One can adhere to the general psychological theory involving a belief in the subconscious, suppression of emotional complexes, the censor, and sublimation, at the same time entirely denying the universality of sexual causes of psycho-neuroses and psychoses. If anything has utterly confounded the sexual theories of the Freudians it is the study of shell-shock. It must be perfectly patent to the most bigoted sexualist that the instinct involved in shell-shock affections is that of self-preservation, and not sex.

The two main syndromes met with in shell-shock are—

(1) Those of the anxiety neurosis type, manifesting tremors, sweats, palpitation, anxiety, somatic apprehension, insomnia, etc.

(2) Hysteria, comprising dissociations of consciousness, *e.g.*, delirium, stupor, automatism, amnesia; and somatic episodes, *e.g.*, deafness, dumbness, anæsthesia, paralysis, etc. A third type of hysterical manifestation is fits. These may be clinically "hysterical," hystero-epileptic, or typically epileptic. The last frequently supervene after a latent period of apparent health in shell-shocked soldiers who have sustained no head injury, who have no personal or family history of fits, and who show no signs of the epileptic temperament. Whatever the clinical character of the fits may be, they are hysterical in origin, even though they may become chronic as the result of cerebral habit after the need for suppression is long past (see below).

Other symptoms worthy of mention are vertigo—exceedingly common, and only very rarely terminating eventually in *petit mal* or fits; it is probably vasomotor and of neurasthenic origin; and stammer, without anxiety symptoms, which is probably a psychasthenic sign (*i.e.*, a disguised expression of an over-excited instinct of self-preservation).

Vomiting is not common, but when it does occur may be

very severe. It is always caused by emotional factors—not diet—and may be cured by psychical means.

In the vast majority of cases of shell-shock, both the anxiety syndrome and hysterical symptoms manifest themselves during their course; and in a considerable proportion fits have occurred. But where a somatic hysterical episode (*e.g.*, dumbness) is successfully maintained, the anxiety *symptoms* (and often signs) are absent—that is to say, a man cannot be hysterically deaf and dumb, for example, and at the same time acutely anxious, agitated, and frightened when fully conscious. The reason for this will appear later.

Two physical signs sometimes seen in agitated cases are Romberg's sign, and "trombone" movements of the tongue on protrusion. The importance of bearing these signs in mind lies, of course, in their usual incidence in general paralysis of the insane and tabes. If purely functional (*i.e.*, shell-shock), they are accompanied by inco-ordination of other types, tremors, and the physical signs of fear generally, and, moreover, by mental anxiety and keen power of auto-criticism. So much for symptoms.

Put briefly, the ætiological hypothesis, which seems to cover all these facts, is as follows:

Soldiers under fire, especially shell-fire, being human beings with human instincts, are afraid. The instinct of self-preservation is in arms. If the instinct were allowed expression as instinctive action the soldier would run away. He does not do so. If he admitted to himself and continually contemplated the struggle between his instinct to run away and his duty or necessity to remain, he would become agitated and betray the physical signs of a fear, which might perhaps conquer. What is he to do, then? He simply does what we all do under analogous conditions: he banishes the struggle from his mind (*i.e.*, he suppresses it into the subconscious), and as far as possible allows the fear some play in a disguised form, such as anger, etc. (*i.e.*, he sublimates). Eventually one of two things happens. A time comes, if he continues under the same conditions, when he can no longer suppress—the censor fails. This failure may be brought about by any incident, ranging from definite shell-concussion to seeing a pal wounded, or by no special incident at all. The result is that the fear-complex arises reinforced in full consciousness once more. If he does

not re-suppress, all the symptoms and signs of fear occur, and he has agitated neurasthenia or the anxiety neurosis. If he struggles to re-suppress and fails he may have fits.

The second event that may occur is the development of a hysterical episode. If he is able to suppress for a prolonged period under fire without sufficient sublimation, and nothing occurs to break down the censor, or when it is broken down he succeeds in re-suppression, then he eventually develops as an instinctive compromise some hysterical episode, *e.g.*, dissociation of consciousness, dumbness, paralysis, etc. The theory of the production of these episodes, which I have endeavoured to explain elsewhere, is briefly as follows :

As the result of continual suppression of the instinct and of continual stimuli tending to excite it (possibly also in part as the result of constitutional tendency in some cases), the instinct enters into a stage of chronic hyperexcitability, which in part constitutes the hysterical temperament. This involves, of course, an extra liability to hysterical episodes. The over-excited instinct results in physiological over-activity of the censor (over-suppression), and hence in the cutting off from consciousness not only of the fear complex, but other stimuli afferent to consciousness as well, *e.g.*, kinæsthetic sensations, ordinary sensations, etc. Thus are somatic episodes, such as paralysis, anæsthesia, etc., produced. The fact that the soldier is fairly happy, *i.e.*, free from anxiety symptoms, when he has a somatic episode, is the result of the instinctive compromise constituted by the episode. The fear complex is still suppressed, but the instinct finds disguised expression as the episode, achieves its ends, and there is then, of course, no conflict.

Very marked over-action of the censor cuts off afferent stimuli to consciousness from wide peripheral areas, and so produces the hysterical states of dissociated consciousness.

The actual site of the somatic episode is in some cases probably determined by associative memory, and often cannot be accounted for. In other cases its position is easily explained, *e.g.*, the exceeding commonness of deafness and dumbness is due to the over-suppression of the instinctive desires to listen and to cry out with fear.

With regard to prognosis and treatment. Severe types that exhibit well-marked symptoms after six months do not recover in the Army. A considerable proportion of those who "recover"

in hospital break down again at their depôts or command depôts, often with symptoms dissimilar from those they originally presented, and not uncommonly with fits (failure of attempts to re-suppress).

Since shell-shock is essentially mental in origin (whatever processes of auto-intoxication supervene)—electricity, radiant-heat baths and other machinery, are perfectly useless, except as vehicles for suggestion. Ten minutes' conversation daily with anxiety types, together with the assurance that they will not be sent on active service again for many months, if ever, does more good than all the devices of the engineer or plumber.

Of course the proper treatment for shell-shock soldiers (I mean severe types) is analogous to that of civilians suffering from the same psycho-neurosis arising from other causes, *viz.*, after a few weeks in hospital, complete removal from the environment, at all events for a time, in which the illness arose. These soldiers ought, therefore, to be given not less than three months leave, then be sent to a convalescent home, from there to a command dépôt. If they subsequently break down they are no use for the field, and never will be. But under this régime I am perfectly sure many men now discharged as permanently unfit, would have been fit for some category.

So far as hospital treatment is concerned, in addition to the measures outlined above, it is found useful to keep anxiety types in bed in the open air in the morning and to allow them out walking with their pals (not escorts) in the afternoons. For medicine, bromide of ammonium with syr. glycerphos. co. is probably as good as anything. Hysterical somatic episodes *e.g.*, dumbness, are usually cured without difficulty by hypnotic suggestion. What the writer generally does is to tell the patient he is going to bring his voice back in a day or two; to refer to his impending cure each day on seeing him. Then in a few days the suggestion of cure has become a faith (more or less subconscious). The patient is put to bed in a single room, given a few drops of chloroform or ether on a mask with the suggestion that after he has counted one hundred slowly to himself he will sit up and say: "Oh, I can speak," and will continue to speak. This method usually succeeds at the first attempt. Hysterical fits occasionally precede the return of speech, so it is well to be on the watch for these.

In some cases real partial anæsthesia, that is to say, the attainment of the stage of excitement, is necessary.

Two words of warning regarding the cure of somatic episodes may not be out of place.

One is that in recent shell-shock cases removal of the episode, as one would expect, results in agitated neurasthenia. The mental wounds still gape and are not sufficiently healed to dispense with the dressing supplied by the episode. As a general rule also patients who manifest *physical* signs of fear (though feeling comfortable) as well as a somatic episode, should not be cured of the latter until the former disappears, or the same result may occur. In these cases the instinct is so over-excited that it requires some other outlet than the somatic episode; this it finds in tremors, etc. The other point to remember is that, when the patient sits up and says: "Oh, I can speak," and continues to talk as he is told, he may be in a hypnotic sleep. One case at this stage I told to keep on repeating "Mary had a little lamb" so that he should not forget that he could talk! Then I left him thinking all was well. Returning to the ward after half an hour, to my surprise I found the patient sitting up in bed still repeating that choice poem like an automaton, and for aught I know he would still be repeating it now, if it had not suddenly dawned upon me that he was hypnotised and asleep! I then woke him up and was thankful to hear him vary his remarks by the bewildered exclamation: "Where am I?"

Part II.—Reviews.

Sixty-fifth Report of the Inspectors of Lunatics (Ireland) for the year ending December 31st, 1915.

The times are out of joint, and if lunacy reports are somewhat belated just at present we must remember that even they, like many matters still more important, must bow to the stringency of circumstances during periods of difficulty and stress such as we are now, and have for some time past been, experiencing. Moreover, it need not occasion surprise if the bulk of such documents is much reduced. The Report of the Irish Inspectors is largely curtailed in size, its dimensions being, in fact, 60 *per cent.* less than those of the Report for the previous year. This diminution in size is mainly due to the omission of the reports on inspections of the individual asylums which have up to this been

appended, but some of the usual tables have also been omitted, and others have been shortened or condensed. This, of course, to some extent impairs the value of the Report.

For the first time since the year 1863—a period of fifty-two years—the inspectors are able to record a decrease in the number of patients under care, there being a reduction of 77 during the year, and the ratio per 100,000 of estimated population, which reached its maximum, 575, in 1914, has fallen by 2. The decrease was due in part to fewer admissions, in part to a considerable increase in the number of deaths. The admissions into District Asylums show a reduction of 119, whilst in the case of Private Asylums there was an increase of 48; the net decrease being, therefore, 71. The deaths outnumbered those of 1914 by 220, whereas the discharges were fewer by 93. It is to be noted that the decrease both in the numbers under care and in admissions was confined altogether to the male sex, the male admissions having been fewer by 82, while there was an increase of 11 in the female admissions. The decrease generally of the total number under care was chiefly noticeable in the case of workhouse patients where it amounted to 108, while in District Asylums there was a small increase of 3, and in Private Asylums the numbers were larger by 32.

While, as insisted on frequently in former reviews, any conclusion based on the statistics of a single year, cannot be accepted as more than in the nature of a surmise, still these most recent statistics, coupled with the fact that, as shown in last year's review, the rate of increase of insanity in Ireland has been steadily reducing during the past fifteen years, may be regarded as distinctly favouring the opinion that the acme of increase has been reached and passed, and that we may hope, perhaps even expect, that sooner or later an actual decline in the amount of lunacy in this country will make itself apparent. The figures for many years past altogether tend to substantiate this view, and there are none that we know of that would lead us to another conclusion. The decrease in the number of admissions is a novel and healthy sign of improvement. The higher death-rate, although perhaps regrettable from one point of view, may not improbably continue, owing to the accumulation of aged people who have reached or gone beyond the normal span of existence, and who, but for the care they have received in asylums, would have succumbed much earlier under less favourable conditions. Should this higher rate of mortality continue it will, of course, be a factor in reducing the aggregate number of insane in asylums. The average annual increase during the ten years 1904 to 1914 was 218, while during the five years from 1909 to 1914 it was only 104, or less than one-half.

The total number of insane in establishments on January, 1st, 1916, was 25,103, of whom 21,530 were in District and Auxiliary Asylums. The number of insane outside institutions, including those wandering at large, was at the last census 4,044, or approximately 14 *per cent.* of the total. The daily average in District Asylums during 1915 was 21,539, as compared with 21,469 in 1914, being an increase of 70 patients. Only 9 *per cent.* of the total under care are now accommodated in workhouses. With respect to these latter institutions the inspectors give a less unfavourable report than they have hitherto been able to do.

They express themselves as being on the whole satisfied with the clothing and dietary supplied, but the accommodation is not all that might be desired, and the sanitary and bathing arrangements anything but satisfactory. These are "with few exceptions still very antiquated, the former consisting only of buckets in the dormitories and privies out of doors, while portable baths or even tubs are in very general use, and in a few instances there is no regular bathing at all."

As regards the influence of the war on the admission-rate it is not very easy to make anything like an accurate estimate. The number of soldiers and sailors admitted into District and Private Asylums was 85, of whom 34 only had seen any active service. The inspectors consider that these figures are not of any value as indicating the prevalence of mental disease amongst Irish soldiers and sailors, owing to the special arrangements made by the War Office for dealing with insane soldiers. Probably a more reliable index as to the effects of the war is to be found in the number of cases in which mental stress was assigned as a factor in causation. These amounted to 19 *per cent.* of the total admissions, of which in 13·6 *per cent.* it was stated to have been the principal cause, the ratios for the previous year having been 16·88 and 11·4 respectively, so that there appears to have been a not inconsiderable increase in such cases. A further inquiry was made as to the number of cases in which the war was regarded as a direct causative factor, with the result that it was found that in only 1·19 *per cent.* did it operate either as principal or contributory cause, and in 0·32 *per cent.* as principal. Two-thirds of these cases were first admissions, and the majority belonged to the female sex, in fact three-fourths of the total. The war, therefore, can hardly be regarded as having been more than an insignificant factor in causing an increase of insanity.

In alcoholic cases there was a slight reduction as compared with 1914, those in which alcohol was assigned as a principal cause being 10·68 *per cent.* in 1915 and 11·01 in the preceding year.

The death-rate was 7·8 *per cent.* on the daily average, being 0·9 *per cent.* higher than in 1914. It is satisfactory to note that the mortality from phthisis has fallen from 27·2 to 21·5 *per cent.* during the last twenty-five years, and in 1915 it was only 20·6 as compared with 22·3 in the previous year. The deaths from general paralysis were only 3·2 *per cent.* of the total. This disease would appear on the whole to be rather on the decline.

The total expenditure on the district and auxiliary asylums for the year ending March 31st, 1915, amounted in round numbers to £640,000, which gives an average cost per head of £29 18s. 6d. for patients in District Asylums, exclusive of the Auxiliary Asylum at Youghal, being an increase of 6s. 10d. on that of the previous year, or a fraction over 1 *per cent.* That there was not a greater rise was due, the Inspectors state, to the fact that nearly all the supplies were obtained under contracts made before the war broke out. When the expenditure for the year 1915-16 comes to be computed it will probably show a much larger increase, which will no doubt be found to have advanced by leaps and bounds during the most recent financial year terminating in March last.

In connection with this subject of finance it is a peculiar feature of

these reports that while the reports from individual asylums have reference to the general statistics for the previous year ending December 31st and to the financial statistics for the period ending March 31st of the current year, the Inspector's Report, although dealing with the general statistics for the same period as those from the several asylums, are a year behindhand in their tables of finance. A probable explanation may be that the more recent accounts have not yet been audited at the time when the Inspector's Report is being written, and that they do not wish to touch on unaudited accounts. But such a plea in defence of a practice which we venture to think is to be deprecated, can hardly be regarded as adequate, unless this method is a statutory regulation. For, although the later accounts may not have been audited at the time the writing of the reports is undertaken, the audit will have almost certainly been made before they are completed, and in the hands of the publisher; and any necessary amendments or alterations in the figures could readily be made before publication. This would bring these tables as nearly up-to-date as possible. Those which appear in the Report under review have reference to an annual period which terminated over two years ago on March 31st, 1915. Some remedy ought to be devised for an anomaly of this kind.

Except for the fact that a large number of the asylums, practically one-half, are overcrowded, some greatly so, there is nothing of special interest or that requires comment as regards these institutions.

Christianity and Sex Problems. By HUGH NORTHCOTE, M.A. Second edition, revised and enlarged. Pp. 478. Philadelphia: F. A. Davis and Co. London: Stanley Phillips, 1916. Price 12s. 6d. net.

Attention was called to this book in the Journal, on its first publication ten years ago, as a treatise in moral theology, discussing the problems of sex from a remarkably enlightened and liberal standpoint of Anglican Christianity. In the present thoroughly revised edition the author has greatly enlarged the book, nearly doubling it in size, and adding six new chapters with numerous appendices. The usefulness of the work has thus been greatly increased for all those—from whom the medical psychologist can scarcely be excluded—called upon to consider sexual problems from the point of view of morality and social hygiene. As the author points out in the new Preface, bad casuistry has often been condemned, but a sound casuistry remains more than ever necessary, and the science of sexual moral theology "holds a rightful place in the scheme of knowledge, and has an important function to fulfil in the moral education of mankind." Even those who are indifferent to moral theology may still find that the author's fairness of mind, his practical acquaintance with difficulties, and his extensive knowledge of the most recent scientific literature of sex, render his book an interesting introduction to sexual psychology.

HAVELOCK ELLIS.

Raymond: Or Life and Death. By SIR OLIVER LODGE, F.R.S.

This book consists of three parts: *First*, what is called the "Normal Portion," consisting of reminiscences of Raymond Lodge, who was

killed near Ypres on September 14th, 1915, æt. 26; of letters from him at the Front, and of letters from officers who had served with him. *Secondly*, what is called the "Supernormal Portion," containing the evidence which, in Sir Oliver Lodge's opinion, conclusively proves that Raymond has communicated with various people since his death. *Thirdly*, an exposition of Sir Oliver Lodge's beliefs about life and death, including, of course, his views on the relationship of mind to matter.

After reading *Raymond* I have no doubt of Sir Oliver Lodge's *bona fides*, for he presents the evidence at considerable length, when he would have made out a stronger case if he had suppressed most of it. However, Parts I and II appear to be really introduced as pegs on which to hang his own views about the universe, for he says (p. 280): "Some people may prefer the details in Part II; but others who have not the patience to read Part II may tolerate the more general considerations adduced in Part III—the 'Life and Death' portion—which can be read without any reference to Raymond or to Parts I and II." But the evidence in Part II should be carefully read, as otherwise some of the statements in Part III might give a very false impression. For instance, he says (Part III, p. 374): "But now, if I or any member of my family goes anonymously to a genuine medium, giving not the slightest normal clue, my son is quickly to the fore, and continues his clear and convincing series of evidences," whereas it appears to me that no serious attempt to avoid giving clues was made in any case.

Of the sittings with mediums recorded in *Raymond*, there are only nine in which a semblance of anonymity was attempted, and in none of these was any real effort made to take all possible precautions against fallacy. The mediums were discoveries of a Mrs. Kennedy, and were recommended by her to Sir Oliver Lodge, who apparently made no independent inquiries about them. All the supposedly anonymous sittings of Lady Lodge were held at Mrs. Kennedy's house, or else were arranged by her; and, as she had received many messages through the mediums, as well as through her own automatic writing, from her son Paul, who was killed in a motor accident in June, 1914, she was a convinced spiritualist, and we have no guarantee that she had not been talking about her friend Sir Oliver Lodge and his loss. At any rate, her presence at the *séances* was a clue; and then the fact of Raymond's death had been announced in *The Times*, so that mediums could easily have got some information about him. As for Sir Oliver Lodge's sittings, he admits (Part II, p. 96) that his "own general appearance is known, or might be guessed," and in every instance the medium recognised him. Then as regards the three sittings which his sons, Alec and Lionel, had with mediums under supposedly anonymous conditions, it is clear that the medium knew who they were. In short, the difference between these facts and what is stated in the sentence I have quoted may be taken as a key to the whole book, which chiefly illustrates Sir Oliver Lodge's lack of qualification for experimental psychology, of which, I take it, psychical research is but a branch. For if he had been a trained investigator, he would have taken, among others, the following precautions: (1) In every case the sitter would have been disguised. For instance, Sir Oliver Lodge himself might

have shaved off his beard, or got himself "made up" by Clarkson. (2) The sitting would have been arranged through someone like a solicitor, who had no interest in spiritualism, and would have arranged the preliminaries as a pure matter of business for a client without giving any clue. (3) In no case would a friend of mediums like Mrs. Kennedy have been present for fear she might give a clue. (4) In every case, if possible, the medium would have been securely blindfolded, so that he could not see the effect of his questions on an emotional sitter like Lady Lodge. (5) The sitter would have talked as little as possible, have never asked leading questions, and have tried not to give the medium hints by word or look.

There are several passages in *Raymond* in which Sir Oliver Lodge inveighs against scientific critics for trying, as he asserts, to limit the range of inquiry; but there is not a word in the whole book about the need of adequate training before undertaking psychical research. Apparently he is quite genuinely unaware that scientific critics, so far from trying to limit the range of inquiry, are actuated solely by their desire that the advance of knowledge shall not be hampered by the publication of researches vitiated by the fallacious conditions under which they have been carried out. Indeed, *Raymond* illustrates very well the difference between Sir Oliver Lodge and investigators trained for biological and psychological research. Whereas he builds his hypotheses on evidence obtained under the most fallacious conditions, in accordance with his dictum that "it seems more useful to get results for such observation as is possible under the circumstances than not to get them at all"—as he said of Eusapia Paladino's "physical phenomena" (*Fourn. S. P. R.*, vol. vi, 1894, p. 328), they maintain that, just as we are all victims of illusion if, without training, we investigate a conjurer's tricks under *his* conditions, so it is mere waste of time to investigate spiritistic phenomena under mediumistic conditions, which are incompatible with real precautions against error.

Sir Oliver Lodge believes that he has reached his present convictions as the result of the cumulative effect of a great deal of scientific evidence, no item of which is conclusive by itself; but a perusal of *Raymond* leaves very little doubt in my mind that by sitting with mediums under absolutely untrustworthy conditions, he has gradually and unconsciously lowered his critical standard, and, like a man who compounds a felony, has had to pay a penalty by becoming the dupe of his bias. Under the emotional influence of conversation with the "dead" judgment is easily warped, and the sitter becomes hypnotised by phenomena which leave the critical reader of the record quite cold, or may even excite his ridicule. As William James said of the difference between taking part in a "Piper" sitting and reading the record of it (*Proc. S. P. R.*, vol. xxiii, p. 32): "The whole talk gets warmed with your own warmth, and takes on the reality of your own part in it: its confusions and defects you charge to the imperfect conditions, while you credit the successes to the genuineness of the communicating spirit. These consequently loom more in our memory and give the key to our dramatic interpretation of the phenomenon. But a sitting that thus sounds important at the time may greatly shrink in value on a cold re-reading, and if read by a non-participant it may seem thin and

almost insignificant." So far, then, from a large number of incidents, each of which is evidentially weak, producing scientific conviction, the fact appears rather to be, as William James also pointed out, that "they will almost always produce a cumulative effect on the mind of the sitter whose affairs they implicate, and dispose him to the spiritistic view. It grows first possible, then plausible, then natural, and finally probable in a high degree" (*ibid.*, p. 18).

Sir Oliver Lodge says (p. 144) there are "innumerable" incidents in which the medium shows supernormal knowledge; but I have only found one incident in the whole of *Raymond* where a normal explanation cannot be given with every appearance of probability. I refer to the occasion in Alec Lodge's sitting with Mrs. Leonard on December 21st, 1915, when he asked the medium, "What used he to sing?" and received the following answer (p. 212): "Hello—Hullalo—sounds like Hullulu—Hullulo—something about Hottentot; but he is going back a long way he thinks. (*Sotto voce*) An orange lady? He says something about an orange lady. (*Sotto voce*) Not what sold oranges? No, of course not. He says a song extolling the virtues and beauties of an orange lady. And a funny song which starts M—A—, but Feda can't see any more—like somebody's name. Also something about Irish eyes. (*Sotto voce*) Are they really songs? Very much so." Now we are told in a note that "My Orange Girl" was the last song Raymond bought, that "Irish Eyes" was a comparatively recent song which he had sung several times, and that he had a still more recent song about "Maggie Magee," which Sir Oliver Lodge of course implies was the one referred to by "a funny song which starts M—A—, like somebody's name." The first part of the answer also is supposed to refer to a song called "My Southern Maid," on which Raymond had apparently written in pencil in March, 1904, the words—

"Any little flower from a tulip to a rose,
If you'll be Mrs. John James Brown
Of Hon-o-lu-la-lu-la-town."

This last fact might easily be explained by coincidence, but I think that such an explanation, while possible, is not so probable in the case of "My Orange Girl" and "Irish Eyes." On the other hand, it is an isolated incident, incapable of being repeated; and, if we knew all the conditions of the experiment, we might get a clue to a normal explanation just as in the case of Maskelyne's mysteries, which deceive us so easily. In this sitting Alec Lodge acted not only as sitter but also as recorder, and it is impossible under these circumstances to have any record of hints which he may have given subconsciously by his manner or expression, if not by word of mouth; and Feda's—(Mrs. Leonard's "trance-control" affected this name)—manner in answering the question suggests fishing for hints. Then, again, to ask a spirit about the songs it used to sing is what may be called a "stock" question, as a study of the Piper records shows; and it is not improbable that a medium who knows her business gets up the songs of the day. Again, "My Orange Girl" may have been a recent song which Mrs. Leonard happened to know was being widely sung; while "something about Irish eyes" is just the sort of thing I should say if I tried to guess at the title of one of a number of songs. Lastly, of course, I should like to know for

certain that Mrs. Leonard could never have got any information about Raymond's songs from any of his family, or from Mrs. Kennedy, etc. Although, then, I have to admit that I do not know what is the explanation, I do not feel impelled to seek a supernatural explanation for a single incident like this, considering the conditions under which it occurred. Also it is to be noted that again and again other questions were answered incorrectly or evaded, although the answers must have been known quite well to Raymond when he was alive.

The content and style of the mediums' utterances do not suggest a supernatural origin, as they are nowhere inconsistent with the culture of the medium employed. The spirit talk is so full of stock phrases, and so often shocks the expectations and requirements of common sense, that it is difficult to take seriously the long-winded descriptions of Raymond's adventures in "Summerland" with his cat and his dog "Curly," or his visits to other spheres, including, apparently, an interview with the Deity. "Fedra," however, is sometimes rather amusing, as, for instance, in Sir Oliver Lodge's sitting with Mrs. Leonard on December 3rd, 1915, when towards the end he looked at his watch, and she said, "I could talk for hours; don't go yet." Even Sir Oliver Lodge realises the worthlessness of some of the evidence when he writes (p. 357): "It is true that in the case of some mediums, especially when overdone or tired, there are evanescent and absurd obtrusions every now and then which cannot be seriously regarded." But this admission gives his whole case away. What may appear ludicrous to him does not thereby cease to be interesting as a scientific phenomenon; and there is no test for distinguishing between the sub-conscious—or conscious—patter of the medium and those utterances which he regards as transmitted by a spiritual entity.

In more than one place Sir Oliver Lodge begs the reader to be willing to learn and be guided by facts and not by dogmas; but Part III is full of contentious assertions and matter calling for criticism, such as his remarks about the nature and honesty of mediums; his argument that prevision is consistent with free-will (p. 315); his views on the relation of mind to matter (pp. 326-330); his assertions that telepathy is a fact (p. 313), and that memory exists apart from the bodily mechanism (p. 328); his belief in psychometry (p. 305), and that possession by spirits is the explanation of dissociated personality (pp. 357-8); and his verbiage about the ether of space (pp. 318-9), and "etherial counterparts" (p. 336), etc., etc. His views about table-tilting, however, I must quote as a final example of the effect which psychical research has had on him. On p. 238 we read: "In general we may say, with fair security, that no receptivity to physical phenomena exists save through sense-organ, nerve, and brain; nor any initiation of physical phenomena save through brain, nerve, and muscle"; and on p. 363—"Certainly the table can only move at the expense of the energy of the medium or of people present"; but on p. 365, where he hints that speaking and writing without the aid of any physiological mechanism, as well as "materialisation," are facts, he writes—"In these strange and, from one point of view, more advanced occurrences, though lower in another sense, inert matter appears to be operated on without the direct intervention of physiological mechanism. And yet such mechanism must be

in the neighbourhood. I am inclined to think that these weird phenomena, when established, will be found to shade off into those other methods which I have been speaking of, and that no complete theory of either can be given until more is known about both. *This is one of the facts which causes me to be undogmatic about the certainty that all movements, even under contact, are initiated in the muscles.*" (The italics are mine.) Apparently he believes that a spirit, by utilising *potential* human energy, may directly make a table move in the absence of muscular contraction. What a shock Faraday's spirit would receive, could he realise that his experiments on table-tilting were thus ignored!

I. L. TUCKETT.

Epitome of Current Literature.

1. Physiological Psychology.

The Classification of Dreams [*Per la Classificazione dei Sogni*]. (*Psiche*, October-December, 1915.) Assagioli, Dr. Roberto.

The writer offers the following classification of dreams only as a preliminary sketch, and not as a complete scheme. The nature, structure, and characters of dreams are so diverse and complex that it is impossible to classify them conveniently from one point of view. It is necessary, therefore, to make as many classifications as there are characteristics by which one can, and ought, to distinguish dreams.

I. Classification of Dreams according to their Origin.

(a) Dreams in which the action of external sensorial stimuli (visual, auditory, tactile, etc.) is recognised. To this category belong also the dreams in which is recognised the influence exercised by atmospheric conditions, particularly by their sudden changes.

(b) Dreams in which the action of internal, organic sensorial stimuli is recognised—that is to say, the various buzzings and noises in the ears, and all the sensations proceeding from the activities of the various organs. Such sensations generally remain subconscious during waking hours, buried in the general organic sense of well- or ill-being (cœnæsthesia), but during sleep they have a power of exercising an influence on dream-activity.

(c) Dreams in which the action of supernormal stimuli is recognised. Being ignorant of the true nature of these stimuli, we can for the present only deduce their existence from their effects.

(d) Dreams of an evidently psychical origin. Many dreams are clearly the production of the spontaneous psychical activity of the dreamer, without the co-operation of other stimuli. To this ample category belong dreams reproducing real events, and the dreams determined by emotional tendencies and conditions.

(e) Dreams with no evident origin. This is a provisional category, which we hope with the progress of science will soon become unnecessary.

II. Classification of Dreams according to their Structure and their General Characters.

(A) Dreams which are (a) Clear, and those which are (b) Confused. This distinction has a relative value, since the want of clearness may depend on the vague remembrance which we have of a dream when we wake, and not on its confusion when it is being evolved in the dream-consciousness. On the other hand, sometimes we seem to remember that the dream appeared to be confused in the dream-consciousness, and further, it is legitimate to admit that the fact that some dreams are impressed clearly on our memory, whilst others leave only a confused trace, depends in part on the greater or less intrinsic clearness of the dream itself.

(B) Dreams are (a) Vivid, or (b) Pallid. This is a distinction similar to the preceding, but which does not coincide with it.

(C) Dreams may be (a) Continued, or (b) Interrupted, or (c) Disconnected, according to their development. The disconnected dreams have a sudden changing of surroundings and argument, without, however, there being a true and proper interruption of the dream. These dreams deserve to be studied with particular attention, in order to discover the reason of such changes. There are facts which show that, in some cases at least, the unexpected changes depend on the action of external or internal stimuli.

From a strictly structural point of view, dreams may be divided into—

(D) (a) Simple, and (b) Complicated. And into—

(E) (a) Coherent, and (b) Incoherent.

(F) Dreams which are recurrent—(a) those which recur on the same night, and (b) those which recur on different nights. Not uncommonly these dreams have a special signification in the life of the dreamer, and deserve to be accurately studied.

III. Classification according to Intellectual Characters.

Although it is true that logic is not a strong point in dreams, it is not lacking entirely as some have asserted.

(A) Logical dreams, which in their relation to reality may be divided into (a) Probable, (b) Improbable, and (c) Impossible. In the latter, however, the dream remains coherent with its premises.

(B) Absurd dreams.

IV. Classification according to Emotional Characters.

There are two great classes of dreams: those which are developed without being accompanied by emotion, and those that are accompanied by it. All the emotions and sentiments of waking hours may appear in a dream, and it is useless to enumerate them. It is enough to divide dreams into (a) Pleasant, and (b) Painful.

V. Classification according to Active Characters.

(a) The dreamer is an actor in the dream—usually the chief actor. These dreams are generally dramatic, and rich in sensations and emotions.

(b) The dreamer is a passive spectator of the dream. As in the theatre, in some cases the spectator follows the spectacle with keen interest and emotional participation, in others with indifference, or in a critical attitude.

(c) The dreamer is an active spectator of the dream. In this class of dreams the dreamer has a vague idea that it is he himself who makes one or more of the *dramatis personæ* act or speak. Stepanow, who pointed out this kind of dream to the writer, gives the following example: "In a train the conductor was enumerating to a traveller the stations through which the train would pass. I heard a series of fantastical names, and at the same time I had a vague idea that I myself must have invented those silly names. My interest became more and more intense, until at last I awoke exhausted." This type of dream is interesting from a psychological point of view, and is connected with the problems of dream-consciousness, dissociation, and impersonation.

VI. Classification according to the Attitude of the Dreamer in the Dream.

(a) The dreamer believes fully in the reality of the scene which is, so to speak, unrolled before his eyes, and in which he appears to participate.

(b) The events of the dream cause the dreamer a more or less vivid sense of surprise.

(c) The dreamer occupies a critical position, and makes various attempts at interpreting or correcting the elements of the dream, which seem to him unlikely, impossible, or absurd.

(d) The rare cases in which the dreamer is fully conscious of dreaming.

VII. Classification according to the Connection between the Psychical Life of the Dream and that of Waking Hours.

(A) (1) Dreams in which the ideas, sentiments, and moral principles are the same as those of the dreamer in waking hours.

(2) Dreams in which the ideas, sentiments, and moral principles are different from those of the dreamer in waking hours.

(B) (1) Dreams which do not exercise any sensible influence on the mind of the dreamer during waking hours.

(2) Dreams, the emotional tone of which is prolonged for a certain time into the waking hours.

(3) Dreams which exercise a special action on the personality of the dreamer during waking hours.

(a) Beneficent dreams: These are useful dreams of various types. Some (Autognostic dreams) give us valuable information for the knowledge of ourselves, revealing latent bad points in our characters, or dispositions and capacities of which we were ignorant. Others (Admonitory dreams) put us on our guard against external or internal dangers and perils. Others (Elaborating dreams) continue the mental activity of waking hours, elaborating ideas, resolving problems, etc. Others, again (Creative dreams), in which the fancy creates products which can be utilised in artistic work. Finally, certain dreams which

can be classed among the Supernormal dreams (Telepathic and premonitory).

(*b*) Maleficent dreams: Some of these (Impressional dreams) are of a terrifying and menacing nature, and disturb the neuro-psychical equilibrium of the dreamer. Others (Pathogenic dreams) become confused with reality, and give rise to phobias, obsessions, deliriums, etc. Others, again (Criminal dreams), instigate the dreamer to crime.

VIII. Classification of Dreams according to their Signification.

Although we are still a long way from knowing the signification of every dream, yet in a great number of them we can establish it with sufficient certainty to group them into various categories.

(A) (1) Dreams, the signification of which is represented in a direct manner.

(2) Dreams, the signification of which is represented under a symbolical form: This distinction was recognised in antiquity, and, indeed, in not a few cases the symbolical relation is so evident that there can be no doubt of the exactness of the interpretation. But, on the other hand, the greatest number are cases in which the symbolism is obscure and complex, which renders the interpretation difficult and uncertain. In these cases it is necessary to proceed with prudence, and not yield to the temptation of manufacturing a quantity of interpretations as ingenious and seducing as fantastic.

(B) (1) Dreams reproducing real events in an exact manner (Mnemonic dreams).

(2) Dreams reproducing real events in a more or less altered manner.

(3) Dreams representing the nature and action of an external or internal stimulus (Prodromic and diagnostic dreams).

(4) Dreams representing the actuality of desire or hope

(5) Dreams representing the actuality of fear.

(6) Dreams representing the actual internal or external situation of the dreamer.

(7) Dreams representing attempts at solving problems or actual situations, or dreams referring to ethical or religious ideals (Perspective or mystical dreams).

(8) Supernormal dreams: These are relatively rare, but their existence has been clearly demonstrated, particularly by the work of the Society for Psychical Research. The two principal types of this class of dreams are the telepathic and premonitory. These types are mentioned under the head of "Beneficent Dreams" (Class VII).

IX. Dreams of a Special Nature (Typical Dreams).

(1) Agonising dreams: The most common types of these dreams. are—those in which one wishes to move and cannot; those in which one is pursued; those in which one arrives late for a train or an appointment; those in which one desires to complete an action, but is impeded by an interminable series of obstacles.

(2) Erotic dreams.

(3) Religious dreams.

(4) Criminal dreams.

(5) Dreams of flying.

(6) Zooscopic dreams: The sight of animals in a dream may happen to normal persons, but it is proved that zooscopic dreams are especially met with in the cases of neuropathics and alcoholics.

X. Phenomena connected with Dreams.

(1) Prehypnic and posthypnic phenomena: By these one designs the vivid images which are perceived at the moment of going to sleep or at that of waking. These images acquire such vividness that they seem to be sensations, and they deserve the name of illusions or pseudo-hallucinations, because consciousness perceives them with all the characteristics of true sensations, although it is known that no real object corresponds to them. If one goes a step further, the illusion becomes a hallucination; the dreamer believes in the objective reality of the images—in other words, he commences to dream. Prehypnic phenomena are the germs from which dreams may be evolved. Posthypnic phenomena work in the opposite direction. In passing from dreaming to waking, one often requires a certain time and a certain strength to recognise the hallucinatory nature of the dream-like images.

(2) "Dreaming with the eyes open" (Fantasies, Day-dreaming): A great many persons, particularly young people, endowed with a rich imagination, give themselves up to "building castles in the air," to constructing veritable romances, in which they are themselves the protagonists, and which appease unsatisfied desires and aspirations. These day-dreams may assume such emotional and representative intensity, and such variety and richness, that they constitute a true world apart, and appear more coloured, more vivid, and, to a certain extent, more real than the external world.

(3) Products of artistic inspiration: These products often present affinities with dreams, either by the special state of abstraction from external reality—of "introversion" in which the artist finds himself at the moment of their manifestation—or by their subconscious elaboration, and by their involuntary irrefrangibility, or by the nature of their contents or signification.

(4) Ecstatic visions: Ecstasy is a special religious experience, a state of mystical consciousness in which visions sometimes, but not always, occur. To these visions the visionary attributes an objective or symbolic character according to circumstances.

(5) Hallucinations: True hallucinations—that is to say, the belief that the subjective images are sensations corresponding to real objects—constitute a normal and necessary character of dream-consciousness. They are, on the other hand, for the waking consciousness exceptional and pathological phenomena.

(6) Morbid dream states: These are met with among psychoneurotics, and especially among hysterical people, and are present in the hypnotic state, in some forms of somnambulism, and the "hypnoid," "twilight," confusional, and stuporose states. Another form of the dream state is found in cases of drunkenness produced by various toxic agents, such as alcohol, opium, hashish, etc.

(7) Delirium in mental diseases: This phenomenon may be considered from a psychological point of view as a fusion or confusion of

dream-consciousness and waking-consciousness. This is confirmed by the fact that sometimes delirium takes origin and sustenance from dreams.

J. BARFIELD ADAMS.

2. Clinical Neurology and Psychiatry.

- (1) *Shock and the Soldier.* (*Lancet*, April 15th and 22nd, 1916.) Smith, G. Elliot.
- (2) *Some Neuroses of the War.* (*Bristol Medico-Chirurgical Journal*, July, 1916.) Clarke, F. M.
- (3) *Mental and Nervous Symptoms following Naval Disasters* [*Les Troubles Nerveux et Psychiques Consécutifs aux Catastrophes Navales*]. (*Revue de Psychiatrie*, April, 1914.) Hensard, M. A.
- (4) *The Treatment of Some Common War Neuroses.* (*Lancet*, June 9th, 1917.) Adrian, E. D., and Yealland. L. R.

The first paper deals with the question of shock from a diagnostic, therapeutic, and social point of view. The whole subject of soldiers suffering from the protean manifestations of shock involves problems of far-reaching importance upon the social welfare of the whole nation after the war. The writer finds that ampler provision has been made for dealing with this problem in other countries, and he has collected the views of French and German authorities as to the various methods of dealing with such cases, with the hope that some solution may be arrived at for a situation which is becoming increasingly urgent.

Stress is laid upon the following points: The importance of diagnosis, that is, the discovery of a clear relation between the symptoms and the history, arrived at only by a sympathetic study of the patient from day to day; the necessity for a consideration of the development of the symptoms in order that the patient may be prevented from systematising his morbid sensations into a delusional scheme; the influence of previous emotional events, apart from the actual traumatic moment, upon the condition of the patient; and the need for a correct diagnosis to carry out a rational form of treatment.

The writer quotes Gaupp in regard to the question of the treatment of shock cases after discharge from hospitals. Any mention of a return to the Front produces a return of the nervous troubles. This manifestation must not be regarded as due to malingering, especially as it frequently occurs in men of proved courage. Return to the fighting line will almost inevitably render the soldier a life-long pensioner on the State, though he might be quite usefully employed in some other capacity. The solution of the problem would appear to be the setting-up of an organisation to place such individuals in positions to which they are most fitted, in view of their previous occupations and present mental capacity. Such an organisation must be scientific and controlled by skilled medical advice. It is useless and often harmful to merely detail these convalescents to garrison duty, which may be irksome and monotonous, but rather must an effort be made to find the right kind of occupation for each individual case.

The question of treatment is discussed under the headings of re-education, hypnosis, and isolation; and in conclusion emphasis is

laid upon the necessity for institutions where incipient cases can be treated on a rational basis, the possession of which would prevent many cases from drifting into definite lunacy, and increasing the inmates of institutions for the insane.

The second paper deals with the clinical aspect of the various neuroses met with amongst soldiers in the war. By the term neuroses are excluded, for clinical purposes, all cases which present any one or more of the definite signs we have learnt to associate with structural change in the central nervous system. This definition is merely one of convenience, however, and does not prove or assume the absence of structural change which may yet be present in the absence of clinical signs.

The neuroses of war will be partly due to the same causes as in civil life, and partly to other and special causes. Some cases will thus present familiar features, and others special and unfamiliar features. This may be made the basis of a preliminary classification. Amongst the former are cases of hysteria—monoplegias, paraplegias, hemiplegias, affections of the special senses, anorexia, vomiting—which show a freedom from symptoms of nervous shock. The second category, presenting symptoms not familiar in civil practice before the war, show evidence of general nervous shock in addition to other symptoms which may be present. The causes of war neuroses are manifold and comprise the effects of anxiety, overstrain, of want of sleep, wounds, of the concussion of high explosives, perpetual noises, fear, and painful scenes. All cases exhibit certain common mental and physical symptoms. The chief mental disorders are mental lethargy, lack of interest, often with no desire to get better, depression, want of self-confidence, difficulty of concentration, confusion, fear, and terrifying dreams. Physical symptoms are tremor, amaurosis, deafness, loss of smell or taste, nystagmoid movements, paralyses, and anæsthesias.

Dr. Clarke states that the symptoms as a whole give the impression that the pathological condition underlying them is some block in the passage of nervous impulses from one neurone to another—a resistance in the synapses:

The third paper is a pre-war contribution based upon cases surviving from the explosion of the "Iëna" and "Liberté" at Toulon in 1907 and 1911. Such cases are especially interesting, as they exhibit symptoms, in the ætiology of which emotional shock plays an indisputable and primary *rôle*. The writer divides his cases into those which exhibit minor psychopathic symptoms, and those which manifest the symptoms of a grave psychosis. He excludes those cases in which emotion appears to play only a secondary *rôle*, and those in which the psychosis is due to the action of some well-defined agent, such as physical shock, asphyxia from gas, surgical shock, etc.

Among the minor symptoms at the moment of the shock are noted a state of semi-somnambulism, automatic mental activity, absorption in some trivial occupation, such as an exclusive preoccupation in the attempt to save some garment, a strange lucidity and feeling of exaltation, and a period of amnesia. Those who took part in the work of rescue and approached the horrors of the accident showed for several weeks symptoms of mental unrest, intense obsessive representations of

the scene, terrifying dreams, diffuse anxiety, fatigue, and various minor phobias. A collective morbid mental state—fear, tension, etc.—was noted for some time afterwards among the civil and military population. This was especially marked in a sudden, unmotivated panic which occurred at the funeral of the victims of the accident.

As regards the more severe disorders, the cases are divided into two categories: (1) Those with a strong predisposition to mental disorders, degenerates and constitutional defectives, who exhibited psychoses in accordance with their particular predisposition, and those subjects with acquired defects who manifested psychoses corresponding to the defect, e.g., chronic alcoholics with delirium tremens; (2) those with only slight predisposition, the majority of whom showed the symptoms of mental confusion.

It is this second category, in which the individuals show a minimum of predisposition to mental disorder, that the term *emotional psychosis* is most correctly applied. In such cases there is usually a period of normal mental equilibrium, followed by a phase of general fatigue, nightmares, and retardation. This precedes the state of actual confusion associated with anxiety and excitement. Several illustrative cases are given.

Such a psychosis thus evolves in the same way as a transitory psychosis caused by some intoxication. The identity of course and symptoms leads the writer to suggest that in these cases the emotion-shock can, in certain organisms hitherto healthy, cause certain nutritive disturbances, and liberate certain cytotoxins capable of acting on the brain and producing a definite mental syndrome. The diminution in the secretion of urine and the decrease in chlorides which is observed in these cases lends support to this view. The toxins may be primary, due to a special disorder of metabolism hitherto unknown, or they may be secondary, freed in the organism as a result of emotional inhibition of such organs as the liver and kidneys, or possibly consecutive to modifications in the innervation of the sympathetic nervous system.

The last paper describes a method of dealing with the common types of hysterical disorder. The method has been applied in 250 cases of mutism, deafness, aphonia, monoplegia, paraplegia, hemiplegia, and disordered gaits. The chief phenomena underlying the hysterical make-up are weakness of will and intellect, hyper-suggestibility, and negativism. The patient has a certain fixed idea, the result of auto-suggestion, and to this his attitude is negativistic, otherwise he is more responsive to suggestion than the normal person. The fixed idea can be treated by suggestion, but it is doubtful as to how far the soil on which this symptom is developed can be improved by treatment, and the writers make no claim to do so.

The principles involved in the treatment are—(1) suggestion, (2) re-education, (3) discipline. Employed alone these methods are, as a rule, not so efficacious as in combination. Hypnotism attempts at cure by pure suggestion, but unfortunately patients often show themselves intolerant of suggestions relating to their fixed idea while in the somnambulant state, and the method has been found slow and uncertain. In isolation the method of discipline is in the foreground, but in many cases this, again, is often too prolonged and ineffectual. Persuasion—a

form of re-education—is also probably more valuable when preceded by preliminary suggestive treatment.

The most reliable method has been found to consist in brief suggestive treatment, followed by rapid re-education. The suggestion may take any form, but it is essential that the patient should be convinced that it will produce an immediate recovery. The simplest form is the application of the Faradic current, as nearly every layman is willing to accept the suggestion that some form of electricity will cure him. Before the actual suggestion, the idea should be fostered that the physician understands his case and is able to cure him. His attitude must be authoritative in every respect. When the suggestion is employed, at the least sign of recovery re-education is commenced, and, before he can collect his thoughts, the patient is hurried along by persuasion until the disordered function is completely restored.

The writers explain their methods more fully under the headings of the various hysterical symptoms, and in conclusion they emphasise, as the author of the first paper does, the necessity for a thorough survey of the case before a decision is made as to what form of service will be most advantageous to the patient and the nation.

H. DEVINE.

Mental Regression: Its Conception and Types. (*Psychiat. Bull.*, October, 1916.) Wells, F. L.

The author, who is a Doctor of Philosophy and Psychologist at the McLean Hospital of Waverley in Massachusetts, bases his study in part on the literature and in part on original cases. "Regression" is a term that has been differently defined. It is here regarded as a turning back to a stage of development which is only normal at a less mature period of the individual's development. It is usually, though by no means necessarily, a reversion to the infantile, and its advantage is that it involves an economy of energy. It is sometimes termed the "shirking reaction," and it always detracts, in more or less degree, from the individual's fullness of life, or rather, we should perhaps say, it is the sign and result of defective fullness of life. It may be pathological, but is not necessarily so, unless it interferes with adaptations, though it can never be regarded as normal. The young woman, disappointed in love, who goes into a convent, and the old maid who becomes devoted to her parrot, are brought forward as typical examples of regression. It will be seen that there is some lack of clearness about the conception of a "regression," which the author fails to dissipate.

The exercise of the chief functions of life serves fundamental trends, and involves some degree of control over the external world. When the energy falls away to less fundamental (and usually more infantile) trends involving no such control, there is regression. The author discusses at length the group, now regarded as very large, of auto-erotic, or, as he prefers to term them, auto-hedonic, phenomena, of which masturbation is the prototype. Masturbation may be said to occur "when orgasmic sensations are produced in the genital tract by action or mental process of which the individual is aware, and without the contactual stimulus of another living creature." The author regards

masturbation as a normal and possibly even useful transitional stage between the diffused pleasurable stimulation of infancy and the sexual activity proper of adult life; but when it takes place in adult life it is regressive. With this group of phenomena may be associated introversion. Such introversion may be said to occur when thought is more or less satisfactorily substituted for conduct, and imagination for reality, as when a young man, instead of effectively courting his sweetheart, day-dreams about her. This is regression. "The more prominent the introversion the deeper the regression."

The prime feature in all regression is negation of effort, the return towards the child-state. The child needs no effort, because its parents care for it. Regression thus becomes a return to protection and domination, to all those influences which may have father symbols or mother symbols, including not only some forms of sexuality but also of religion, alike in what may be regarded as its normal shape as in its erotic aberrations of Mariolatry, etc. This theme is developed at considerable length. After discussing asceticism in this connection, the author passes on to masochism in the sphere of erotic reactions, following McDougall in grouping together asceticism and masochism under the instinct of self-abasement. The tendency of self-abasement is against progression and in the direction of regression. The author seems to use "progressional" as synonymous with "self-assertive." He is here open to criticism, for there are clearly limits to the "progressional" character of self-assertion, limits which seem to be overlooked when both religion and anti-militarism are regarded as always and necessarily regressive.

It can scarcely be said that this lengthy study—which, as will be seen, is mainly on Freudian lines—much advances the subject dealt with, but it remains interesting and suggestive.

HAVELOCK ELLIS.

The Psychiatric Study of Delinquency. (*Fourn. Nerv. and Ment. Dis.*, May, 1916.). Adler, Herman.

There is a tendency to regard delinquency as a manifestation of abnormality, if not disease. But while the attitude of the community is changing, and we are more and more coming to look on delinquency as comparable to disease and therefore to be treated with sympathy and constructive remedies, the law is still chiefly concerned in searching for "responsibility." We are apt to blame the law and exalt science. The truth of the matter is, says Adler, that medicine in general and psychiatry in particular, have not yet sufficiently advanced the subject to warrant definitions of such precision that law can note them. We still have insufficient knowledge to analyse human nature. It will take psychologists and neurologists a long time to explain the phenomena, just as Ehrlich said it would take a hundred years to explain the phenomena of immunity. With this in mind and using terms simply as symbols, as was done by Ehrlich for his side-chain theory, Adler proposes the following classification of "individuals with mental and social difficulties": (1) The group of defect or inadequacy, in which intelligence is below the lowest normal level (the feeble-minded, Kraepelin's

oligophrenias, the end stages of dementia præcox, and the deteriorating psychoses); (2) the group of emotionally unstable (individuals of average or better intelligence, but showing in conduct the predominating influence of emotion); (3) the group of those with average or better intelligence and only secondary emotional disturbance, but with mistaken logical thought processes (the egocentric, the cynical, the prejudiced, the contentious, etc.). Many cases lie in the borders. A distinction must always be based on prolonged observation. The "behaviouristic psychologist" will place little emphasis on the results of a single examination but much on the history of the case. Of 100 delinquent cases (men æt. 25 to 55) at the Psychopathic Hospital, 35 belonged to the first group, 22 to the second, and 43 to the third. The main difference in the careers of these delinquents from those of average normal people consists in their apparent inability to learn by experience. Adler applies a generalisation of Weigert's to the effect that the body tends to react to injury by an over-production of defences, that is to say, the formation of habits and the acquisition of mental control. The delinquent must be encouraged to react to injuring conditions by an over-production of defences, the threshold of the reaction to be determined in each individual case. By careful training, based on analysis of the individual, it should be possible to influence future conduct. Nothing is gained by attempting to increase the intelligence of a mental defective or to change the personality of a paranoid individual. But much may be accomplished in controlling the emotional instability of the other group. What is needed is a system of mental and emotional exercises for the formation of habits, a kind of orthopsychics. Such training is more hopeful than punishment, for punishment increases the delinquent's intoxication rather than strengthens his defences, and is like administering alcohol in delirium tremens. Adler draws an analogy from immunisation, the therapy involving a building-up of the defences by training and gradually strengthening, but not overwhelming, the organism.

HAVELOCK ELLIS.

Korsakow's Psychosis in Association with Malaria. (Lancet, April 28th, 1917.) Carlill, H.

Loss of memory occurs as the result of shell-shock, it may be simulated to avoid uncongenial service, and it is a symptom of dementia paralytica, concussion, alcoholic psychoses, senility, and epilepsy. The form of amnesia described by Korsakow as occurring in alcoholic patients with peripheral neuritis has also been found, associated with nervous symptoms, in other illnesses, such as typhoid, diabetes, and arsenical poisoning.

The writer here describes the case of a stoker, æt. 45, with the characteristic mental symptoms of Korsakow's psychosis, which he regards, in this instance, as malarial in origin. The neuritic symptoms were confined to a loss of the ankle-jerks. General paralysis was excluded by a negative Wassermann reaction.

H. DEVINE.

Dementia Præcox associated with Uncinariasis. (The Journal of Nervous and Mental Disease.) Bondurant, Dr. Eugene D.

In the Southern States of America the hookworm has long been regarded as a possible causative factor in the psychoses and other nervous disturbances of childhood and early life. It exerts an uniformly unfavourable influence over mental development, and contributes towards the production of epilepsy, hysteroid states, and confusional psychoses, all of which syndromes disappear when the parasites are expelled.

In the case recorded hookworm injection seems to have constituted the sole exciting cause of a genuine dementia præcox. It was that of a young girl, æt. 16, previously healthy and mentally sound, of above the average intelligence. Except that her mother had been "nervous" at times her family history was alleged to be free from taint of neurodegeneracy.

She spent a summer in the country and went without shoes part of the time, and "had ground-itch terribly." Soon after she grew pale and weak, became listless and indifferent, and mentally dull. On returning to school she found her work too hard for her, and that she "could not learn." During former years she had been bright, intelligent, active, attentive, and near the head of her class, whereas she was now dull, apathetic, inattentive, given to dreaming, and at times seemed dazed and confused. She grew worried and despondent, and cried a good deal. As time passed she grew steadily worse, became more apathetic, completely unable to learn anything, or fix her attention on her tasks; got slovenly in habits, talked to herself, and was silly and feeble-minded to the last degree.

She was brought home, when her condition was a fairly typical hebephrenic dementia præcox. She would not converse, would sit immovable staring at vacancy; would at times smile or giggle foolishly; she made no complaint and did not seem distressed—merely apathetic, dull, and devoid of mental activity. She was entirely indifferent to her personal appearance, would not dress or undress herself, and was unclean in her habits.

Amongst other "physical" symptoms there was a partial anæsthesia over entire cutaneous surface. There were no cataleptoid symptoms. Examination of fæces showed the presence of hookworm ova in unusual numbers.

After free movement of bowels by calomel and Epsom salts she was given ten grains of powdered thymol in a capsule every twenty minutes until sixty grains were taken. Two hours later she had a second dose of salts. About 1,500 hookworms were expelled. Liberal dietary was given, with an iron tonic, and rest in bed for ten days. Improvement was immediate, and recovery rapid and complete. Before the ten days' rest was finished all symptoms of mental retardation, instability, and defect had completely disappeared, and memory, reasoning power, and power of attention, as well as the emotional state, were practically normal. One month later she returned to school, made up her deficiencies, and completed the work of the year with her class, and with credit.

Three years after the patient had remained perfectly well, there being no trace of mental or nervous instability, peculiarity, or defect, to suggest the occurrence of a former severe psychic degeneration.

T. DRAPES.

3. Sociology.

Eugenic Factors in Jewish Life. (*The American Hebrew*, January-February, 1917.) Fishberg, M.

It is well known that the Jews produce a very much larger proportion of persons of marked ability than the nations among which they live. Thus, although constituting less than one-third *per cent.* of white humanity, about a dozen of those who have received Nobel prizes have been Jews, and of the three American men of science who were awarded the Nobel prize, one was of Jewish extraction. It is also known that there is a very much larger proportion of mental defectives, insane, idiots, congenitally deformed, and physically weak or puny individuals among the Jews than in any other civilised religious, social, or ethnic group. Dr. Maurice Fishberg, of New York, a distinguished authority on Jewish anthropology and sociology, author of a comprehensive book on *The Jews*, here attempts to explain these two apparently contradictory facts. The considerations he thus brings forward have an important bearing on heredity as well as on eugenics and dysgenics.

Up to about seventy-five years ago practically all Jews were orthodox and intensely religious, following Biblical and rabbinical ordinances in matters of matrimony as in everything else. These ordinances were on the whole more eugenic than Christian or Mohammedan marriage laws, but with important exceptions. Every Jew was bound to marry and procreate as early as possible in life—before the age of eighteen—and for Jewesses before sixteen, but not before thirteen. Recalcitrants were forced to marry. Marriage for money was deprecated; the bride must belong to a worthy family, and above all it was desirable that she should be the daughter of a learned man. The mediæval and late Jews were thus apparently great believers in heredity, and their ideals of marriage centred in intellect and learning. If the rich could not find scholarly husbands for their daughters in their own circles they would seek them among the poor. Rich learned castes were thus formed, but not wealth, or old stock, was the core of the caste, but intellect. A promising boy among the poor was always sought out, educated, and well married, and an intellectual aristocracy thus constituted. It is on this foundation that the great achievements of the Jewish mind have arisen.

But there is another side to Jewish marriage laws and customs. In the first place, while regard was had to the beauty and physical condition of a bride, there was complete indifference to the physical defects of the bridegroom, provided he was a scholar. Moreover, although the beautiful bride was preferred, every Jew and Jewess, even if a physical and mental cripple, was encouraged to marry and to propagate. The blind werē united with the lame, the insane with the imbecile, etc., and a remarkable and far-reaching dysgenic influence was furnished by societies to supply these unfortunates with dowries and trousseaux.

Such societies still exist, not only in Eastern, but even in Western Europe. Thus it is that, beside the excess of superior members in a Jewish community, there is also an excess of paupers and defectives, with a large number of borderland cases fairly healthy but with sub-normal energy, so that they are periodically out of employment; as they do not become drunkards, and are consequently considered by the charitable as "deserving," they are encouraged to go on increasing their numbers.

These conditions are changing. The Jews are adopting the customs of their non-Jewish neighbours. The number of defectives will thus be diminished. The proportion of intellectually superior Jews will also be diminished. "Whether the loss thus sustained in the number of capable Jews is compensated by the decrease in the number of defectives," Fishberg concludes, "depends on the point of view."

HAVELOCK ELLIS.

The Madness of an Emperor, or the Aberration of a Nation? [Pazzia d'Imperatore o Aberrazione Nazionale?] (*Rivista di Patologia Nervosa e Mentale, Anno xx, fasc. 7, 1915.*) Prof. Ernesto Lugaro.

Among the many books and pamphlets which have been published on the psychology of the authors of the present war, that is to say, not only on the psychology of the two Emperors and that of the chief members of their governments, but also on that of the German peoples, Prof. Lugaro's article takes a high rank. It is one of the most powerful indictments of the German race which has appeared, but the facts by which the arguments are supported, are proved facts, and the conclusion is arrived at logically, step by step.

The writer examines briefly the case of Francis Joseph, "a man of intellectual mediocrity, and moral insensibility," to whom no one has ever attributed a generous act, a happy phrase, or a far-seeing thought. Possibly during the last few years he was sinking into senile dementia.

William's case is considered more in detail. But after making due allowance for his atrophied limb, his epileptiform seizures, his vanity—oscillating between sheer childishness and the delusions of a paranoiac—his brutal, blasphemous speeches, his duplicity, the writer only sees in the German Emperor "a docile, though sometimes maladroit, instrument in the hands of the German Government."

The Professor pushes aside the two Emperors almost contemptuously. He proceeds to study the German race, politically, morally, socially.

He recites the history of the double-dealing policy of Germany from the days of Frederick II to those of Bismarck and Bethmann-Hollweg. "It was not only in August, 1914, but for two centuries that Germany has sustained the theory that treaties are only to be respected while it is convenient to do so."

The various systems of German espionage are described in detail. Foreign espionage is considered under the heads of military and economic, the latter being the more perfidious and unscrupulous. As to the domestic espionage, it is so terrible that one cannot believe that any but a race of slaves would submit to it.

The moral and social conditions of the German people as revealed among the officers of the army, the rich industrials, the socialists, and the intellectuals, and the parts played by these classes in preparing for the present war, are studied with care. In the analysis of the famous "Appeal to Civilised Nations" every shred of hypocritical respectability is torn away, and German intellectuality, such as it is, stands naked before the world.

The history of the growth of the theory of Germany's hideous system of war is traced from the time of Von Clausewitz to the present day. The doctrine of this system being admitted, one understands how the Germans deny their misdeeds, and assert that no act of *useless cruelty* has been committed by the Kaiser's troops. Then in a paragraph, every sentence of which rises above the last in burning eloquence, Lugaro relates the horrible story of the German atrocities during the present war—atrocities which are utterly unequalled for devilish cruelty in the history of the most barbarian nations.

In England a great deal has been made of the point that the commanders and crews of German submarines who sink unarmed merchant ships and leave the sailors and passengers to perish miserably, and the German officers and soldiers who murder the wounded, massacre the civil population, violate women, and burn down private houses unnecessarily, commit these crimes because they are ordered to do so, and that consequently they are free from responsibility. Hear what Lugaro says:

"With all that, although obedience may be in the blood, although it may be reinforced by habits acquired in the family, in the school, and in life, there are acts of obedience which would not be committed if the moral stamp of the man who obeys were not adapted to the order which he receives. There are armies—not German—which would not obey certain revolting orders. There are soldiers—not German—who would allow themselves to be shot rather than murder the wounded, rip up women, or mutilate infants. There are officers—not German—who would feel themselves dishonoured by transmitting certain orders. It is all very well for theorists sitting at a table to declare that terrorism is a military necessity, but terrorism could not be put into practice if the troops were not adapted to the inhuman work."

The Professor's conclusions are obvious:

"Even if one cannot recognise perfect normality of mind in the two Emperors," he says, "one must admit that their abnormalities have a negligible value in the face of the great psychological and social movements which prepared the present war. The mind of Francis Joseph and the arm of William are not worth even as much as the nose of Cleopatra."

Prof. Lugaro writes me that his article has been translated into English by Dr. W. N. Robinson, and published by Routledge & Sons. If any one meets with the pamphlet it is worth reading, and will open some people's eyes.

J. BARFIELD ADAMS.

4. Psychology in Literature.

Insanity in some of Shakespeare's Female Characters and Feminine Psychology [*Follia nelle Donne dello Shakespeare e Psicologia Femminile*]. (*Il Manicomio, January, 1915.*) Prof. Fr. Del Greco.

One is sometimes tempted to ask whether foreigners understand Shakespeare. We know that with all their boasted study of his plays, and their—save the mark!—emendation of his text, the Germans do not and never did understand him. The Hamlet that one meets in *Wilhelm Meister* is Goethe's Hamlet, not Shakespeare's. Dr. Hermann Ulrici reads his own fantastic ideas into the Englishman's honest work. Gervinus is possibly a little more rational, but very little.

There is no doubt that the Italians understand the English dramatist better than other foreigners. This may be due to the fact that directly or indirectly Shakespeare wrote under the influence of Italian literature. He was acquainted with the works of Boccaccio, Ariosto, and others, either in the original or by means of translations. The scenes of many of his plays are laid in Italy. Do not the names of Venice, Verona, Padua, long before they evoke the recollection of some fact in history, call up to our minds the story of Portia and Shylock, the feuds of the Montagues and the Capulets, the quarrels of Katherine and Petruchio? Would it have been possible for the story of Romeo and Juliet, with all its colour and its passion, to have been written of any but Italian lovers? Nay, more, would it have been possible for it to have been written by any man who was not impregnated with the genius, the life, the very perfume of "the land where lemon-trees do bloom?"

Prof. Del Greco is himself conscious of the difficulties that a foreigner meets with in interpreting the English poet.

"William Shakespeare!" he exclaims. "He is so different to us. How can we understand him? As his dramas unroll themselves, we see the most varied human characters moving among the multitudinous vicissitudes of life. They follow a logical course, and the logic reveals itself distinctly in every character amid its changing fortunes. Certainly, there are apparent disorders, due to the complex, the casual, and the unexpected, which are found in human actions."

The first of Shakespeare's heroines, studied by the Professor, is Ophelia. She is a charming girl, and in his earlier and happier days before the shadow of his father's murder fell across his path, Hamlet made love to her, brought her flowers, and wrote madrigals in her honour. Her father, Polonius, and her brother, Laertes, growing suspicious of the object of Prince Hamlet's attentions, forbade her to receive him, and Ophelia, though she loved him with all her heart, obeyed.

Strange coincidence! The refusal of Ophelia to receive Hamlet occurred about the same time that the story of his father's murder was revealed to him. Ophelia's father and the Queen, Hamlet's mother, believe that the extraordinary conduct assumed by the Prince is due to love. To test the case, they arrange a meeting between the girl and

the young man in the Palace. At first Hamlet speaks gently. Then he perceives that he is being spied upon, and his suspicions fall upon Ophelia. His manner changes; he speaks bitterly, cruelly. The poor girl suffers intensely; partly because she thinks that she is abandoned, but far more because she sees, or at any rate, believes, that her beloved Hamlet is mad.

The poet with happy expressions indicates the development of Ophelia's heart-felt sorrow.

In the play-scene, Hamlet lies at Ophelia's feet. But he behaves cruelly to her. His whole attention is bent upon the King. What he says to the girl is hard and pungent, and is spoken with a sneer upon his lips. When she is alone, Ophelia broods over her sorrow, her agony, which is a mixture of pity, disillusion, and wounded pride.

Then comes the decisive event. Hamlet accidentally kills Polonius, and Ophelia becomes mad.

Through a maze of dark events and sad presentiments the poet leads us to the culmination of the tragedy. In spite of some opposition, Ophelia makes her way into the royal presence. She, the flower of modesty, is dissolute in her speech. Her dress is in disorder. She sings snatches of songs, which she interrupts with disconnected and incoherent phrases. From these phrases, as from the fragments of a broken crystal, one can reconstruct a mind, the agony of a mind; they are expressions of a love betrayed, of suspicions, of mental pain, all mingled with fleeting images of the secret funeral of her murdered father.

The last scene shows us the poor, mad girl, crowned with flowers, clinging to a willow-tree on the bank of a brook. She slips, loses her hold, and falling into the water, is drowned.

Having thus briefly sketched Ophelia's case, the Professor proceeds to consider it from a medico-psychological point of view:

"Is this picture of Ophelia's madness exact?" he asks. "It is to a certain point." "From what form of madness was she suffering?" "From dementia præcox."

Shade of Kraepelin! Ophelia suffering from dementia præcox!

Young men and young women, proceeds the Professor, of pleasing mental constitution, who have previously shown themselves bright and intelligent, gradually or suddenly, sink into madness. They are delicate plants which quickly wither in the flower of their age at the shock of oncoming puberty. Such was the madness of Ophelia.

But after all, the Professor has some doubt about his diagnosis.

If this, he goes on to say, had been a picture of true madness, there would have been in the language of Ophelia phrases more empty and more disconnected. The sphere of the emotions would not have been deep and susceptible to suffering, but gentle and colourless. The nature, which feels profoundly, does not become mad in this way. Certainly, among the prodromes of dementia præcox there are delusions of love, mysterious rages, and vain dreams of ambition. But all from the beginning have the impress of an affectivity capable of little resistance. The apathy, so characteristic of this form of disease, is marked from the commencement, and gives to the combat of the affections a note of superficiality and incoherence. In Ophelia there was a painful

superabundance of the affections : there was a feeling of outrage when she saw herself suspected and derided. A person predisposed to dementia præcox before all this would have been indifferent. Was not after all the case of Ophelia one of minor gravity? Have we not before us an episode in a case of simple "*confusione mentale*," which might have been cured? After all, it was a sad accident, and nothing else, which caused the death of the poor girl. The clinical picture does not leave that in doubt.

There is one point that Prof. Del Greco has not mentioned. If Ophelia had been suffering from dementia præcox, would she have cared a brass farthing about her lover? And Shakespeare certainly indicates that she cared a great deal about him. Would she have been distressed at the idea that he was mad, at his altered demeanour, his rudeness, his untidiness in dress, he, who in her eyes, and in the eyes of all the world, had been the very flower of chivalry?

The Professor next proceeds to the consideration of the case of Lady Macbeth.

Macbeth has communicated the witches' prophecy to his wife. The old king, Duncan, is their guest that night in their own castle. The idea of murdering him springs up in both their minds. Macbeth hesitates, and his ferocious wife with words of pungent sarcasm spurs him on to commit the crime. We see Macbeth, through all the unfolding of this terrible scene, hesitating, agitated by thoughts of remorse and fear—thoughts, in the midst of which glitters a solemn, grandiose philosophy. We see the varying phases of the consciousness of Macbeth. And beside him stands his strong, violent, and cunning wife.

Duncan is murdered, and Macbeth is king, and the latter, giving way more and more to massacre and slaughter, becomes the victim of frightful visions. Lady Macbeth, a clear-sighted and profound dissimulator, rules and comforts him.

At this point, the position of the two characters changes. The savage energy of Macbeth rises supreme among all the horrors that surround him. Lady Macbeth disappears from the drama. Suddenly, when the catastrophe is imminent, when the ruin of the tyrant is approaching, Lady Macbeth reappears. A doctor and a maid are beside her. With a lamp in her hand, and dressed in white, she moves like a phantom across the stage. With broken, feverish words, with a profound sigh, with gestures which reproduce the terrible circumstances of the night of the assassination of Duncan, she passes from our sight. The tragic effect of the scene is extraordinary.

Is that scene true to nature? The somnambulism of Lady Macbeth is true. It is true also that the words and acts of long ago, buried in the memory and the mind, repeat themselves in such a state. It is true that there are ferocious women like Lady Macbeth who never experience remorse. They are grave neuropathics. They may be sufferers from hysteria. Somnambulism is not uncommonly a manifestation of hysteria. But this is a feminine malady *par excellence*. Terrible women, such as the one we are considering, have both feminine and masculine characteristics. It is common for hysterical criminals to poison their victims, and if Lady Macbeth did not poison hers, she came very close to it. It was not to make them drunk only that she

put drugs into the wine of those who guarded Duncan. However, somnambulism is only a morbid episode; it is not a serious disease, and it does not cause death, which appears to have taken place suddenly after her sleep-walking, in the case of our heroine.

Then follow some remarks which it would be well if those of us, who are fond of searching for evidence of mental disease in the characters and actions of personages in fiction and even in ancient and modern history, would read, mark, learn, and inwardly digest.

But it is ridiculous, says Prof. Del Greco, to criticize Shakespeare from an alienist's point of view at the distance of several centuries. What was known about psychiatry at that time? Besides, a poet is not compelled to follow the objective-truth of facts and ideas in all their minute particulars. He must convey the appearance of truth. That is all. He must move the feelings of his audience, and sometimes in doing so his genius leads him away from the truth. If Ophelia had been drawn as her form of madness demanded that she should be, she would have appeared insignificant. Without the terrible somnambulism of Lady Macbeth, she would have aroused in our minds only the feelings of fear, horror, and repulsion.

Those modern poets who describe facts in all their crudity, those artists who reproduce disease and madness with great fidelity upon the stage are imitators, not poets and artists. One cannot help thinking that this is going a little too far. Surely, when it is necessary to describe disease or madness, fidelity is better than monstrosities which offend common sense, or travesties which verge upon the ridiculous.

The writer then passes on to consider the passion of love as it is revealed in Shakespeare's women; pure and all-else-forgetting as in the case of Juliet, selfish and interrupted by memories of past amorous entanglements as in that of Cleopatra.

Shakespeare, says the Professor, endows his women with great fatality of the affections and impulses. He makes them terrible by that, not by the mind or the will. They have no power of long-continued resistance; they have not the energy of men. Hamlet, Macbeth, Othello, in tremendous circumstances only reveal the original disequilibrium of their minds. They are not mad at all. Shakespeare has only one study of a madman—old King Lear—and he in the end is cured. Ophelia and Lady Macbeth, on the other hand, show grave signs of mental disease.

In spite of charming writing and a wealth of illustration, ranging from the female as found among the lowest and most disagreeable forms of animal life to Sappho singing her love songs by the shores of the Ægean Sea, the remainder of the paper, that which deals with the psychology of woman, is rather commonplace. The writer tells us nothing new. He only presents us with well-known facts arrayed in beautiful language. His conclusion practically comes to this: that the masculine and feminine minds, even where they seem most to differ, are not opposed, but are merely complimentary the one to the other.

J. BARFIELD ADAMS.

5. Asylum Reports for 1916.

The Annual Report for the Year 1916 of the Government Asylums in Egypt.

Yearly we receive this Report and each number impresses one with the amount of constructive work which is being carried out in Egypt.

This year further relief from merely clerical work has been given to the Director, Dr. Warnock, by the Central Board taking over many details as to payments and general non-medical administration. Government has recognised the good work done and conferred on him a New Year Honour.

The Report consists of five parts; the first contains the general report on the whole lunacy division, the second refers to "M" special hospital for British military cases, Part III is devoted to the parent institution and Part IV to the new asylum at Khanka, while an additional part provides appendices concerned chiefly with Government instructions.

The number of beds in the two asylums remains 1,550; the number of patients in residence has risen from 2,055 to 2,081, there being an excess in residence amounting to 531. The ordinary admissions were 970, besides 324 British soldiers. 824 Egyptian patients were discharged; 228 of these recovered, while 575 were sent home, though not recovered, but being harmless they were discharged to make room for more acute cases; 21 were found not insane. This is not satisfactory, for such unstable persons tend to relapse or to fall into degenerate or criminal ways.

The number of deaths at the two asylums amounted to 244; on the average number resident, 11·2 *per cent.*

Lists of the various general and administrative works carried out are given in detail.

An irrigation farm was worked at Khanka Asylum and this produced vegetables for both asylums, but the land was becoming water-logged, so the farming had to be reduced. Seven patients were admitted with fractured bones, six with cut throats. Eight patients were received as voluntary boarders, and this marks an advance in the understanding of the treatment of the insane by the general Egyptian public.

The European medical staff is reduced to two, Dr. Warnock and Dr. Dudgeon, but an officer of the R.A.M.C. was supplied to assist with the British military patients.

Part II.—This is concerned with the returns from the military special hospital, called "M." During the year 324 patients were admitted, suffering from the various forms of insanity. Melancholia contributed 59, mania only 16, alcoholism 31, and general paralysis 117. Epilepsy 23, and adolescent insanity 36. Simple mental weakness is represented by 45 cases, and neurasthenia 30. One would have expected more than 18 delusional cases, but the general result is much as might be expected. Of these patients the Wassermann test was applied with a positive result in 35.

The table giving attributed causes is, like all such tables, imperfect; active service, heredity, and epilepsy being credited with the chief part in causation.

Part III.—Including the military patients 1,344 patients were

admitted in the year, a larger number than admitted in any asylum in the British Empire.

The patients were employed in making baskets and mats. The usual clinical lectures were given to fifth-year students of the Cairo School of Medicine. A certain number of Turkish prisoners were admitted. Their language being Turkish made it difficult to get into touch with them.

Twenty-five convicted prisoners were sent for report on their mental condition, of whom seven men and two women were sent back to prison, being sane. Four murders were committed in Egypt by lunatics, but none of these had been in the asylum. Seven persons accused of grave offences had been in the asylum, and had been returned to the care of their friends.

A series of interesting tables is given, showing the forms of insanity and the nature of the offences of 55 male patients. Of the 55 males and 4 female patients 12 suffered from pellagrous insanity, 4 from that due to hashish. General paralysis was not represented among these patients. Murder and attempted murder were common, and these not specially associated with any one cause. A table is given of the forms of mental disorder met with among the prisoners of war.

Of admissions, 1,104 were first admissions, while 240 were readmissions. The usual tables as to times of admission, occupations, etc., are given, and need not be reproduced here.

Of 923 admissions 120 men and 59 women were suffering from pellagra, 52 from hashish, 192 from mania, 90 from melancholia, and 69 general paralysis.

Special tables in reference to pellagra are given, showing the districts from which they come. Tables giving the nationality and the places of residence of the general paralytics are given. Nine *per cent.* of the male admissions were suffering from general paralysis of the insane.

A considerable number of the patients had an undoubted neurotic heredity, and it was certain that a much larger number had that defect, but it was hard to get a true history in Egypt, and we know the difficulty in England. The death-rate is rather above the English standard. Only 15 autopsies were performed, in consequence of the pressure of ordinary work.

The Laboratory examined by Wassermann test 850 specimens, and also 521 cases of ankylostoma, beside a few cases of bilharzia, malaria, and tuberculosis.

One table of particular interest gives the statistics of 630 consecutive cases to which Wassermann's test (Meier's modification) was applied. The result was positive in 26.6 *per cent.* of men and 30 *per cent.* of women.

Of general paralysis of the insane, 75.6 *per cent.* men positive and 100 *per cent.* females positive. A full list is given of the forms of mental disorder and the percentage of positive reaction. This is worth careful study. In treatment a large amount of hypnotics was found to be necessary, and Dr. Warnock found the wet pack, now discarded in England, a useful help.

Many attempts at suicide by hanging were made, but without success. The high seclusion rates and the free use of hypnotics are a direct

result of excessive overcrowding, which Dr. Warnock says is to be regretted. This part is brimful of interest for all connected with asylum work.

Part IV.—Dr. Dudgeon's special report is eminently practical. He points out the reduction of costs, and of the increase of useful work on the land.

At Khanka there is accommodation for 400 patients, but there are 700 in residence.

The medical staff consists of Dr. Dudgeon and three native assistants. It is suggested that at Khanka the country patients should be received, while Abassia will take those from towns. Dr. Dudgeon regrets that a large number of epileptics and chronic patients have to be received, thus reducing the numbers of curable patients who could work on the farm. The usual tables are added, including the various items of administrative cost.

The death-rate is rather high, and depends to a great extent on general physical decay and diarrhoea of a very intractable kind. No mechanical restraint has ever been used in the asylum, and seclusion has also not been used this year. Lectures were given by one of the Egyptian doctors to the staff, and the results were satisfactory.

The list of diseases treated is a very long one, and a very large number of surgical lesions are reported.

Scabies, dysentery, and diarrhoea are very common.

Thirteen of the staff suffered from malaria.

The electric power is much used for pumping as well as lighting, and the water supply was reorganised.

Drug-producing plants are being grown on the farm to some extent. Very full tables of expenses are given. Dr. Dudgeon had for over three months to take over the duties of Dr. Warnock, who was on holiday. His work, as shown by the reports, gives evidence of his energy and determination under local conditions of difficulty and isolation.

Part V of the Report contains very interesting views of the development of the treatment of the insane in a partially organised country. Instructions in detail are given as to the removal of lunatics from various parts of the country to the asylum, it being made clear that the patient is not to travel with the ordinary travellers. In Egypt there are now, all over the country, district hospitals under Government control with native doctors. In each of these provision is made for the reception of local lunatics, but it is pointed out that these hospitals are only receiving stations, and that all patients, if markedly insane, must be sent at once to the central asylum at Abassia. It was found necessary to draw up rules for the temporary treatment of such cases, and an admirable and concise code is laid down. The instructions would rather amuse English doctors connected with asylums from their simplicity, but one can see the necessity for exact directions for the local doctors. Instructions are given so that persons who are excitedly talking religion or politics should be cared for, but not necessarily treated as insane.

It seems that persons have been rather summarily sent to the asylums without certificate or order. Anyway, from the appendices one can trace the evolution of a Lunacy Law.

Part IV.—Notes and News.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE ORDINARY QUARTERLY MEETING of the Association was held at the Medical Society's Rooms, Chandos Street, London, W., on Tuesday, May 15th, 1917, Lieut.-Colonel David G. Thomson, M.D., R.A.M.C., President, in the chair.

There were present: Sir G. H. Savage, Sir Robert Armstrong-Jones, and Drs. T. S. Adair, G. F. Barham, Fletcher Beach, D. Bower, P. E. Campbell, J. Carswell, James Chambers, R. H. Cole, Maurice Craig, A. C. Dove, T. Drapes, T. Duff, R. Eager, J. H. Earls, C. T. Ewart, C. F. Fothergill, A. Hume Griffith, W. S. Kay, H. Wolseley-Lewis, H. J. Mackenzie, W. F. Nelis, E. S. Pasmore, J. G. Porter Phillips, D. Rambaut, J. Noel Sergeant, G. E. Shuttleworth, R. Percy Smith, T. E. K. Stansfield, J. Stewart, J. Tattersall, F. Watson, W. R. Watson, and R. H. Steen (Acting Hon. General Secretary).

Visitor: F. Sano.

Present at the Council Meeting: Lieut.-Colonel D. G. Thomson, M.D., R.A.M.C. (President) in the chair, Sir Robert Armstrong-Jones, and Drs. T. S. Adair, Jas. Chambers, R. H. Cole, Thos. Drapes, R. Eager, H. J. Mackenzie, J. G. Porter Phillips, J. Noel Sergeant, T. E. K. Stansfield, H. Wolseley-Lewis, and R. H. Steen (Acting Hon. General Secretary).

Visitor: Dr. David Bower.

The following sent communications expressing regret at their inability to be present: Drs. R. Dods Brown, J. R. Gilmour, R. R. Leeper, John Keay, R. B. Campbell, C. C. Easterbrook, N. Lavers, P. W. Macdonald, J. D. McRae, M. J. Nolan, H. H. Newington, G. N. Bartlett, and J. G. Soutar.

The minutes of the last meeting, having been printed in the Journal, were taken as read, and approved.

OBITUARY.

The PRESIDENT said that before proceeding to the brief agenda, he regretted having to report a serious and heavy obituary list since the Association last met. No less than five of their well-known colleagues had, since then, departed this life. The first was Dr. R. B. Smyth, who was Medical Superintendent of the County Asylum, Gloucester. One knew, both from the obituary notices and from other knowledge, that Dr. Smyth must have been a very able and brilliant man. He died at the comparatively early age of 45. He was educated at Uppingham School, and at Trinity College, Dublin, where he graduated in 1893. In 1894 he became Clinical Assistant at St. Luke's Hospital, and in 1895 was appointed Assistant Medical Officer at Gloucester County Asylum, and became Superintendent of that institution on the death of Dr. Henley in 1908. There he won the entire confidence of his Committee, his affection for his patients and the great interest he took in their welfare was always predominant. Dr. Smyth must have been a very keen all-round man, not only in his work, but in all forms of sport, athletics, and all forms of outdoor recreation; he was a good shot, and an exhibitor of dogs, for which he won cups and prizes. The funeral took place at Belfast. He left behind many to mourn his loss, not least among them being his colleagues, his staff, and his patients.

Another of the members who had died recently was Dr. William Rawes, who, being a London member, was seen at the Association's meetings more frequently. He was Medical Superintendent of St. Luke's Hospital, City Road. He, too, passed away at a comparatively early age, namely, 55. He had been connected with St. Luke's for many years, and his sudden death, from some form of lung trouble, took place very shortly after that establishment was closed.

The next death to be noted was that of Dr. Thomas Seymour Tuke, a very constant attender at the meetings of this Association, and well known to most of those in the room. He did good work on the Council. His death took place at the age of 61, from pneumonia, which followed rapidly upon an apparently simple cold. The *Lancet*, in its obituary notice, said that the deceased member was the

son of Dr. Harrington Tuke, who, in the last generation, was a leading consultant physician for mental disorders, and was a grandson of the famous Dr. John Conolly. Dr. Tuke was educated at St. Paul's School, and afterwards proceeded to Brasenose College, Oxford, and later to St. George's Hospital. He had a keen love for all British games and sport. After his Oxford career and his entry at St. George's, he showed his abilities as a physician, especially in this department of the great subject. He was also one of those who protested against the dangers which might follow on the existing fashion of placing insane patients in ordinary nursing homes, a very important danger to be remembered at this time. Dr. Tuke spoke from a full knowledge of his subject, after many years' association with his brother at Chiswick House. He was appointed lecturer on mental diseases at St. George's Hospital. His instruction to his students was always of a very practical character, and his general advice to them in matters connected with lunacy was always of a character which they required in general practice. He did not aim at any high philosophical methods, nor methods based upon scientific research; his aim was to present them with what would be most useful to them when they would come into contact with actual cases. In his death there was removed from among them one of the kindest and most sympathetic of men, and one who discharged his professional duties with the highest appreciation of their importance and delicacy. He married a daughter of the late Dr. Graily Hewitt, a well-known obstetric physician, and his wife and daughter survive him. His only son, Second Lieut. A. H. S. Tuke, he lost in the war.

The next name was that of Dr. Murdoch, the Medical Superintendent of Berks County Asylum, Moulsoford. Dr. Murdoch had a very useful career there, and was much thought of by his committee and his patients. He died suddenly, from appendicitis, leaving a widow and family.

The foregoing were all well known to members of the Association, and did active work for it, and it was his duty to propose a vote of condolence to the relatives on the sad occasions.

There was yet another name to mention, and it gave him a shock when he heard it to-day, because it was the death of a young and promising member of this specialty—Captain Blandy, R.A.M.C., Military Cross. He had been Assistant Medical Officer, Middlesex County Asylum, Napsbury. He was a former colleague of the President's, and he knew what admirable qualities he had, as well as a distinct charm. He was doing exceedingly well in his work. He was killed in action.

The resolution of sympathy with the relatives of the deceased was carried by members rising in their places.

ELECTION OF NEW MEMBERS.

The PRESIDENT appointed as scrutineers for the ballot Dr. Pasmore and Dr. Mackenzie.

The following were unanimously elected members:

CROCKET, JAMES, M.D.Edin., D.P.H., Medical Superintendent, Colony of Mercy for Epileptics, Consumption Sanatoria of Scotland, Craigielea, Bridge of Weir.

Proposed by Drs. D. Fraser, R. D. Hotchkis, and R. B. Campbell.

MACKAY, NORMAN DOUGLAS, M.D., B.Sc., D.P.H., Dall-Avon, Aberfeldy, Perthshire.

Proposed by Drs. H. C. Martin, W. F. Nelis, and R. B. Campbell.

MORRIS, BEDLINGTON HOWEL, M.B., B.S.Durham, Inspector-General of Hospitals, South Australia; Pembroke Street, College Park, St. Peter's, S. Australia.

Proposed by Lieut.-Col. D. G. Thomson, M.D., R.A.M.C., and Drs. H. Hayes Newton and R. H. Steen.

SHAW, JOHN CUSTANCE, M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, West Ham Borough Asylum, Goodmayes, Essex.

Proposed by Drs. John Turner, G. W. Slater, and R. H. Steen.

The PRESIDENT said he had now to call upon Dr. Steen, who, in the midst of his arduous duties as Secretary of the Association, had kindly found time to contribute a paper.

PAPER.

Dr. R. HUNTER STEEN: "Hallucinations in the Sane" (see p. 328).

The PRESIDENT said members had listened to Dr. Steen with great pleasure. He had dealt with a difficult subject in a very sane, sound, sensible, yet learned and methodical manner. This was a subject which had to be so dealt with. Before the meeting proceeded to the discussion of the paper, he would like to read a letter he had received from Dr. Mercier:

"It has been known for a very long time that hallucinations occur in persons who are in every respect sane. Many instances are on record. I have myself recorded some very striking cases, in particular that of a woman who conversed for some time with ghostly visitors, and did not recognise that they were hallucinations until she saw the carpet through the hand that was held out to her for money. Another case in my own practice was that of a woman who was haunted by the spectre of a rat, which under my ministrations gradually shrank to the size of a mouse, then to that of a blackbeetle, finally to the size of a fly, and then troubled her no more. There is, of course, the case of the Duke d'Olivarez, which has, I daresay, been related by Dr. Steen, and there is another well-known case which he may have related, and if so the following passage may be omitted.

"My vision," said the patient, "commenced two or three years ago, when I found myself embarrassed by the presence of a large cat, which came and disappeared, I could not tell how, but the truth was finally forced upon me, and I was compelled to regard it as a bubble of the elements, which had no existence save in my deranged visual organs or depraved imagination. I am rather a friend to cats, and endured with so much equanimity the presence of my imaginary attendant that it had become almost indifferent to me, when in the course of a few months it was succeeded by a spectre of a more imposing sort. This was the apparition of a gentleman usher in court dress, with bag and sword, tamboured waistcoat and chapeau bras, who glided beside me like the ghost of Beau Nash. Neither did this freak of my fancy produce much impression upon me. But it had its appointed duration. After a few months it was seen no more, but was succeeded by the image of death itself—the apparition of a skeleton. Alone or in company, this phantom never quits me. In vain I tell myself a hundred times over that it is no reality, but merely an image summoned up by the morbid acuteness of my over-excited imagination and deranged organs of sight. But what avail such reflections, when the emblem at once and presage of mortality is before my eyes, and while I feel myself, though in fancy only, the companion of a phantom representing a ghastly inhabitant of the grave?"

"That sane persons suffer from hallucinations has long been known to me, and has been mentioned in every book on insanity published by me in the last thirty years, and in many other of my publications. I cannot sufficiently rejoice that it is now to become known to the Association at large. The Association will not listen to me, but it cannot surely refuse to listen to its own Secretary, and its members now have it on the authority of their own Secretary that hallucinations do occur to sane persons.

"If this is so, then I ask members of the Association what becomes of the doctrine that insanity is unsoundness of mind, or disorder of mind, or disease of the mind? Are hallucinations normal, or are they abnormal? Is an hallucination a perfectly healthy phenomenon, or is it unhealthy? Is it in itself, or does it indicate, the normal or the abnormal, order or disorder, health or disease? I know not what answer Dr. Steen would give to that question, nor do I know what answer would be given by Dr. Newington, or by other members of the Association, but I know that I, in common with every medical man outside the Association and every competent psychologist, and every person capable of forming an opinion and not belonging to the Association, considers an hallucination as unhealthy, abnormal, disorder, or disease. About this there can be no doubt whatever.

"If, then, hallucination is not a sign of perfect health, if it is a manifestation of disorder, or disease, or departure from the normal, of what is it a disorder? What is it that is disordered? The body or the mind? No doubt Dr. Stoddart will say it is the body. He will scarcely—I suppose, but I do not know—he will scarcely say it is in the big toe, or the liver. He will probably say it is in the brain. To speak of an hallucination as existing in the brain, or as being a disorder of the brain, is a mistake that no one ought to make after he has left the nursery.

"So to speak exhibits an utter ignorance of the abyss that separates the universe of mind from the universe of matter. All feelings, volitions, desires, thoughts, and percepts are in the mind, not in the body. Feeling, volition, desiring, thinking, and perceiving are mental operations, not bodily operations. And an hallucination is a mistaken percept, an illusory percept, a disorder of the process of perception, which is a mental process.

"Hallucination, then, is a disorder of a mental process. It is a disorder of *mind*; and Dr. Steen tells us that it sometimes occurs in the sane. If this is so—and I heartily agree with Dr. Steen that it is so—I want to ask Dr. Steen, and Dr. Newington, and Dr. Stoddart, and the rest of the Association, how this can be so if insanity is disorder of mind? If insanity is disorder of mind, how is it that hallucination, which is admitted by everyone (except, perhaps, certain members of this Association) to be disorder of mind, can occur in the sane? I submit again, as I have submitted for thirty years, that insanity and disorder of mind are not the same thing. I submit, as I have submitted for thirty years, that not only hallucination, but many other disorders of mind, may, and do, occur in the sane. I submit, as I have submitted for thirty years, that disorder of mind no more necessarily means that the patient is mad than a shivering fit necessarily means that the patient has ague. That disorder of mind does occur in insanity I do not deny, and have never denied; but that disorder of mind constitutes insanity I say is no more true than that shivering constitutes ague.

"I do not hope to convince this audience. I have no doubt that this Association will continue to consider a lunatic, an idiot, and a person of unsound mind are convertible terms, after even the law has ceased so to consider them. But I wish to dissociate myself from this opinion. I take this opportunity, as I shall take every opportunity, of protesting against it. I should be sorry for the future historian of medicine to suppose that I shared an opinion so universally held among alienists, so manifestly erroneous, and so utterly inconsistent with the existence of hallucinations in the sane."

Sir GEORGE SAVAGE said the meeting had just heard a most encyclopædic paper, and one which left it open for anyone and everyone to give his experience. Naturally, seeing what the subject was, one looked up authorities, and he noticed that Dr. Steen had referred, as they all should, to the work of Hack Tuke. That authority gave a very short definition of an hallucination: "Hallucinations:—Sensations experienced, although no external objects act upon the periphery of the sensory nerves." There was no doubt it was a normal and an abnormal thing to have hallucinations, and there should be a distinct grouping and consideration of them. He was rather surprised to find that visual hypnogogic associations were prevalent in youth. He himself had them constantly: it was most pleasing for him, on going off to sleep, to see figures and faces getting larger and smaller, but always of the same type—and he presumed he was not insane. He did not notice having heard in the paper any reference to migraine. The hallucinations in that condition were very interesting, and were apart from insanity. That hallucinations might be life-long, and yet perfectly normal, he could support by what Plato gave in the "Apologia" of Socrates. Socrates, defending himself, said: "An oracle or sign which comes to me in a kind of voice. It first began to come when I was quite a child"—this would be of interest to Freudians—"it never commanded me to do anything, but sometimes forbids me to do what I am going to do." In fact, Socrates had hallucinations of a sensory type, and probably they were associated with his greatness.

Another thing which had to be considered was, as Dr. Mercier said, that insanity and unsoundness of mind were not quite the same. Dr. Mercier considered that his insistence on the difference for thirty years was as a voice crying in the wilderness, though that was not so. He (Sir George) remembered being asked to see a man in a mental hospital—where he had been for some time, and where he had been seen by one of the members of the Board of Control. They said this man heard "voices," and had marked hallucinations of hearing, and therefore he could not be discharged. After he had seen the man he agreed he had hallucinations of hearing. He had a long talk with the man in his room, during which the patient asked him whether he had ideas passing through his mind which he did not act upon. He replied that he hoped so. He then said, "My ideas appear to me as voices, but I know they are voices; they are not imperative to me, and they have

no more influence upon my conduct than the ideas which pass through your mind have upon your conduct." He (Sir George) therefore insisted that the man was sane; he had never acted upon his hallucinations, and probably he never would. He was discharged from the asylum, and, as far as he knew, had remained well ever since.

One heard a good deal about the hallucinations of mad people, and it was a most interesting list of such which Dr. Steen gave. But it did not include the case of St. Paul. That would have brought in religious and enthusiastic ideals and ideas. If a man was definitely and earnestly living up to his ideas, they might become so real that the senses might reproduce them.

The paper was interesting in a high degree, and it afforded food for thought. He hoped many more members would discuss it.

Dr. PASMORE said the subject which had been brought forward by Dr. Steen was, as Sir George Savage said, a very interesting one. It was one which had occupied his own attention a great deal, and he thanked Dr. Steen for having brought it on for debate.

Before proceeding to discuss the subject, "Hallucinations in the Sane," it was necessary to have a clear idea of what an hallucination was, also what was meant by sanity; a definition of the first would lead to a clear conception of the second. He looked up the definition of "hallucination" in a little text-book published by the Society, *Handbook for Nursing the Insane*, and as that was written and published by a committee of the Association, he took it that the definition given in it was authoritative. On page 229 the definition given ran: "An hallucination is a perception without an external object." It therefore became necessary to know what a perception was, and when that was clear, one would be able to state whether such a thing occurred in the sane, or not. He asked his hearers to refresh their memories, to follow him, and to trace the origin of a perception as it occurred in the normal evolution of mind. All the elements of our knowledge existed as perceptions until they were brought into more definite shape by our imagination, memory, and judgment. When any part of the nervous system was affected, we got a feeling of which the mind was conscious; and that feeling would determine a sensation. But that had nothing whatever to do with the object producing the sensation, nor were we aware that such a thing existed. It was the consciousness of this feeling which we possessed. After a time, in the growth of our mind, when there were several sensations experienced, these seemed to close around a central point, to which they all seemed alike related. This central point we termed self-consciousness; it was that inward or instinctive feeling that all the sensational impressions we experienced belonged to one subject, that subject being termed the self, or the *me*. After that, and as our sensations developed contemporaneously with that, we received a consciousness of the external world; and when we had got that, with its politics and its changes, we were able to project inwardly from that self-consciousness the feeling of the outward object producing it; and that power which the mind had of passing from the inward feeling to the outward we termed perception. That perception grew into an idea and became a conception, and from conceptions we generalised and evolved abstract ideas and generalisations, formed judgments, and so on.

What was an hallucination? If it was a perception it would be seen that perceptions, to a certain extent, covered the whole of our mental life. In the origin of the normal growth of mind, our judgment and our reason were built up on some actual foundation, *i.e.*, the perceptions we got in life, and from these we formed our judgments. But an hallucination was formed from no external sensations. An hallucination was a condition which one might define as an auto-genetic irritation of the brain, giving rise to a pseudo-sense impression. That was the definition which he would favour, because it indicated how the hallucination arose: namely, from a persistency of the irritation of the brain.

If one were to try to classify hallucinations, he would say that one of the best methods would be into functional and organic. The excellent paper by Dr. Steen gave an enumeration of the conditions under which hallucinations occurred, but did not say what an hallucination was, nor its pathology. Recently, in the *Journal of Experimental Physiology*, vol. ix, pp. 355-390, appeared a very interesting account of the experiments which Dasset ([?]), of Bayonne, carried out. He painted the brain of a cat with minute doses of strychnine, and they produced

hyperæsthesia and hyperalgesia. There was a distinct hallucination. Whatever part of the brain was painted, an hallucination was produced at the periphery. Hence the latest experimental work showed it was possible to produce, by painting with dilute strychnine a condition which might be termed an hallucination of touch. This hyperalgesia and hyperæsthesia was both superficial and deep.

He would relate four cases which had come into his experience during the last few years. One Sunday morning he was called to see a woman who had committed suicide by throwing herself through a window. One of her children had also been killed by her. Her husband was at church. He was sent for, and arrived as she was breathing her last. He said to her: "Why did you do this thing?" She said: "Those voices I have heard for years to-day said I was to be burnt, and the children were to be burnt, and I thought it would be better to kill myself by throwing myself through the window." He questioned the husband very carefully, and he said the voices were not very much, but after the first baby was born a neighbour said one day that she was not dressing the child well. He told her not to pay attention to that. When the second child was born she said the neighbours were saying she did not feed it properly. Again he told her not to mind what they said. During the ensuing five or six years the woman led an absolutely normal life. The husband said he took her to three doctors, who said there was nothing the matter with her; she was quite sane. It was only that morning she remarked that the neighbours said she was going to be burnt.

The second case was that of a man who was a clerk in London. He used to hear his fellow-clerks saying—so he thought—"Get up and go and drink some water," and several other things. But one day his brother, who worked in the same office, went into the lavatory and found that the man had cut his throat. When asked why he did it, he said: "The men in the office said I was going to be burnt"; and so he committed suicide. During the six or seven years previously the voices he heard merely made casual remarks about things which he did in the office, and they did not affect him.

Case 3 was that of a very celebrated barrister, who heard voices. He practised at the Old Bailey and other courts in the country, and he was a most intelligent man. He heard voices saying to him, "Put your coat on properly," or some other casual remark. One day he went to stay with a friend. One morning, at 5 o'clock, this friend heard a great rattle downstairs. He went down, and found the man had got out of bed, gone downstairs, and opened all the windows and doors of the house. Asked why he did so, he said: "I heard a lot of bees in the house, and I felt I should be stung by them, so I thought I would let the bees out."

The last case he would mention was that of a man who was a celebrated "medium" in London; he was at present under the speaker's care in the mental hospital. He did *séances* in the drawing-rooms of titled persons, at which a few scientific men were present. He had these hallucinations of hearing, and said he could get into communication with the spirit world, by which means he made two or three thousand pounds. He said he could collect as much as £50 in one night. A time came when the voices told him he was going to be flogged because he was an impostor. He said that after he had been carrying on this business for seven years, on some nights he did not hear these voices, but he had to pretend he heard them, because he had to keep up his reputation as a medium. When he began to fail to hear communicated spirits, the voices threatening flogging began to be heard.

Those four cases were very instructive from this point of view: each case went on for several years before anything happened, and it would have been noted that as long as these hallucinations did not affect the self—the person, the *me*—as long as they were simply casual voices, which had no persecutory influence on the person, he was able to go on in his normal life, to carry on his work, and follow his ordinary avocations. But the moment these hallucinations became of a persecutory character and affected the person's self, then the patient became a lunatic.

He would have preferred the title of Dr. Steen's paper to have been "Hallucinations in the Apparently Sane." His reason was that it would be a pernicious doctrine to teach that there could occur, with impunity, hallucinations in the sane. There were these authentic cases on record, but sooner or later there was serious mental trouble. The man he quoted who was a medium might have gone on for

fourteen years hearing these voices, and then been carried off with pneumonia, or some such disease; and his case would have been quoted as one in which hallucinations persisted for a long time without having produced any untoward result on his mentality. His view was that all these people who had definite hallucinations collapsed sooner or later: they always reached a danger-point at which sanity passed over the border into insanity. The historical cases were those of men in great authority and influence, and it was always difficult to certify such men: it could be imagined what the difficulty would have been in such a case as Napoleon's.

In tracing evolutions of mind, it depended on our normal perception, and anyone who had an abnormal condition brought about by an hallucination was an abnormal person. He was not now referring to functional hallucinations, such as crystal-gazing, and the condition of mind produced by opium; those were transitory, and soon passed away after the drug or influence had been withdrawn. The class of case now being dealt with was that of the persistent central hallucination.

He was very glad to have had an opportunity of hearing Dr. Steen's paper.

Dr. CARSWELL (Glasgow) said the subject dealt with to-day was of intense human interest, and had there been a lay audience present, he thought it probable that there would have been a much fuller discussion, because among the many psychological ideas—or perhaps more accurately, pseudo-psychological ideas—widely prevalent among communities, that relating to seeing visions or hearing voices—for the ordinary folk did not speak of hallucinations—was very widespread indeed. He was particularly struck by the omission from the paper of any reference to what was a very widely spread idea, in his own part of the Kingdom, at any rate, to the effect that it was the frequent experience of both doctors and nurses that people about to die said they saw the faces, or the bodily presence, of relatives long since dead. It would be very interesting to know from Dr. Steen whether, in his most exhaustive investigation into the literature, he had come across definite and reliable instances of the kind. Personally, he had never seen in the dying evidence of any such manifestation. All, of course, had seen the low, exhausting delirium of approaching death, in which pseudo-reminiscences occurred, and the patient spoke of persons long since dead as though they were then actually present; but he thought those members who had seen that recognised it as short-lived and transient—quite a pathological state due to the bodily collapse.

Reference had often been made, and was made in this paper, to the production of hallucinations by the taking of alcohol. He, the speaker, was not quite sure that alcohol ever produced an hallucination. That hallucinations were the most prominent feature of delirium tremens in alcoholic subjects was beyond dispute, but he was one of those who did not believe that alcohol produced delirium tremens. That alcohol produced a condition in which toxins were absorbed into the system, or in which toxins were caused in the gastro-intestinal tract, and delirium tremens resulted, he regarded as the true pathology of delirium tremens. If alcohol in itself produced hallucinatory delirium, that would, in some places, be seen very frequently: it would, for instance, be very common in some districts of Scotland, especially at certain seasons of the year. As Dr. Ireland, in his book on idiocy, very properly remarked, in regard to the effect of alcohol in parents as a cause of idiocy in their children, that whole villages in Scotland, at certain seasons of the year, such as at New Year, or after the return of the men from their fishing, went drunk, and they had been in the habit of going drunk at those seasons for generations. One would have expected a crop of idiots nine months after such drinking bouts, but this was not the case. But alcohol produced a fine sense of enlargement, importance, and expansiveness, and generally put out of focus, in the direction favouring those about him, his capacity of judging. For instance, ordinary friends became, at such a time, their greatest friends, for both time and eternity, and their families were the greatest families that had ever lived, their children were the greatest geniuses who had ever been born, and so on. But he could not recall a case in which there was a manifestation of a true hallucinatory state in the mere condition of alcoholic intoxication. But perhaps their Irish friends knew something of that as well: Englishmen, of course, were so free from bad habits that they would have had no experience on the point.

He would like an answer, if possible, to the question he put as to the appearance

to the dying person of a relative or other friend long since dead. Was it a popular idea based upon a recognised pathological condition in the dying person?

Dr. STEEN, in reply, expressed the gratitude he felt for the kind reception of his paper.

The meeting had been very pleased to hear from Dr. Mercier, and would have been still more glad if he could have been present among them. He was sure the Association had always thought most highly, and with the greatest respect, of what Dr. Mercier put forward, and, as Sir George Savage said, many members agreed with him on the present subject, namely, that insanity and unsoundness of mind were not convertible terms. If a man was insane he was mentally unsound, but a man might be mentally unsound without being insane. Therefore Dr. Mercier's teaching had not fallen on the dry and stony ground which that authority considered it had.

The lateness of the hour precluded him from making any detailed reply to the criticisms of the paper. Sir George Savage's remarks had been most interesting, especially with regard to hypnogogic hallucinations. The cases described by Dr. Pasmore were of great value, and it was certainly very difficult in borderland cases to state the exact period when sanity changed to insanity. Dr. Carswell had brought out a very interesting point in that, although popular opinion was strong in the belief that the dying experienced hallucinations, the scientific literature was almost silent on the matter. He feared he could not quite agree with all Dr. Carswell had said about alcohol.

NORTHERN AND MIDLAND DIVISION.

THE SPRING MEETING of the Northern and Midland Division was held at the kind invitation of Dr. H. Dove Cormac at the Cheshire County Asylum, Macclesfield, on Thursday, April 26th, 1917.

Dr. Cormac presided.

The following seven members were present: Drs. H. D. Cormac, R. Eager (Western Division), E. G. Grove, A. McDougall, S. R. Macphail, W. F. Menzies, T. S. Adair.

Apologies were received from several members for non-attendance.

The minutes of the last meeting were read and confirmed.

On the proposal of Dr. Macphail, seconded by Dr. McDougall, Dr. T. S. Adair was re-elected Secretary for the ensuing twelve months.

Drs. D. Hunter and J. Geddes were elected to represent the Division on the Council of the Association. This was proposed by Dr. McDougall and seconded by Dr. Macphail.

The kind invitation of Dr. Cribb to hold the Autumn Meeting, 1917, at the Durham County Asylum, and that of Dr. Cowen for the Spring Meeting, 1918, at Rainhill Asylum, near Liverpool, were cordially accepted. The dates and details were left to the Secretary to arrange.

As no papers had been obtainable for the meeting, the time was profitably spent in a consideration of various matters connected with present-day asylum administration, particularly the question of rationing the asylum and the use of suitable substitutes for bread, potatoes, etc.

A hearty vote of thanks was accorded to Dr. Cormac for his kindness and hospitality.

ASYLUM WORKERS' ASSOCIATION.

MEETING AT THE MANSION HOUSE.

(Abridged Report.)

THE ANNUAL GENERAL MEETING of the Asylum Workers' Association was held at the Mansion House, London, on May 14th, the Rt. Hon. the Lord Mayor (Col. Sir Wm. Dunn), Vice-President of the Association, in the chair. There was a distinguished company present, including Cardinal Bourne, Bishop Ryle (Dean of Westminster), Alderman Sir G. Wyatt Truscott, Bart. (Chairman, City of London Mental Hospital), Sir Fredk. Needham, M.D., and Dr. C. Hubert Bond (Commissioners of the Board of Control), Sir J. Crichton-Browne, M.D., F.R.S.

Hon. Major Sir Robert Armstrong-Jones, M.D., Sir G. H. Savage, M.D., Dr. David Nicolson, C.B. (Lord Chancellor's Visitor), etc., etc.

The LORD MAYOR said: This, I believe, is the twenty-first annual meeting of your Association. It is the first held in the Mansion House, but I hope it won't be the last, and that my successors in the seat of the Lord Mayor will make a note of the subject. (Applause.) The Association has had many distinguished chairmen, the second of whom, as I understand, was my friend Sir James Crichton-Browne. Other friends of mine have been connected with the organisation, notably Sir Wm. Collins, who has presided over you. We were very good friends in the House of Commons, though we sat on opposite sides. One of the distinguished gentlemen whom I welcome here to-day is Sir Robert Armstrong-Jones, who has been associated with me from boyhood. The interest that I have taken in the Association is due to his initiative. This organisation is not properly appreciated by the general public. We busy people have not time to examine carefully all the charities brought to our notice. If we had time I do not think that some of them would be quite as successful as they are, while others, including the Asylum Workers' Association, would be more prosperous. This organisation must be studied before the good work it does can be recognised. It is impossible for an outsider to realise the amount of time, patience, care, and anxiety bestowed by the nurses and attendants on the patients in asylums. It is not very popular to be connected with a lunatic asylum, and perhaps that is why the public do not pay as much attention to such institutions as they deserve; but it is very interesting and instructive to go into asylums and see the admirable way in which they are worked; the self-abnegation and devotion of the staffs in all grades are above praise. The object of the Association is to promote the welfare of these staffs, and I can honestly recommend it to your kind and serious consideration. Nobody knows better than I in my life at the Mansion House what generous and lavish contributions to worthy causes are made by the people, but I want to urge emphatically that this Association and some others who have done good service for years should not be allowed to fall by the wayside while new organisations are supported. (Cheers.)

Dr. G. E. SHUTTLEWORTH (Acting Hon. Secretary) announced that Sir John Jardine, M.P., President of the Association, could not attend the meeting as he had been sent abroad, on the business of the country. He had sent a letter expressing his regret at being unable to take part in this meeting.

ANNUAL REPORT, 1916.

In submitting their Annual Report for 1916, the Central Executive Committee have the pleasure of recording a year of consistent endeavour to advance the objects for which the Association was constituted in 1895, *viz.*, "the promotion of the interests and welfare of asylum nurses and attendants and of others engaged in nursing the insane, with a view of improving their status in the nursing world." Experience has since shown the desirability of the scope of the Association being extended so as to include within its benefits those engaged in other departments of asylum work, and also those engaged in the training and care of mental defectives—a class of the afflicted placed by the Mental Deficiency Act of 1913 under the supervision of the same central authority as the insane, *viz.*, the Board of Control, in which has been merged the former Lunacy Commission.

At the last annual meeting satisfaction was expressed at the patriotic spirit shown by the male members of asylum staffs generally in their ready response to the call of King and Country for their services in the voluntary Kitchener's Armies. It may now be said that under the Military Service Act every available man of military age in asylum service has been called up, and consequently, the limitation of depletion of staffs originally sketched out by the Board of Control as essential to be observed in the interests of the insane has been reached, if not passed. In some asylums there is at the present time an absolute shortage of male attendants; in others the able-bodied and experienced have had to be replaced by older and less capable men, entailing additional responsibility and increased strain upon those who remain from the original staff. Though the female staff has, of course, not been depleted in the same degree, not a few have from patriotic motives transferred their services to war work, including assistance in the care and nursing of the wounded and invalided soldiers in the fourteen asylums in England

and Wales, and the two in Scotland, which have for the period of the war been requisitioned as military hospitals. In a considerable number of instances, moreover, especially in Scotland, experienced women nurses have been put in charge of male wards, so that shortage prevails to a considerable extent even amongst the female staff of asylums. As one consequence of this state of things it has proved increasingly difficult to keep up to its former strength the membership of the Association, the temporary substitutes obtained to fill the places of those withdrawn for military service or war work not considering it worth their while to join what they regard as a nursing organisation. Added to this, the spread of trade union principles of late years amongst the rank and file in many asylums has considerably narrowed the recruiting ground of an Association which, while striving to secure for all asylum workers, without distinction of class, improved conditions of service, as was proved by the successful efforts to obtain the passing of the Superannuation Act of 1909, does not regard material aggrandisement alone as the sum and substance of its aspirations. Rather does it seek to promote harmonious working amongst all who in various capacities, whether as managers, officers, nurses, attendants, or other employees, have set their hands to the benevolent task of "ministering to minds diseased"—a task, indeed, which calls for the highest qualities of heart and head, and corresponding consideration not only on the part of immediate employers, but of the public at large. One of the objects which this Association may claim to have carried out with some degree of success is the wider appreciation of the devoted and often self-sacrificing services rendered by asylum workers to the most piteously afflicted section of humanity, services which are necessarily less obvious to the public eye than those rendered to the sick in hospitals, but not one whit less meritorious, or less deserving of the sympathy of the community. As a means of intercommunication between members the journal of the Association—*The Asylum News*—is published quarterly (in pre-war times monthly), and a perusal of its contents, to which members largely contribute, and patients sometimes send their experiences, would probably disabuse many of the erroneous ideas formed as to the devotion and capacity of asylum workers and the actual incidents of asylum life.

Under the circumstances referred to above, it can hardly be expected that the Association should be able to increase its numbers, and the roll of membership stands at present as follows :

<i>Membership, 1916.</i>	
Life	322
Associates	178
Ordinary	1,544
	2,044

Legislation affecting Asylum Workers during 1916.

Though these troublous times have not been favourable for domestic legislation, and all private measures are necessarily hung up for the present, the Central Executive Committee have continued to keep a watchful eye on all proposals likely to affect the interests of asylum workers. They have reason for congratulating the Association on the passing by Government of the Local Government (Emergency Provisions) Act, which (*inter alia*) provides for the contingencies affecting the superannuation allowances of asylum officers and attendants called up from their duties for service with the Colours, and in the main gives effect to the representations made by our Parliamentary Committee to the Board of Control and the Home Office, under the lead of Mr. Morgans, early in the war. Our President urged more generous treatment with respect to grants to dependants of men with less than ten years' asylum service, and with regard to the power to re-engage pensioned asylum attendants without their pensions being thereby affected, but in view of the urgency of the passing of the Bill as it stood, he found it impracticable to get these two points included. The diminution of the period of service entitling to pension, especially in the case of women, has not been lost sight of, and this and other desirable amendments of the Asylum Officers' Superannuation Act will be pressed forward as soon as there is a chance for private Bill legislation.

The scheme of legislation by the College of Nursing, Ltd., for the State registration of nurses has also engaged the anxious attention of the Executive Committee, and in conjunction with the Medico-Psychological Association (who for more than a quarter of a century have carried out a complete and uniform scheme of training, examination, and registration for asylum nurses, male and female, throughout Great Britain and Ireland and some of the Overseas Dominions) they have claimed for mental nurses, as a matter of right, equality of privilege with nurses trained in ordinary hospital work. The position at present is somewhat complicated owing to an amalgamation having been agreed on by the College of Nursing and the chartered Royal British Nurses' Association, which is now awaiting the decision of the Privy Council, but whatever may be the upshot, trained mental nurses (of both sexes) may rely upon the support of this Association to secure their just rights with regard to equitable representation on the body controlling registration and other matters affecting their interest, should any project of legislation be brought forward.

Acknowledgments.

The Executive Committee have again to express to the President, Sir John Jardine, Bt., M.P., their grateful sense of his invaluable services to the Association, which is enhanced by his consent to be re-nominated as President for 1917-18. They desire also to express their gratitude for the many activities of the Ladies' Sub-Committee, who have stimulated interest in the Association by visits to asylums, and by valuable contributions to our own journal and the nursing papers.

Renewed acknowledgments are due to Lieut. Farquharson Powell, R.A.M.C., for his earnest and useful work as Honorary Secretary and Editor, and to his co-adjutor in the latter capacity, Lieut. J. P. P. Inglis, R.A.M.C., until they were both called up for active service in the autumn, and they have the cordial good wishes of the Association for their welfare in their patriotic duties. Dr. Ralph Brown, the other Assistant Editor, we grieve to record, was removed by death just prior to the date fixed for his joining up, and we have to lament the passing away of a young physician of much promise and a good friend of our cause. We have also to record, with much regret, the deaths of four Vice-Presidents of the Association—Drs. Kirwan, C. S. Morrison, W. Rawes, and T. Seymour Tuke.

The Committee specially desire that grateful recognition shall be made in this Report of the obliging service rendered to the Association by Dr. G. E. Shuttleworth in taking up the Secretarial and Editorial duties of Dr. Powell during his absence at the Front. Dr. Shuttleworth's unselfish readiness has saved the Society from grave difficulty. No one knows better than he what the Society stands for. He is in sympathy with all its interests and in touch with all its friends. He is a past-master in stating its problems, marshalling its forces, and finding possible ways of advance. He stepped into the breach made by the war, and once more proved himself the friend in need, and so the friend indeed. Not only because Dr. Shuttleworth saved the Committee from much anxiety (which was the case), but also because his action was of such value to the Association in general, the Committee ask him to accept their heartfelt thanks.

It should also be recorded that the Assistant Secretary, Mr. J. B. W. Wilson, has nobly supported Dr. Shuttleworth's efforts, and has never spared himself in meeting the difficulties of the times.

To the Rt. Hon. the Lord Mayor, who for some years has been one of our Vice-Presidents, deep gratitude is due from the Association for the hospitality so kindly afforded for the holding of the Annual Meeting at the Mansion House.

H. E. Cardinal BOURNE, moving the adoption of the Report, said: I suppose that in no department of public life has such enormous progress been made as in the department of nursing the sick of every kind. There was a time—say a hundred years ago—when, had a comparison been set up between what was going on in England and what was taking place in other countries, we might have been obliged to admit that our countrymen were far in the rear as regarded the advice and the devotion that they were giving to the treatment of the sick. Now, however, I suppose we may fairly claim that in no country is more being done for the sick of every kind than in England. Things that were unthought of in those days are now of common knowledge and acceptance. Sometimes when we travel

we see magnificent buildings which were set up years ago for the care of the sick, but which in arrangement and site are, according to our present ideas, unsuited for their purpose. But for a long time now every possible care has been taken to avoid mistakes. There is one element on which all the rest depends, and that is personal qualification and personal devotion. Looking into the past ages we have to admit that very often the surroundings, appliances, buildings and methods which medicine and surgery disposed of were perhaps the very reverse to what we should choose to-day, and yet great, successful, and noble work was done owing to the self-sacrifice and devotion of the workers. At one period nursing came to be regarded as a function not to be undertaken by people of a certain social position or of a higher type of education. Those days, I trust, have disappeared altogether. The personal element is, after all, the chief good thing in the history and application of nursing, and we may claim that to-day, in this country at least, nursing is regarded as a function not only not unworthy, but ennobling all those who exercise it, whatever their education or social station. Those who are privileged to tend the sick can approach the objects of their care with the sense that they are dealing with God's creatures made in His own image and likeness, to whom, however different from them in some respects, they are united by a common humanity overshadowing all differences. Unless they have that double conviction nurses will never carry out their holy functions rightly. If this be true of the tending of every kind of malady to which the human body may be exposed, it is pre-eminently true in the case of those who are called to give their care to the mentally afflicted, for there the God-given reason is clouded, and some of the human characteristics are overshadowed. It requires, therefore, great faith and high insight to realise the factors on which alone successful tending of the sick depends, and those who undertake the task need every possible help to make them understand the greatness of their vocation. Your Association has a two-fold purpose: in the first place to create and maintain a very high standard of duty among you. An Association of fellow-workers united by a bond and a purpose such as yours is one of the most potent means of keeping up high ideals. The second object of your Association is no less important. It is that those who are devoting themselves to the care of others, weighed down, perhaps, by the many anxieties peculiar to their position, should in other matters at least be free from worry and anxiety as to both the present and the future. That is a claim which you may fairly make to all interested in such work as you are doing. I wish that your work were better known. The balance-sheet of your Association ought to show very much higher figures on the credit side than it does at present. Splendid work is being done with a lamentably insufficient income, and I trust that this meeting will be the means of helping you to obtain what you need. If your Association is important at the present day, it will be still more important in the future. Your Report speaks of over-work and over-worry as a condition of the times. Everybody knows something of that. Everybody has more to do and more anxieties and worries than before the war. We trust that when peace comes these may diminish, but the new obligations that will be thrown on public authorities in connection with the Mental Deficiency Act will render the work in which you are engaged even more important in the future than it is now. I have the greatest possible pleasure in commending the Annual Report to your acceptance, and I commend your Association, as a most important, most necessary, and most deserving body, to all who have the means of assisting it.

Bishop RYLE (Dean of Westminster) said: I count it a high privilege to be associated with the Cardinal-Archbishop in moving this resolution, and commending it very warmly to your attention. We have listened with deep interest to his words, so full of eloquence and so profound in suggestion, and I am sure that what he has said will be of great help to the Asylum Workers' Association during the coming year. The kind of work in which you are engaged demands a not very common combination of science and philanthropy. They are, as it were, moving hand in hand on the path of most necessary hygienic progress. But science by itself may very easily be accused of lacking warmth of heart, while philanthropy by itself may very often be accused of lacking soundness of head, but here you have a work which combines reason and generosity. Generosity is not to be commended if it is not steadied and directed by reason, and reason will not always commend itself unless it has the warmth and kindness of real humanity. In view

of these considerations I strongly support the work of this Association, because it combines the finest science of modern times, devoted to the study of the mentally unsound, with the most humane and self-denying work performed by those who minister as nurses and attendants to the unhappy patients in asylums. As His Eminence has said, you find it most remarkable if you survey the progress of both science and humanity in the last hundred years. How great has been the advance made by our medical research and in the systematic development of hospital work during those two half-centuries! I suppose that if we looked at the fiction composed in the earlier half of the last century, and tried to derive from it an impression of asylum work, we should not form a very high opinion of either its humanity or its science. Those days are past, and the eminent men whose names you find on the list of Vice-Presidents and other supporters of the Association—men like Sir George Savage, Sir James Crichton-Browne, Sir Clifford Allbutt, and others—have watched over the improvement in the treatment of the insane, and have prompted the kindness and generosity with which this unhappy class behind the high walls of their refuges has been treated by the intelligence and thoughtfulness of the most noble of professions. I bear my tribute more particularly to the nurses and attendants, who work day by day, week by week, and month by month behind those high walls, which seem so forbidding to people who hurry by them in motor cars. As you pass you wonder what kind of life, set in sorrow, is being led behind the walls. Some of us have had opportunities of seeing it, and the more one saw the more he had reason to thank God for the kind patience and self-denying sympathy continually shown by the nurses and attendants. There we find none of the element of—shall I say advertisement?—which is perhaps associated with some of the splendid work done by our ordinary hospitals. Few people think of what is going on in asylums, because, as His Eminence said, a kind of shadow lies between it and ordinary society. Nobody likes to be thought of as connected with patients in hospitals of that kind. It is a false shame. Nearly every family in the country has connections, friends or relatives, who are patients. There is nothing to be ashamed of in that. There is good reason why every family should be interested in, and sympathetic with, the work of this Association. It is impossible to say truly that we all are not in some sort of way connected with asylum work and have no reason to thank God for it. So I say may God bless the work done by the skilful doctors, the faithful nurses, and the whole legion of attendants and servants who are combined in asylums for the mentally unsound and defective.

Alderman Sir GEORGE TRUSCOTT, Bart., supporting the motion, said that for many years he had been associated with the governing body of the City of London's Mental Hospital. From time to time he had to go through the wards, and he never did so without being impressed by the splendid work of the staff. Everyone connected with asylum work should be dubbed "honourable." He looked with pride on his connection with it. There was great sympathy between those who governed asylums and those who worked in them, but perhaps the former were not always aware of what was for the best interest of the people they employed, and therefore the Association did good in bringing before them what was likely to improve the status of the staff. He was glad to be brought into more intimate connection with the Association, and he joined with the Dean of Westminster in saying—"God bless this institution."

The motion was unanimously agreed to.

Sir JAMES CRICHTON-BROWNE, proposing the re-election of Sir Jno. Jardine as President of the Association, said that the organisation was giving of its best to the war service of the country. Almost all its sons of military age had joined the Army, and many of them had laid down their lives in the good cause. A large number of its daughters were tending the sick and wounded in military hospitals, and the rest, under circumstances of unexampled difficulty, remained in asylum wards, ministering to those who had been worsted in the never-ending battle of life. One result of the war was already discernible, and that was the greatly enhanced appreciation of the nursing profession. The hospital nurse would stand higher in public esteem than she had ever done before, and he claimed for the asylum nurse equally honourable consideration. The work was always arduous; it involved as much technical ability as was needed in the ordinary hospital; it demanded even more sympathy and kindness, for it was done under profoundly

depressing conditions, and the patients were often irresponsive to attentions. Asylum nurses and attendants were, as he could testify from life-long knowledge of them, faithful to their trust. Under the auspices of this Society progress had been made in their status, privileges, and relationships. When German brutality was finally beaten down and just punishment meted out to the miscreants, we should have to deal with remedial institutions made necessary by the results of the war. Among such institutions would be those connected with lunacy administration. We should not be content to go on erecting in every county huge, costly asylum buildings. These buildings, good as they were in some respects, had become receptacles more and more of human *débris*, because, notwithstanding all our discoveries, there had been no improvement in the rate of recovery during the last fifty years. Some new departure would therefore be wanted—less red tape and more science, less routine and more freedom, less legal rigidity and more of the elasticity of common sense, less patching up and more prevention. It was on prevention that hope for the future of lunacy must be founded. The causes must be removed. After the war we should perhaps have a Minister of Health, who no doubt would turn his attention to lunacy. Measures now in contemplation must be efficiently carried out to strike at the root of much of the mental disease and degeneracy with which we were afflicted. Segregation of the weak-minded would probably be managed to some extent in order to limit the propagation of their kind. The extended scheme of education promised by Mr. Fisher—an education physical as well as intellectual—would conduce to the force of character and self-control which were guarantees of integrity throughout life. Improved feeding of the people would to a large extent restrict the ravages of the great white plague, tuberculosis, and the great black plague, insanity. Then the widened sense of brotherhood which the war had established among all classes of the community would give courage and confidence to many who in former days had been betrayed into bitterness of spirit and despair. The new facilities that were to be given for the treatment and, he hoped, the prevention also of the great hidden plague would no doubt reduce that insidious disease which was the terror of the asylum worker—general paralysis of the insane. The wave of insanity which the war would create would, unfortunately, obscure the position for a time. But when that wave had subsided, we should, he believed, see a very substantial, continuous reduction in the prevalence of insanity in this country. The report of the Board of Control, just issued, showed that for the first time since the statistics began to be issued sixty years ago there was a decrease in the number of notified insane persons in this country. That, however, was obviously due to movements of population consequent on the war, and we must not count upon its continuance. As for the asylum workers, there would be a greater demand for personal consideration. He thought that better days were in store for them, and that the value of this Association would be more fully recognised. Finally, he expressed the hope that after the war members of the volunteer aid detachments who had done such good service among the wounded would enter our asylums and qualify to become trained mental nurses.

Sir R. ARMSTRONG-JONES, who seconded the motion, held that the mere fact of meeting at the Mansion House secured public support and encouragement for any society, and he therefore rejoiced that the Asylum Workers' Association had obtained that privilege. As the Cardinal had said, nursing had made enormous strides in the last hundred years. The last great stride was taken during the Crimean War, and perhaps we should find that similar progress had been brought about by the present conflict. Mental nursing had participated in the improvement. Since the present war began not a single soldier had been certified as insane, but that fact must not make us too optimistic. In 1793 Pinel transformed the treatment at the Bicêtre Hospice, Paris, and exactly one hundred years later the London County Council opened their great mental hospital at Claybury. It was the great Earl Shaftesbury who kindled the modern feeling of sympathetic care for the insane, and also for the workers who ministered to them, and it was the father of Sir James Crichton-Browne who made the first attempt to educate the asylum nurse. He initiated the great ideals which exercised so much influence to-day with reference to study and training for asylum nurses. As recently as 1876, Dr. (afterwards Sir Thomas) Clouston lamented the unattainableness of the ideal asylum nurse, and in 1882, when he (Sir R. Armstrong-Jones) entered the

medical service of a London asylum, there was not even a clinical thermometer in the institution. All this had now been transformed. Only since the opening of Claybury Asylum in 1893 had there been available for the staff scientific technical training (such as systematic lectures, bedside demonstrations, technical instruction) in any of the London asylums. Now, happily, such training was given everywhere, followed by uniform examinations conducted by the Medico-Psychological Association. So satisfactory are the practical results that he might instance that during three years at Claybury, with its many feeble, bedridden patients of faulty habits, there was not a single case of bed-sore—a record which said much for the quality of the nursing. Scientific training of nurses and attendants was not only beneficial to the patients: it kindled the interest of the workers, and helped to overcome the repugnance which young nurses sometimes felt. That was a most important result. With regard to the proposed re-election of Sir John Jardine to the Presidency, the Association was very fortunate in securing his services, for he was a man of great learning and experienced in affairs, not only M.P., but LL.D., and formerly of high judicial rank in India. Personally, Sir John had reason to be proud of his three sons at the Front, where one of them had gained the D.S.O. and the Military Cross. He realised that for the care of the insane persons of high character were needed, and good nurses and attendants could only be retained by making their positions as comfortable as possible and providing for their future prospects. How depressing their work sometimes was appeared in a tragedy at an institution from which he (the speaker) had just come. It was a large general hospital, where a soldier, under the influence of delusions, cut his throat. Only asylum workers knew, as a rule, what it was to watch over suicidal patients night and day. The Bishop of Barking once said at their annual meeting—and he was a great ally and friend of theirs—that he thought a sense of humour was one of the great essentials of a good mental nurse. It certainly takes the sting out of sarcasm, and helps to transform so much of the merciless ridicule one has to encounter unperturbed into harmless banter, or possibly into just criticism. But the patient is always very quick to read censorious harshness in those about him, and the nurse without good nature, tact and sympathy will never secure attachment or elicit the support of her patients. The meeting had been honoured by the presence of the Chairman of the Asylums Committee of the London County Council—a gentleman whose friendship and support he cordially acknowledged. Mr. Goodrich had done much to raise the level of material comfort among the staff in the London County Council Asylums. To secure this for the staff is to make their domestic life stable and happy, to establish them permanently in the service, to the great advantage and comfort of the patients, who disliked changes in the staff as much as a mistress does, and to win for them and their families the respect of their neighbours.

Sir GEORGE SAVAGE congratulated the Lord Mayor on the success of the meeting. Speaking of himself as a witness from the past, he said that more than fifty years had gone by since he first had to do with the treatment of the insane. At Bethlem Hospital in those days it was looked upon as quite proper that a nurse should be also a scrubber of floors. He held that however useful scrubbing might be, it was better that nurses should be highly educated, and therefore he rejoiced at the enormous amount of good done by the Association in raising their standard. It was not necessary to dwell at length on the many excellent qualities possessed by Sir John Jardine. He was a most competent director of the many kinds of work in which the Association was engaged, and therefore his re-acceptance of the office of President was a thing to be thankful for.

The motion was unanimously adopted.

Sir FREDERICK NEEDHAM, one of the Commissioners of the Board of Control, moved the election of the Vice-Presidents and officers, remarking that the Association had been most successful in doing good work, and he hoped it would do more. Having recently visited a number of large asylums, he had been impressed with the opportunity which lay before the Association of promoting the economy of food, which the Food Controller was urgently asking for. In some of the asylums visited by him the staffs had most loyally co-operated with the authorities to reduce the quantity eaten to a point within the limits fixed by the Food Controller. In other institutions those limits had not been reached, but there was an approximation to them. He regretted to say, however, that in a third section of the

asylums there was still indisposition to recognise the urgency of the demand for a reduced consumption of certain kinds of food. In one of these institutions he was present at dinner-time, and he saw a shameless distribution of bread. He understood that the staff had not been quite willing to co-operate with the authorities in reducing the rations. He saw great quantities of bread handed out to the patients, with the result that after the dinner a very large amount of bread was left on the tables, crumbled, broken, and in such a condition that it could not be used for human consumption. He spoke about it at the time, and he wrote strongly to the Committee on the subject. This Association might use its great influence to promote a strong movement for the economising of food in asylums throughout the country, and he hoped that the Committee and officers would consider the suggestion. If they acted on it they would add to the good works already standing to the credit of the Association.

ASYLUM AND GENERAL HOSPITAL NURSES.

Dr. HUBERT BOND (Commissioner of the Board of Control) seconded the motion, remarking that the work of officers of an association of this kind was much greater than could be realised by people who had not experienced it. In the present instance it must not be forgotten that the Hon. Secretary and Editor (Dr. J. Farquharson Powell) was at the Front, and that once again Dr. Shuttleworth had come forward in his ever-ready way to fill the vacant place. Referring to asylums converted into war hospitals, Dr. Bond said that the War Office had gladly taken over, not only the buildings, but the staffs, and it had been a great privilege to him to go among them and see what they were doing. As very few members of those staffs had received the training of a general hospital, they had been obliged to subordinate themselves to new-comers who had gone through such training. The patriotism of the old staffs had enabled them to accept the change without a murmur, so that in no case had there been trouble. He was glad to see in the Association's Annual Report an allusion to the action of the Executive in connection with the proposed State registration of nurses. Here was an opportunity for reciprocity. Mental nurses required three years' training to earn the final certificate of the Medico-Psychological Association, but candidates who had had three years' general hospital training were exempted from the preliminary examination and from one year's mental hospital training. It seemed to him that two years' general hospital training should be enough for those who had already gone through three years' asylum training.

PRESENTATION OF MEDALS.

The LORD MAYOR, on behalf of the Association, then presented medals for long and meritorious service.

Dr. R. H. STEEN proposed a vote of thanks to the Lord Mayor, which was seconded by Dr. SHUTTLEWORTH.

The motion was adopted amid cheers, and the Lord Mayor having remarked that it was very pleasant to lend the Mansion House for such a good cause as that of the Association, the meeting came to an end.

HOSTELS FOR HEROES.

UNDER this heading an account of a meeting held on April 28th, at 15, Grosvenor Gardens, by invitation of Eleanor, Viscountess Gort, in connection with recuperative hostels for nerve-stricken soldiers appeared in the *Daily Graphic* of April 30th. Sir Frederick Milner presided, and amongst those present who addressed the meeting was a Dr. White, B.Sc., M.B., who, in the course of her remarks (we understand she is a lady member of the profession), according to the report in the *Daily Graphic*, "protesting against nerve-stricken men being sent to lunatic asylums, said that soldiers who had served our country were put, here in England, into worse prisons than our prisoners in Germany. After three years of war they had been absolutely unable to make any impression on the War Office with regard to these men. There were 200 uncertifiable men in one of the blocks of the Middlesex County Asylum at Wandsworth. They were not insane. Such men needed cheer and employment."

Such statements as these, unjustified as they are by facts, are likely to make a very unfavourable impression on the minds of the public, and are not creditable to any person who makes them. We thought that this idle tale had been extinguished by the report in *Truth* of February 23rd, 1916, but there appear to be some that still give credence to the legend. For this reason we think it well to reproduce the articles which appeared in *Truth à propos* the alleged outrage.

The first was published in that paper on February 9th :

"MAD-HOUSES FOR SOLDIERS.

"Owing to the inadequate manner in which Parliamentary proceedings are nowadays reported in the daily press, it will be news to a great many people that numbers of invalided soldiers suffering from nervous and mental disorder, but not certifiable lunatics, are at present being treated in lunatic asylums. At intervals during the latter part of last Session several members of Parliament have been agitating against this proceeding by the only means at present available, namely, harrying with questions the representatives of the War Office in the House of Commons. They have, however, found themselves, as too often happens in such cases, up against an official stone wall—a wall more than usually impregnable at present owing to the absence of any organised Opposition. In this state of things the only remedy lies with public opinion, and fortunately this is one of the rare cases in which public opinion can be appealed to and can express itself in opposition to the Government without any fear of assisting the enemy. For these reasons I draw special attention to the following letter from a correspondent thoroughly familiar with all the facts of the case :

"SIR;—A good deal of attention has been given lately in the medical world to a vast number of instances of strange and perplexing nerve-disturbance occurring as the result of prolonged stress, exhaustion, sudden shock, or even (it may be) the intolerable strain on natural human susceptibilities unstrung by scenes of horror. It has been pointed out how varying must be the treatment adapted to these many different manifestations. And in the case of officers all kinds of interesting methods are resorted to for linking up again with stable normal life the transiently shattered threads of consciousness.

"With the *rank and file*, however, the case is sadly different. The Under-Secretary for War, when questioned on September 30th, 1915, admitted that all that is done for 'uncertifiable' nerve-shaken soldiers of the rank and file is to place them in a *block of a county asylum, and under the same management as the rest of the asylum, which is in use for certified lunatics.*

"He acknowledges that these soldiers, being uncertifiable, could not, if they were civilians, be *legally* placed in such a position (see Hansard, September 30th, 1915). Yet this is the way in which our brave soldiers are treated (who have been willing to sacrifice life, limb, and prospects in their country's cause) when sent home to recuperate after the fearful strain through which they have been passing. The Director-General promised a year ago that special treatment in hospitals should be provided for them, *apart from lunacy.* But this is how this promise has been kept.

"There are numbers of such cases among the wounded, who are every whit as much shaken, yet who recover in a short time with rest and sleep and medical care in the base hospitals. Why, then, are the unwounded sent to blocks of county asylums, where the public know well that all the inmates are *certified as insane*, and naturally conclude that the soldiers are regarded as insane, too? A taint so undeserved and so unnecessary should be removed, and our soldiers of the rank and file treated with the same consideration as officers, who are kept free from any association with asylums. It is a more serious risk for the men than for officers, since they have to depend on their own exertions for their livelihood, and (as pointed out by the Murray Commission on Disablement) the existence of such a taint may easily prejudice their future chances of employment.

"The Chairman of the Labour Party asked in the House of Commons on January 26th, 1916, why the rank and file are exposed to such a risk, and why hospital treatment is not provided for those who are uncertifiable.

"A sum is paid by the War Office to the asylum authorities in respect of the 'care and treatment' of these uncertifiable soldiers, and the arrangement relieves the War Office of responsibility. The Lunacy Board of Control may have the best

of intentions, but it is not its proper function to deal with the *uncertified*. When once placed under the wing of lunacy authorities these soldiers may readily be certified at any moment, without appeal, at the will of the asylum doctor and commanding officer.

"It will not look well at the end of the war if many of our soldiers are found in asylums, and their families in trouble, and perhaps without support.

"Yours faithfully,

"PRO PATRIA."

"In view of the reference made in the above letter to promises made by the Director-General of the Army Medical Department which have not been kept, it should be explained that about a year ago a very weighty memorial upon this subject was addressed to Lord Kitchener by a large body of M.P.'s and medical men. The matter was referred to the Director-General of the Army Medical Department, who received a deputation of the memorialists, and in what passed subsequently Sir Alfred Keogh certainly conveyed the impression that the views expressed in the memorial would be carried out. They certainly have not been. No doubt officialdom will be ready with plenty of excuses for what has been done, and at times like these it is as well to give those who have to deal with unprecedented difficulties under emergency conditions credit for a sincere desire to do their best. But I am inclined to think that the excuses, when brought out into the light of day, will not do, and that the public will decide that the best which officialdom has yet been able to do is not good enough. The official mind evidently recognises that it is important to save the men whom it is putting into lunatic asylums from future stigma as having been under treatment as lunatics. How does it seek to avoid this? By temporarily rechristening an asylum or a block of buildings in an asylum 'Army Hospital So-and-So.' Is this good enough? The plain facts are that because they are soldiers who cannot help themselves the men are being put into asylums in circumstances where this could not be done if they were civilians. This is a very wide stretch of military law and military authority. That it should happen in consequence of what the men have already suffered in war will be repugnant to the feelings of almost everybody, and the more so because it has not been found necessary to extend this method of treatment to officers in the same condition. It will take a very strong case to justify what is being done, and the public are entitled to know what the justification is. We are not only entitled to know it; but bound to find out, for the men concerned are perfectly helpless, and we all have an imperative duty to look after them."

The second article appeared in the issue of February 23rd:

"NERVE-SHOCKED SOLDIERS.

"On February 9th a letter signed 'Pro Patria' was published in *Truth* severely criticising the method which has been adopted for the treatment of soldiers suffering from nerve-disturbance in consequence of the shocks of war. The gravamen of the criticism was that such soldiers are treated in 'blocks of county asylums,' and that this was being done in violation of a promise given a year ago by the Director-General, Army Medical Department, that such 'special treatment in hospitals should be provided, apart from lunacy.' In reply to this, it was suggested that the Editor should see for himself the principal establishment to which these observations apply, and judge for himself of the justice of the accusation. He did so. The establishment in question is the Springfield Military Hospital, Beachcroft Road, Upper Tooting. Having visited it and seen everything there was to see material to the charge, under the guidance of Major Worth, M.D., R.A.M.C., the Commanding Officer, the Editor comes to the conclusion that the accusation is absurd, and feels it his duty to say so, for the sake of everybody concerned, and especially of the men.

"The sole foundation for the accusation, so far as the Springfield Hospital is concerned, is that the building is situated on land attached to the Wandsworth Asylum of the Middlesex County Council, and that the Commanding Officer is also the Superintendent of that institution. The asylum stands in its own ground, surrounded by a high wall. The hospital was erected on the other side of this

wall at some time subsequent to the asylum, as a special institution for imbecile children. The War Office has taken over this building, and controls and conducts it as an ordinary military hospital. The second in command is a quartermaster of the R.A.M.C. He has under him a staff of R.A.M.C. orderlies in uniform, and a certain number of female hospital nurses. There is a military sentry on duty at the gate, which is at the end of a lane leading from Beachcroft Road to the hospital and leading nowhere else. The whole atmosphere of the place is that of a military establishment. The hospital itself is, externally and internally, a delightful building, in the designing of which the greatest care must have been taken, and little expense spared, in order to provide the original inhabitants with a beautiful home. In going over it I was chiefly struck with wonder as to what some of the ratepayers would say if they knew how much of their money had been spent for this purpose. The house stands in a splendid situation on the brow of a slight hill, with a broad outlook westward and southward over open fields. It must have several acres of ground round it for the use of the patients. Except for the high wall on one side, the whole surroundings are as rural as they could be on the outskirts of a London suburb. In short, the place is an ideal one for the purpose for which it is being used, and the soldiers must be hard indeed to please if they do not thoroughly enjoy their residence there. They present no visible sign of not doing so. Some of them, poor fellows, can hardly be in the mood for enjoying themselves. Two or three were in bed when I passed through the wards, suffering more or less painfully. A few others were sitting in wheeled chairs, more or less without the use of their legs; a few others deaf or speechless. But the great majority of the 230 inmates were strolling about or sitting in the grounds, or lounging in the spacious and comfortable rooms, smoking, reading, or chatting with their visitors, who were numerous. In short, they were evidently enjoying what Major Worth told me is the first essential of cure, rest, and enjoying it under as comfortable conditions as you or I would if we went for a rest-cure to a well-equipped country hotel. They are under no more restrictions than their wounded fellow-patients in any other military hospital; indeed less, for Major Worth says that he believes in letting them as far as possible do what they like, and he thought that military discipline in his establishment was rather slack.

"In such circumstances I can only say, as said above, that it is absurd to suggest that these men are being treated in 'blocks of a county asylum,' or that special treatment in hospitals, 'apart from lunacy,' has not been provided for them as promised. The expression 'a block of a lunatic asylum' suggests something which bears no relation at all to the circumstances of Springfield Hospital. The condition 'apart from lunacy' is carried out in the spirit as well as in the letter, for I repeat that the hospital has in all respects the character and atmosphere of a military establishment. The ground of complaint amounts to this, that there is a lunatic asylum next door, and that the same medical officer is in charge of both houses. The first point is frivolous, and could hardly have been raised if the two buildings belonged to separate landlords. The second point, so far from being a reasonable cause of complaint, is really the crowning merit of the arrangement, because it enables the men to enjoy all the benefit of hospital treatment under the immediate eye of a highly qualified and experienced specialist. By all accounts, Major Worth is as good a man for this job as could be found in all England, and from what I saw I should think the patients are lucky to have him so close at hand.

"The charges made in the letter published on February 9th referred to more than one establishment. As to others than Springfield Hospital I cannot speak from personal knowledge; but I am credibly informed and believe it to be the fact that there is only one other where any association with lunacy law treatment can possibly be suggested. This is the Maghull Hospital, Liverpool, which was built for a lunatic asylum, but was taken over by the War Office for use as a hospital for nerve disorders before it was ever occupied as a lunatic asylum. Objection to the use of this building in this way seems a degree more absurd than the objection to the Springfield Hospital. That being the state of the case, I must withdraw the observations made in *Truth* of February 9th on my correspondent's letter. So far from reproaching Sir Alfred Keogh for not having carried out his promise in regard to providing hospital treatment, I think, after seeing Springfield Hospital, that he is to be congratulated on finding the chance of carrying it out in such an

admirable manner. And if anybody feels any doubt on that point, I recommend him before he opens his mouth on the subject to do as I did, and go and see for himself."

The incident was also commented on in *The Hospital* of March 4th, 1916, as follows:

"THE SPRINGFIELD MILITARY HOSPITAL.

"The Editor of *Truth* recently gave publicity to an accusation of broken pledges directed against the Director-General of the Army Medical Service (Sir A. Keogh) in connection with the arrangements for 'nerve-shocked' soldiers. Having availed himself of an invitation to inspect on the spot the Springfield Military Hospital, Wandsworth (around which the contention seems to have arisen), he very emphatically refutes the whole of the criticism which he formerly printed, and incidentally testifies to the efficiency of the Springfield Hospital in a manner which must be highly gratifying to the Commandant, Major Worth, who is also Superintendent of the neighbouring Wandsworth Asylum, under the Middlesex County Council. An enthusiastic description is given of the hospital buildings themselves, and of the extensive grounds in which they stand; while the system of treatment as Major Worth administers it is also spoken of in the very highest terms of praise. Altogether both the Springfield Hospital and the Army Medical Department get a very excellent testimonial over the incident, which may be regarded as most satisfactorily closed."

We must say that it is a matter for surprise that at a meeting held more than a year after the occurrence of an incident which received such publicity at the time, there was apparently no one in the audience acquainted with the facts, and that not the slightest attempt appears to have been made to refute an absolutely groundless *canard*.

CORRESPONDENCE.

WAR EMERGENCY FUND OF THE ROYAL MEDICAL BENEVOLENT FUND.

To the Editors of the JOURNAL OF MENTAL SCIENCE.

SIR,—The time has come to make a further appeal for the War Emergency Fund.

This Fund was instituted last year to afford assistance to members of our profession who, in consequence of having joined the Army Medical Service, find themselves in temporary difficulties.

Many medical men, when called up, had to leave on very short notice, without time to make adequate provision for the continuance and maintenance of their practices during their absence. As a result they have had to face a severe fall in income even when supplemented by Army pay; while many expenses, such as rent, insurance, taxes, family maintenance, and education, could not be reduced. Although in a year or two after their return it may be hoped those affected will recover their position, still, in the interval help is, and will be, necessary, and it is to meet these needs that the War Emergency Fund was established.

To be effective the grants must be made on a liberal scale, and the fund from which they are to be drawn must be a large one. The sum obtained last year was about £4,000. This is quite inadequate, as at least £25,000 will be required if even a small proportion of those requiring assistance is to be helped. From the wealthier members of the medical profession, it is hoped, substantial sums will be received, but everyone should feel it a duty which he owes to his less prosperous colleagues to give the most liberal donation he can afford.

At the same time the appeal is not, and ought not to be, restricted to the medical profession. The public, too, may be rightly called upon to bear its share, and to show, by liberal contributions, its appreciation of the special services so freely rendered by the medical profession to the country.

The War Emergency Fund is a special department of the Royal Medical Benevolent Fund. It is kept separate and distinct from the ordinary operations of the general fund, and is under the management of a committee specially appointed for the purpose.

Communications should be addressed to the Honorary Secretary, War Emergency Fund, 11, Chandos Street, Cavendish Square, W. 1, to whom cheques should be made payable.

We are, etc.,

SAMUEL WEST,

President.

CHARTERS J. SYMONDS, Colonel A.M.S.,

Honorary Treasurer.

G. NEWTON PITT, Major R.A.M.C.(T.),

Honorary Secretary.

London, W. 1,
June 8th.

Cases of Special Distress caused by the War which the Committee have Helped.

A lieutenant in the R.A.M.C., who had only been in practice a few years, volunteered for service, and was killed in action a few days later. He left a widow, with two children, aged 3½ and 1 year, without means except the War Office pension. The Fund voted £25 for her immediate necessities, and the Officers' Families Fund gave further help.

A captain in the Territorials was called out, and had to leave his practice in the hands of a *locum*, who proved a failure. There were seven children, aged 2 to 14. Financial difficulties arose, and payment of the school fees became impossible. Between the Fund and Guild, and the Officers' Families Fund, the necessary fees were raised, and sorely needed clothing provided.

A captain in the Territorials, who was called out when the Army mobilised, and had to leave his practice worth £800 at a day's notice, could not pay the fees for his son's education, who was in his last year at school. The Fund, the Guild, and the Professional Classes War Relief Council together raised the necessary money.

A captain in the Territorials was killed in action, and left a widow, and two children, aged 3 and 4½ years. The Fund investigated the case, and referred it to the Officers' Families Fund, who gave her a grant to meet her immediate necessities. The Fund also obtained work for the widow, a trained nurse, who was thus enabled to earn her own living.

A major, R.A.M.C., Territorial, was called out at the beginning of the war and was abroad for over two years. He was invalided to England and put on home service. His practice was completely lost by his absence. There are three children—one in the Navy, one in the Army, and one at school. He had to give up his house, as he was in difficulties with rent, taxes, and education. The Fund gave £50, and further help was obtained from other sources.

A captain in the R.A.M.C.(T.), with a wife and six children, found the income derived from his practice, left in charge of a *locum*, and the balance of his Army pay insufficient to meet his expenses. He obtained assistance from the Civil Liabilities Committee and the Officers' Families Fund, and a grant was made from the War Emergency Fund towards the education of the children.

A practitioner, earning £700 to £800, volunteered for service, leaving his practice in the hands of a neighbour, who was not a success. There were two children, aged 7 and 10, and another baby was born shortly after the husband left. The wife contracted pneumonia and nearly died. A resident patient had to leave the house. Rent and other expenses led to a debt of about £80. This the doctor could not meet, and he hurried back from the trenches to save his home from being sold up. The Fund voted £25, the Guild gave £15, the Officers' Families Fund £25, and the Professional Classes War Relief Council offered further help, with the result that he returned to the Front with his immediate anxieties relieved.

SIR,—We beg to support the urgent letter of appeal to this Fund which appeared in the last week's medical journals.

This Fund was instituted by the Royal Medical Benevolent Fund last year to afford assistance to members of the profession who, in consequence of having joined the Army Medical Service, find themselves in temporary difficulties.

We very strongly commend the claims of this Fund to the generous support of both the profession and the public.

- We are, etc.,
FREDERICK TAYLOR
 (President, Royal College of Physicians).
W. WATSON CHEYNE
 (President, Royal College of Surgeons).
W. H. NORMAN, Surgeon-General, R.N.
 (Director-General of the Medical Department of the Navy).
ALFRED H. KEOGH
 (Director-General, Army Medical Service).
WILLIAM OSLER
 (Regius Professor of Medicine, University of Oxford).
T. CLIFFORD ALLBUTT
 (Regius Professor of Physic, University of Cambridge).
JOHN TWEEDY
 (Past-President, Royal Medical Benevolent Fund).

11, Chandos Street,
 Cavendish Square,
 W. 1.

June 16th.

OBITUARY.

WILLIAM RAWES, F.R.C.S.Eng., M.D.Durh.

To the great number of the friends of Dr. Rawes the news of his death came as a sudden shock, as few had heard of any severe illness. There is no doubt that the closing of St. Luke's Hospital was in a measure a great sorrow to him, though he was looking forward to a well-earned holiday. He told the writer that he felt parting from the majority of the patients as old friends, and these same feelings were, I know, reciprocated by the patients.

Dr. Rawes was educated at the London Hospital. After qualifying in 1885 he was appointed House-Physician to Drs. Hughlings Jackson and Stephen Mackenzie, and later to a House-Surgeoncy under Mr. John Couper. A few years later he became Assistant Medical Officer at St. Luke's (July, 1891). He was made Medical Superintendent on December 26th, 1898 (upon the retirement of Dr. George Mickley), and was still an officer on the date of his death, March 6th, 1917. Dr. Rawes attended frequently the meetings of the Association, and on two occasions the South-Eastern Division met and were hospitably entertained at St. Luke's.

A former assistant and intimate friend writes:

"He was a man of wide intelligence, great intellectual powers, and of detached views. He thought for himself, and refused to take anyone's views or teaching without first examining it closely. Main and broad questions, and practical subjects in his work as alienist, were those to which he devoted his mind, but he refused to waste his time and intellectual energy on any impractical or futile subjects, or those, as a rule, of purely academic interest. His advice in cases of mental disease, and also in all medical and surgical cases, was always most valuable, as it was not only sound, but enlightening from its practical standpoint.

"The guiding principles of his life were truth, honesty, and justice, and these endeared him to his friends, his patients, and to all who worked with him, as one on whom they could rely, and to whom they could give their best service. He also possessed a fine sense of humour, which is essential to success. His principal recreations were foreign travel and reading history and travel. At such sport and games of skill as he could practice he was good, and enjoyed them. He was a keen Mason, and Treasurer of the London Hospital Lodge."

CHARLES THEODORE EWART.

CLINICAL psychiatry has lost a devoted as well as an able and interesting personality by the death of Dr. Ewart. It is unspeakably sad that he should have been called away from the work of his life, just as he was happily enjoying the climax of his ambition, for which he had long waited and which, when at last attained, he maintained with honour and the utmost credit, *viz.* the post of Medical Superintendent of the London County Council's large asylum at Claybury, with nearly 3,000 beds, and to which he was temporarily appointed only last September. All who knew Ewart respected his loyalty, the love that he had for the work of tending the insane, his anxiety for their comfort and welfare, as well as his great reserve of perseverance and patience. It is not too much to say that no man was ever more respected by the staff nor more loved by his patients for the special qualities which make a successful medical officer of a large institution. Those who knew Ewart never failed to realise his great tenderness in speech and action, for sympathy was in the nether springs of his nature. He never turned a deaf ear to the most trivial complaint, even when made by the most unreasonable of his patients, and he readily gave an interview to the most unamenable and perturbing spirit. He regarded his patients as his friends and he gave of his best freely to serve their interests. The writer knew no medical officer who so readily responded or who gave his time so unstintedly to "interviews with friends" in order to reassure anxious relatives that the patient was receiving the best curative and remedial treatment, and his sincerity always carried confidence and conviction.

He was gifted with no small amount of that introspective mental analysis which characterises so many Scotsmen, and his great delight was in a contemplative philosophy which sustained some religious, reflective, or mystical trend. He was a man who was capable of doing great things, and he was certainly a man whose friends had great expectations from him, for he had initiative original powers and an inventive, suggestive mind; but he possessed the defects of his qualities; his calm, contented disposition, his mysticism (usually associated with a keen intellect), and his firm optimism (that all would work well in the end) militated against his achieving early success and distinction. Ewart was so full of life—he made all the detailed arrangements for his own operation, and planned his summer holidays, and even arranged what books to read during his convalescence—that he may be said to have been absolutely open and "responsive" to life. He was the type of perfect gentleman; suave, self-resourceful, and self-reliant; sympathetic, and in consequence considerate for the welfare of others.

He possessed a deep feeling of altruism, with a most hopeful temperament; he had an imposing and pleasing presence, and these, combined with a refined intellect and good manner—he had a loathing contempt for any meanness or underhand dealing—made Ewart one of the most popular and charming characters whom the writer has met.

Dr. Ewart was never keen to attend public meetings, even when he had the opportunities to be present; he was lost in a self-assertive crowd; he loved so much more the *personal* touch, for he was the quiet scholar and he felt into the soul of things. He contributed on occasions to high-class magazines and journals. He wrote for the *Nineteenth Century*, the *Westminster* and *Empire Reviews*, *Quest*, *Chambers' Journal*, and others, and he excelled in magazine articles rather than in contributions to medical literature, because he had a passion for a more abundant life, and this made him extend his sympathies beyond his own special sphere. It was this lure for something more than was apparent in things that made him search for the deeper reality which existed and which he was thus led to pursue. In spite of this philosophic tendency he was one of the earliest of this passing generation to draw practical attention to the value of special industrial colonies for those afflicted with epilepsy, and he may be correctly described as the originator of the scheme adopted later by the London County Council when the Colony for the Insane Epileptic was founded at Epsom. He was the first to institute the training of nurses in the London asylums upon the basis of a syllabus adopted by the St. John Ambulance Association, as a recognition of which he was elected an Honorary Life Member of the Association. He took the greatest interest in physical drill for mental patients, many of whom in asylums need some encouragement to perform muscular movements, especially those of a general,

orderly, and sustained kind, and he was a firm believer in the maxim, *Mens sana in corpore sano*.

He was an ardent naturalist and loved the country with all its pursuits, and he was a great "gamester," being a "plus" golfer and well known at some of the principal links, a keen cricketer and "Footer" player, a good opponent at tennis, and a useful hockey hand, but owing to a football accident, which brought on a strained knee, he was obliged of late years to moderate his favourite bent towards athleticism. Dr. Ewart was a well-trained and well-read graduate of the Aberdeen University, and was intimately known to some of its most distinguished *alumni*, who were his fellow-students.

He came of a good family: his father was a Judge of High Court in Jamaica, and his mother was a Barclay. He married whilst at Claybury a daughter of the late Mr. Abraham Flint, of Chigwell; she and her young daughter are left to mourn the loss of a most devoted father. Last Easter he suffered from an abscess of the vermiform appendix, which was successfully treated in a nursing-home in London, and on Saturday, June 16th, he was further operated upon in his home at Claybury for appendicitis. The writer saw him the day before he died, when the wound, owing to complications, was re-opened and the abdomen re-examined. He was then calm, composed, and self-reliant, his only thoughts being for others. He died from exhaustion and shock four days after the operation, having for a few months only reaped the fruits of a too long-deferred promotion.

His remains were laid to rest, by his own wishes, near to the scenes of his long labours, and with every mark of love and respect. His great wish is probably now being realised; he had hoped after death to begin life in a new state with far more abundant opportunities for experience, having left behind him the busy strivings of a probationary existence.

It is hard to believe that Ewart has ended all his aims, plans, and activities! He will be tenderly recalled by several present medical superintendents who were his colleagues at Claybury—as well as by many matrons—as a loyal, sincere, and generously-minded friend, and to the writer and his family his memory will be long retained and affectionately cherished.

R. A.-J.

A CORRECTION.

IN the discussion on Sir Robert Armstrong-Jones's paper on "Dreams," which appeared in the April number of the Journal, Dr. Rothsay Stewart is reported (p. 220) to have said—"it assumed a submental stimulus." Dr. Stewart writes: "This should be '*subminimal* stimulus.' The term is borrowed from electricity, and the meaning wished to convey was that certain cells in the brain, which had received the least stimulus to allow of their acting, would have become active during a dream." We regret that this clerical error should have occurred.—Eds.

THE LIBRARY.

MEMBERS of the Association are reminded that the Library at 11, Chandos Street, W., is open daily for reading and for the purpose of borrowing books. Books may also be borrowed by post, provided that at the time of application threepence in stamps is forwarded to defray the cost of postage. Arrangements have been made with Messrs. Lewis to enable the Association to obtain books from the lending library belonging to that firm should any desired book not be in the Library. In addition, the Committee is willing to purchase copies of such books as will be of interest to members. Certain medical periodicals are circulated among such members as intimate their desire to be included in the list.

Members reducing their private libraries are requested to bear in mind the library of the Association.

Applications for books should be addressed to the Resident Librarian, Medico-Psychological Association, 11, Chandos Street, Cavendish Square, W.

Other communications should be addressed to the undersigned at the City of London Mental Hospital, Dartford, Kent.

R. H. STEEN,
Hon. Secretary, Library Committee.

APPOINTMENT.

Dunn, Edwin Lindsay, M.B., B.Sch., Trinity College, Dublin, Medical Superintendent of the Berkshire Asylum, Wallingford.

NOTICES BY THE REGISTRAR.

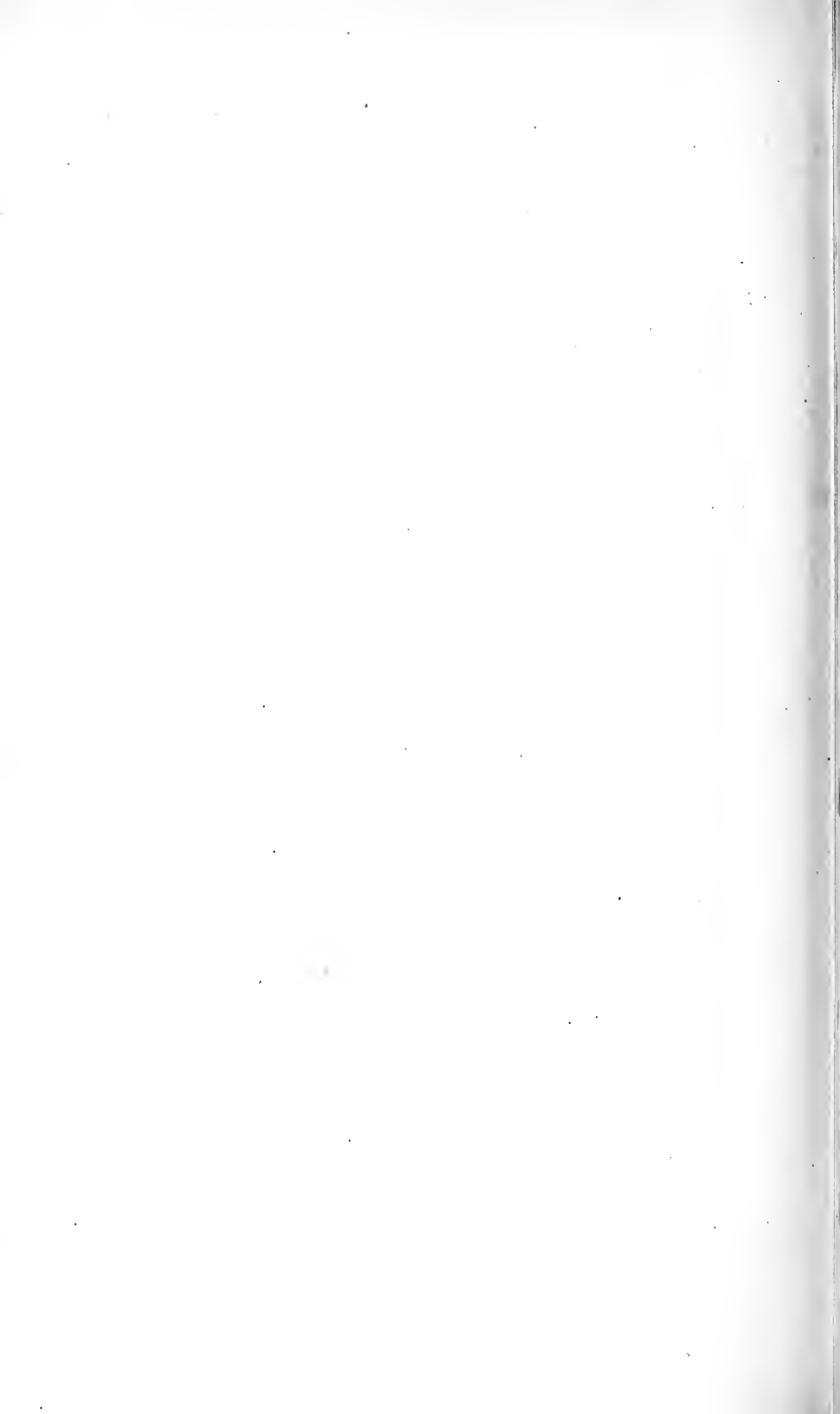
The examination for Certificate in Psychological Medicine will be held in London early in July. For particulars, apply to the Registrar, Dr. A. MILLER, Hatton Asylum, Warwick.

NOTICE TO CONTRIBUTORS.

N.B.—The Editors will be glad to receive contributions of interest, clinical records, etc., from any members who can find time to write (whether these have been read at meetings or not) for publication in the Journal. They will also feel obliged if contributors will send in their papers at as early a date in each quarter as possible.

Writers are requested kindly to bear in mind that, according to LIX(a) of the Articles of Association, "all papers read at the Annual, General, or Divisional Meetings of the Association shall be the property of the Association, unless the author shall have previously obtained the written consent of the Editors to the contrary."

Papers read at Association Meetings should, therefore, not be published in other Journals without such sanction having been previously granted.







H. HAYES NEWINGTON, F.R.C.P.Edin., M.R.C.S.Eng.
Obiit July 31st, 1917. Treasurer, 1894-1917.

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THE
JOURNAL OF MENTAL SCIENCE

[*Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland.*]

No. 263 [NEW SERIES
No. 227.] OCTOBER, 1917.

VOL. LXIII.

HERBERT FRANCIS HAYES NEWINGTON,
F.R.C.P.EDIN., M.R.C.S.ENG.

WHEN a great pillar is removed, the structure which it supports, if happily it does not fall, seldom escapes without a tremble; and it speaks well for the construction of the fabric if, without outward sign of damage, it can withstand its loss until a new pillar has been inserted in its stead.

So it is with our Association to-day: for seldom has it sustained so grievous a loss as it has recently experienced in the removal by death of its revered Treasurer. And when in due course it rises from its war-stunted activities, if it can resume its normal tenor and maintain without set-back its acknowledged sphere of usefulness, none will deny that its vitality and stability are in no small measure due to the fostering care of its late Treasurer, to whose memory the Association is under a debt it can never sufficiently acknowledge.

Herbert Francis Hayes Newington was born in Sussex in the year 1847 at the village of Ticehurst, the name of which—since the labours of his grandfather, continued by his father (Dr. C. E. Hayes Newington) and other members of the family, and conspicuously by himself—has become so closely associated with the establishment known as Ticehurst House for the treatment of mental disorders. His mother, Eleanora, daughter of the late Rev. Richard Wetherell, also belonged to an old

Sussex family whose home, Pashley, at Ticehurst, is of historic interest in having been the residence of Ann Boleyn and her father.

Hayes Newington received his preliminary education at Blackheath, and his medical training partly at University College, London, and in part at Edinburgh University. He qualified as M.R.C.S.England and L.R.C.P.Edinburgh in 1871 and 1873 respectively, and, taking the Membership of the latter in 1878, he was elected a Fellow in 1898.

His connection with Edinburgh led to his joining the medical staff of the Royal Edinburgh Asylum at Morningside, at the head of which Dr. David Skae then was, and, on the appointment of the late Sir Thomas Clouston to the Physician-Superintendentship of that institution in 1873, Hayes Newington became the latter's first Senior Assistant Physician: small wonder therefore that, with the stimulus of those two teachers and the traditions into which he himself had been born, his professional views and aspirations should have been of high order. Of fine physique and commanding presence—but the latter robbed of all hauteur by a slight stoop and a manner transparently sincere and friendly—he was a “big man” in both body and mind; and on his return to Ticehurst House, and later on as its medical head, the future progress and development of this already well-known establishment were in eminently safe hands.

To say that Hayes Newington was a many-sided man gives but a shadowy indication of the immensity of his activities and the diversity of his interests; but, many though these were, all directly or indirectly had as their goal the improved care and treatment of the insane, the welfare of those so engaged, and—it is not too much to add—the mental health of the general population. It is no easy task either to summarize his work, or at all adequately to portray the unique and great place he filled in the ranks of those practising the special branch of Medicine to which, with untiring energy, he devoted his life; probably his ideal biographer would have been his old friend, Dr. Urquhart—another member of, alas! the fast dwindling “Old Guard” of our Association—whose death occurred on the same day as his own. At this year's Annual Meeting it was Dr. Hayes Newington who proposed the late Dr. Urquhart as an Honorary Member of the Association. There is a touch of

pathos in the incident, as a close and almost lifelong friendship had existed between the two men. Only six days later both, within a few hours of each other, passed beyond the confines of this mortal life. In their deaths they were not divided.

It is, however, safe to assert that, in the home of his ancestors, at Ticehurst House, of which he was medical superintendent and part-proprietor, he found his life's work. His reign there was marked by many improvements and several important additions to the resources of the institution. Never for one moment did he, or those associated with him, allow private considerations to come before the best interests of the patients. A gift of rare insight, with an ability to enter into the lives of his charges and to win their fullest confidence, were qualities Hayes Newington possessed in remarkable degree; and doubtless it was to this intimate knowledge of his patients' cases, to his ripe judgment, and to his real scholarship in psychological medicine that he owed both his success as a physician and the readiness with which cases, often giving rise to a maximum amount of anxiety, were entrusted to his care. He realized the importance of providing for their pleasures and recreations, and the zest with which he himself joined in these with them was ever an example to the staff under him. A good cricketer, a keen golfer, and an enthusiastic musician, he utilized these and other accomplishments for the welfare of his patients and, rightly, did not think it derogatory to the dignity of his position to act as organist, choir-master, and conductor of the orchestra of Ticehurst House. If his attitude towards innovations in modes of treatment was one of considerable caution, he at any rate saw to it that, as regards the methods on which his experience had taught him to rely, there should be no stint in the means for their thorough application. That he was in no wise hostile to modern methods and that he was well aware that the march of knowledge in the specialty would inevitably carry with it changes in lines of treatment are evidenced by his anxious solicitude—known at least to some of our members—that, when time with him should be no more, his successor should be a man versed in the results of modern research and imbued with a desire to apply them. If an epitaph to his life-long labours to maintain and enhance the best traditions of Ticehurst House be wanted, most truly may it be written of him :

“Thou cam’st not to thy place by accident,
It is the very place God meant for thee.”

But to most of us—among whom and for whom he so assiduously toiled for almost half a century—Hayes Newington was best known, and will longest be remembered, for the prodigious work he did for the Association and in relation to the important positions in it which he has filled with such conspicuous ability and acceptance. How much those present at our meetings owe to him for their creature comforts has probably been little realized outside the Association’s permanent officials : it is a fact to which he would never permit any reference, but which ought not to escape notice here. In catering for the social amenities of our gatherings every detail, however trivial, was the subject of his scrutiny, and he brought into play here the same methods of precision and exercise of system that characterized all his work ; if any member at the festive board, finding himself cheek-by-jowl with a particular friend, ever gave a passing thought as to the happy coincidence by which he found himself so placed, he may now know that it was usually to the Treasurer’s foresight that he owed his pleasure. All that, however, is “by the way” and insignificant in comparison with the great work he did in furtherance of the prime aims—scientific and administrative—of the Association. His connection therewith dates back to 1873 and it would be of interest to know, not how many but how few of its meetings in those forty-four years he failed to attend. In 1889 he occupied the presidential chair on its vacation by his already-mentioned former chief—Sir Thomas Clouston. He served on, or acted as Chairman of, almost every Committee that from time to time has been set up, and of the Standing Committees. He was Chairman of the Parliamentary Committee from 1896 to 1904. He was our “watch-dog” over proposed legislation, and from his high position, both medically and socially, he was often able to improve or correct intended enactments. In the anxious period immediately prior to the passing of the important Acts of 1890 and 1891 and in connection with the Superannuation Act of 1909 he was much at Westminster, and rendered yeoman service to the real interests of all concerned ; as also he did for asylum staffs in relation to the Workmen’s Compensation Act.

It was, however, in the Treasurer’s seat, in which he followed

Dr. Paul and which he occupied from 1894 until his death, that he was most familiar to us, and where he was the "power" not only "behind the throne," but by the side of successive presidents. His faculty of seeing all sides of a question of policy or procedure and his accurate knowledge of the minute-book, even for remotely antecedent entries, were remarkable. Creative criticism and "a modest and learned ignorance" distinguished his mode of discussion. For these reasons, and because of his obvious single-mindedness and directness of motive he could, in debate, always arrest and sustain attention; and, where a decision was necessary, rare indeed must have been the occasions where his advice was not followed. His skill in the more immediate duties of the office of Treasurer and his successful management of the Association's finances are too well known to need here more than record. His labours in assisting with the preparation of the *Handbook for Attendants on the Insane*—first published in 1885—and in connection with the training, examination, certification, and registration of mental nurses, male and female, are also common knowledge; their valuable results can never be obliterated. Mention, too, must not be omitted of the strenuous manner in which he threw himself into the task entrusted to the Statistical Committee, whose work, extending through three years, besides effecting other important changes, was productive of much saving in labour by homologating to a considerable extent the tables published by the Commissioners in Lunacy and those recognized by the Association. Assuredly, since the death of Dr. Hack Tuke, the most dominant personality at the Council and on the Standing Committees has been Hayes Newington; but his loyalty to his numerous friends and the trust he inspired not only made jealousy impossible, but made his dominance a source of congratulation. The affection and esteem in which he was held by the members was marked by their presentation to him, at the Annual Meeting, 1913, of his portrait in oils by W. W. Oules, R.A., on the completion of his fortieth year of membership of the Association.

Despite this position in our Association, Hayes Newington shunned the "limelight," and his professional views are to be found mostly in the records of scientific discussions. Nevertheless his literary powers were great, and he published not a few papers of much value—notably, for example, "Observa-

tions on Stupor" (1874), "Mental Aspects of Music" (1897), and "Plans of a New Asylum for East Sussex" (1900). The subject of his presidential address was "Hospital Treatment for Recent and Curable Cases of Insanity."

In local government, Hayes Newington gave much valuable, though unobtrusive, assistance. At the formation of county councils, he was elected for the Ticehurst division, and was, at the time of his death, and had been for several years, Alderman of the East Sussex County Council. Many of the medical features of Hellingly Asylum, which he worked out with the Architect (the late Mr. G. T. Hine, F.R.I.B.A.), are the result of his prevision, planning, and organisation. He more than once declined the honour of a seat on the County Bench.

Notwithstanding these numerous claims on his time, the deep interest he had from early years taken in the affairs of his native parish never flagged. At the establishment of parish councils he was co-opted Chairman of the Ticehurst Council. A great lover of his garden (the dahlia was his favourite flower), he did his best to encourage successful results, and was President of the local Horticultural Society.

For some considerable time his health had not been good, and, following the death by a motor accident of his cousin and partner (Dr. Alexander Newington), his friends viewed with anxiety the additional strain of work thrown upon him, and, later, the effects of the war caused further stresses in connection with his duties. But no one who was present at the Annual Meeting of the Association in the third week of last July and listened to his share in the discussion on Dr. Mercier's paper had the least suspicion how near at hand our loss was; and when the end came as it did on the 31st of July, it found him, except for a few hours' indisposition, as he himself would have wished—in harness and at work. That the affection he bore for his native place was returned in full measure by the parishioners was strikingly manifest at the funeral which took place at Ticehurst; nor was the solemnity of the occasion diminished by the circumstance that throughout the service in the churchyard the guns from the Front were plainly audible.

In 1875 Dr. Hayes Newington married Jane Elizabeth, daughter of Prof. Archer (Director of the Edinburgh Museum of Arts and Science), and this memoir would be incomplete without an allusion to his home and character as a host. If a

special welcome was reserved for their more intimate friends, none could visit "The Gables"—the home he built for his family and himself at Ticehurst, and where hospitality was proverbial—without feeling invigorated and encouraged. In all these matters he was ably seconded by his wife, who was ever alert to shield him from the strain of his many activities. As well as by her he is survived by a son and daughter, the latter of whom has given indefatigable assistance in the clerical work of the Treasurership. If the end of his life was clouded by sorrows, sorrows through the war, it is a source of satisfaction to know that they were to some extent mitigated by the knowledge of the emphatic manner in which the gallant services of his son have been recognised.

"Strong towers decay,
But a great name shall never pass away."

Part I.—Original Articles.

Chadwick Lecture (April 26th, 1917): Mental Hygiene in Shell-shock, during and after the War.⁽¹⁾ By F. W. MOTT, M.D., LL.D., F.R.S., Major, R.A.M.C.T.

MR. PRESIDENT, LADIES AND GENTLEMEN,—A new epoch in military and medical science has arisen in consequence of the employment of high explosives, combined with prolonged trench warfare, in this terrible war.

The term "shell-shock" is applied to a group of varying signs and symptoms, indicative of loss of functions and disorder of functions of the central nervous system, arising from sudden or prolonged exposure to forces generated by high explosives. The forces producing shell-shock are most commonly generated by the explosion of large shells, but also of mines, aerial torpedoes, whizz-bangs, trench mortars, bombs, and hand-grenades filled with high explosives.

In a large number of cases, although exhibiting no visible injury, shell-shock is accompanied by burial. Again, cerebral or spinal concussion may be caused by sand-bags, hurled from the parapet or parades of the trench, striking the individual on the head or spine. The soldier may be concussed by the

roof or wall of the dug-out being blown in, or he may be driven violently against the wall of the trench or dug-out, or blown a long distance, simply by the strength of the explosion.

One case in point: An engineer officer under my care recollected nothing of the circumstances of the shell-shock which brought him to hospital, but a brother officer informed me that he was blown 40 feet along a road by the explosion of one shell, and blown back again by the explosion of another. The enemy was "strafing" the road by planting shells along it at intervals.

It has been shown that the force generated by 17-in. shells is equal to 10,000 kgrm. per square metre, or 10 tons to the square yard. This supports the contention that even death may occur as the result of aerial concussion, generated by high explosives, without visible injury. I think probably the cause of death in such a case would be sudden arrest of the vital centres.⁽¹⁾ The stem of the brain, surrounded by the cerebro-spinal fluid, is prevented from oscillating by the anterior and posterior roots and the ligamentum dentatum. The cerebro-spinal fluid, therefore, acts as a water jacket to the spinal cord, and water cushion to the base of the brain. A sudden shock of great intensity would be transmitted through this incompressible fluid, and, seeing that it not only surrounds the central nervous system, but fills up the hollow spaces, ventricles, and central canal, and all the interstices of the nervous tissues, it follows that a shock of sufficient intensity communicated to the fluid would occasion *commotion* of the delicate colloidal structures of the living tissues of the brain and spinal cord. Such commotion would certainly lead to disordered function, and if severe to loss of function. The higher centres are the most likely to be affected; therefore consciousness, memory, sensory perception, and speech suffer. If the commotion is sufficient to arrest the functions of the vital centres in the medulla, instant death would ensue, but it is difficult to determine in many cases whether the force was delivered by the hurling of a sand-bag against the head or spine, or simply by aerial concussion in a confined space.

This leads me to call your attention to another important factor which may complicate the condition termed "shell-shock." The soldier, while lying partially buried and unconscious, or at any rate helpless, may be exposed to various noxious gases,⁽²⁾ generated by shells or mines, especially carbon

monoxide, or oxides of nitrogen, both of which are poisonous by reason of the de-oxygenating effects upon the blood. Other poisonous gases from shells may produce most injurious and even fatal results; *e.g.*, cyanogen compounds, phosgene, which is chloride of carbonyl and chlorine, etc. Both these gases are very deadly in their effects.

From the point of view of compensation or pension, the War Office authorities very properly regard shell-shock as a definite injury; still, from my experience, I have formed the opinion that the term "war neurosis" would be better for the majority of cases now sent back diagnosed as "shell-shock," because the signs and symptoms of these in no way differ from cases of neurasthenia and hysteria, occurring even in soldiers who have never been exposed to shell-fire, but have experienced the emotional shock of fear, and apprehension of what will happen to them, if they are exposed to the terrors of shell-fire and trench warfare.

Another objection to the term "shell-shock" is its elasticity, rendering it liable to be differently applied by different medical officers. I have observed that some medical officers avoid the term as far as possible, and I am always suspicious of the soldier who, when asked what he is suffering from, glibly informs you "Shell-shock, Sir." I am apt to believe he is "shell-shy." I agree with Major Hurst that it would be better if the term "shell-shock" was more limited in its application, and it should not be employed in cases of neurasthenia, hysteria, or fear, causing a man to be sent back, although he has only been subjected to the experiences of war which every soldier must undergo who goes to the Front. The term "shell-shock" should, from a scientific point of view, be applied to those cases where there is definite evidence of commotion or concussion of the central nervous system.

Malingering as shell-shock is, I am informed by Capt. William Brown, quite common at the Front, and the detection of conscious fraud is not easy in many of these cases, owing to the fact that a functional neurosis, due to a fixed idea or obsession, inhibiting will power, may be mistaken for malingering. Again, the notion of never recovering tends to become a fixed idea, and this fact is of considerable importance in respect to the discharge from the Army "permanently unfit," and the subsequent payment of pension and compensation. It is

essential to be sure of your diagnosis that the disease is altogether functional, and, being satisfied thereof, to avoid all forms of suggestion of non-recovery.

Mental and Bodily Condition of the Individual at the time of receiving the Shock.

In considering the effects of shell-shock on the nervous system, it is necessary to call attention to a complex of factors of extrinsic and intrinsic origin, apart altogether from the effects produced by direct material injury to the central nervous system by commotion and concussion. I will now consider the extrinsic conditions in modern trench warfare, which lead in a neuro-potentially sound individual to nervous exhaustion, predisposing to shell-shock. It must be obvious that through all the sensory avenues, exciting and terrifying impressions are continually streaming to the perceptual centres in the brain, arousing the primitive emotions and passions, and their instinctive reactions. The whole nervous system, excited and dominated by feelings of anger, disgust, and especially fear, is in a condition of continuous tension; sleep, the sweet unconscious quiet of the mind, is impossible or unrefreshing, because broken or disturbed by terrifying dreams.

Living in trenches or dug-outs, exposed to wet, cold and often (owing to shelling of the communication trenches) to hunger and thirst; dazed or almost stunned by the unceasing din of the guns; disgusted by foul stenches, by the rats and by insect tortures of flies, fleas, bugs, and lice, the minor horrors of war, when combined with frequent grim and gruesome spectacles of comrades suddenly struck down, mangled, wounded or dead, the memories of which are constantly recurring, and exciting a dread of impending death or of being blown up by a mine and buried alive together constitute experiences so depressing to the vital resistance of the nervous system that a time must come when even the strongest man will succumb, and a shell bursting near may produce a sudden loss of consciousness, not by concussion or commotion, but by acting as the "last straw" on an utterly exhausted nervous system, worn out by this stress of trench warfare and want of sleep.

In considering the effects of shell-shock, it is necessary to take into account, the state of the nervous system of the:

individual at the time of the shock caused by the explosion. As I have indicated, a neuro-potentially sound soldier may, from the stress of prolonged trench warfare, acquire a neurasthenic condition, and it stands to reason that a soldier who is already neurasthenic from a previous head injury, or from acquirement of a disease, prior to his being sent to the Front, will not stand the strain so well as a neuro-potentially sound man.

Of even greater importance than the extrinsic conditions in the causation of military unfitness from exposure to shell-fire, are the intrinsic conditions, for if there is an inborn timorous or neurotic disposition, or an inborn or acquired neuropathic or psychopathic taint, causing a *locus minoris resistentiæ* in the central nervous system, it necessarily follows that such an one will be unable to stand the terrifying effects of shell-fire and the stress of trench warfare. A large number of the cases of shock which I see in hospital and which especially require treatment by mental hygiene are neuro-potentially unfit.

They come back after a short experience at the Front, suffering with neurasthenia or hysteria, which persists for months and even a year or more; these are temperamentally unfit.

To take two concrete examples of the importance of the personal factor in the consideration of the causation of shell-shock. A commercial traveller with one year's training, three weeks in France, and three days in the trenches, was sent home suffering with shell-shock; after six months in hospital he is still tremulous and hardly able to stand or walk. He has done his best, but has cost as much as a cartload of shells. Compare the personality of this man with another, who was also admitted under my care suffering from spinal concussion, paralysed in all four extremities, with loss of control over his bladder and bowels. The history he gave was that he was in a dug-out when an 8-in. shell burst 2 ft. behind the dug-out; he was partially buried, but did not lose consciousness; when he was rescued he was found to be paralysed. Now this man shows none of the signs of shell-shock; he has no terrifying dreams, and although the concussion caused a hæmorrhage into his spinal cord, followed by degeneration of the pyramidal tracts (*viz.*, the paths of volitional impulses), nevertheless he is making a splendid recovery, and in two months is much less helpless than most of the severe functional cases of paraplegia, in which the paralysis of the legs is due to a fixed idea that they are

unable to walk or stand. He appeared to be insusceptible to emotional shock. The case of another man under my care however, illustrates remarkably well the effects of emotional shock (psychic trauma) in the production of a profound effect upon the central nervous system. He was sent out with a party to repair barbed wire, when a great shell burst among them, blowing him into a shell-hole; he scrambled out; seeing his comrades mangled and dead, he fell down and recollected no more of what happened for some weeks. When admitted under my care, he presented a picture of abject terror, reminding one of the lines in Spenser's *Fairie Queen* :

“ He answered not at all, but adding new fear to his first amazement,
Staring wide with stony eyes and hollow hue,
Astonished stood as one who had espied
Infernal furies with their chains untyed.”

As we know, one of the peculiarities of the functional neuroses, e.g., hysteria, is not only the sudden manner in which an emotional shock may cause a loss of function, but likewise the sudden manner in which it may be unexpectedly restored by a stimulus of the most varied kind, provided there is an element of surprise. That is, his attention is for the moment taken off its guard. I am referring especially to hysterical mutism and aphonia. If the patient is neuro-potentially sound, he will recover as a rule from shell-shock by rest of the mind and body under healthy conditions without any special treatment. But the neurotic, the neuropathic and the psychopathic individual, with an inborn or acquired *locus minoris resistentiæ* in the central nervous system, is more difficult to treat successfully, for when an inborn or acquired predisposition to a neurosis or psychosis exists, functional disorders or disabilities of the nervous system tend to become organised by habit, and eventually firmly installed.

Before we consider the mental hygiene of shell-shock, it is necessary to point out the more important signs and symptoms, for although the general principles of treatment are the same, special functional disorders and disabilities necessitate special methods.

The Effect of Shell-shock on Consciousness.

Most of the severe cases have suffered from loss of consciousness, or they have no recollection of what happened after the

shell burst and till they were at the clearing station or hospital ; it does not follow that they were in a state of complete unconsciousness during that time, for cases have been recorded where under hypnotic suggestion they have been able to revive in consciousness some of the forgotten events. Again the following case rather tends to show that often instead of complete unconsciousness loss of power of recollection seems to be the effect produced on consciousness by the shock. Several cases of the kind have come under my notice, but I will describe one of the most reliable, as it is a history that came from an officer. His company dug themselves in in a wood ; he went out into the road to see if a convoy was coming when a large shell burst near him. It was about 2 a.m. and quite dark ; about 4.30 a.m. it was quite light, and he found himself being helped off his horse by two women who came out of a farm house. He had no recollection of anything that happened between the bursting of the shell and this incident. It is interesting to know that it is possible for him to have inhaled noxious gases, for the single cigarette in a metal case that was in his breast pocket was yellow on one side, due, no doubt, to picric acid contained in the explosive.

Many cases have been admitted under my care at the Neurological Section of the 4th London, who had not yet recovered normal consciousness, and for some days were in a dazed, somnolent or even semi-conscious condition. Usually these cases came at a time when large convoys were sent from the Front owing to a recent engagement. The histories of cases sometimes showed that men absented themselves as a result of shell-shock, and, wandering away from the trenches, were found in a dazed condition, unable to account for their actions or to recollect how they came there. This condition is not unlike a fugue or automatic wandering of an epileptic ; and, indeed, in some of these cases there was a history of epilepsy or a predisposition to it, but in others no other cause was ascertainable than the conditions which induced shell-shock.

A good many patients say that they can picture in their mind's eye the shell coming ; they visualise the death and destruction caused, and they can revive in memory the sound of the explosion, but a blank of variable duration in their recollection of events follows. Many of these patients have not really suffered with either cerebral commotion or concussion,

and in strict acceptation of the term are not true shell-shock cases. Cases of severe concussion or commotion have not only an anterograde but also a retrograde amnesia, and these cases may sometimes show such a complete loss of memory of any event in their past life that they do not know their own name or where they live; in fact, their recollection is a blank, as if the commotion had obliterated the store house of the mind and its contents. In these cases it is quite probable there has been either an additional factor of concussion or burial with gassing.

Some of the severe cases of amnesia we know were gas poisoning complicated by concussion or burial. However, it is as well to bear in mind that when a man professes a complete loss of memory, otherwise showing no signs or symptoms of shock, he may be suspected of malingering. Cases have been admitted to hospitals, and diagnosed as shell-shock, because they are unable or pretended to be unable to recollect their names or where they came from, who have never been out of the country. I am informed by Capt. William Brown, who is neurological expert with the 4th Army, that hypnotism is very useful in detecting such malingerers, and the fear of giving themselves away has a deterrent effect on this form of malingering, whether it be deserting their post or deserting the ranks and professing inability to recollect what has happened.

The drowsy anergic stupor which many of these patients suffer from may disappear gradually; or it may be associated with auditory or visual hallucinations of a terrifying nature—day dreams of the terrible experiences they have gone through. As the mind becomes more conscious of the external world, these day dreams are screened off and as a rule are not able to pass the threshold of consciousness; but I have had cases where quite suddenly and unexpectedly terrifying visual hallucinations have induced all the external manifestations of fear, *e.g.*, profuse sweating, a wild terrified look and attempt to escape by flight, and when prevented from doing so, fear gave place to maniacal excitement and desperate struggling to escape. Some of the cases are obsessed with a terrifying experience; for example, one soldier kept shouting out that he saw “ginger-headed Fritz,” it turned out that this was a German sniper of renown. Another felt a patch of blood on his cheek, and when a mirror was held in front of him and he was shown that there was nothing there, he said he felt it was there although he could not see it.

Asked how it happened, he said that a Prussian Guard had stabbed his sergeant in the neck with a saw bayonet, and when the Prussian drew it out the blood spattered all over his cheek. Now, although as a rule, in most cases these terrifying experiences do not come up into consciousness during the daytime when the mind is occupied in reacting to the constant perceptual chain of events, yet if the mind is not diverted from introspection, these terrifying experiences are always ready to obtrude themselves on consciousness, and this is clearly shown by the fact that one of the most constant, most serious and disturbing symptoms of shell-shock are the terrifying dreams which are seldom, if ever, absent, although sometimes they cannot be recollected, but in such cases although the patient does not recollect the dream he will tell you that he has been awakened in a cold sweat and has experienced the feeling of sinking or falling; this may be due to relaxation of muscles in consequence of fear.

Sleep and Dreams.

Insomnia, and sleep disturbed by terrifying dreams, afflict nearly all cases of shell-shock and war neurosis. I have not found any evidence supporting Freud's views. I have questioned a number of officers and men, and have asked them to write confidentially their dream recollections. Very seldom indeed do they refer to any reminiscences of childhood. They almost always tell the same story of dreaming of their recent experiences in the trenches. Shakespeare has clearly indicated how dreams influence the minds of men, and how they are based upon past experiences. Thus, Mercutio, in the description of Queen Mab, refers to the soldier's dream in the following lines, which are as true to-day as when Shakespeare wrote them:

“Sometime she driveth o'er a soldier's neck,
And then dreams he of cutting foreign throats,
Of breaches, ambuscadoes, Spanish blades,
Of healths five fathom deep; and then anon
Drums in his ear, at which he starts and wakes;
And, being thus frightened, swears a prayer or two,
And sleeps again.”

In addition to the revival of experiences of trench warfare, of hearing the shells burst and seeing the flash, of parapets

being blown down, of being buried, of charging the enemy, soldiers often complain of a falling or sinking feeling; possibly it is to this that Shakespeare refers in the lines, "Of healths five fathom deep." Often, in their dreams, soldiers are heard to cry out; and officers have been heard to give commands to their men, and urge them on to battle.

I have had four or five cases of soldiers who, in their sleep, have gone through the pantomime of fighting with the bomb, with the bayonet, and with rifle. In consequence of the danger of injuring themselves in their unconscious but violent purposive motor activities, it sometimes became necessary to place them on a mattress in a padded room. Sometimes soldiers, when placed under an anæsthetic, have been known to perform the pantomime of habitual acts, as of raising the gun to the shoulder, and pulling the trigger.

The ancients were fully aware of this, thus Lucretius says: "Again the minds of men which pursue great aims under great emotion often during sleep pursue and carry on the same in like manner, kings take by storm, are taken, join battle, raise a loud cry as if stabbed in the spot." "*De rerum natura.*"—Munro. Sometimes the same terrifying dream recurs night after night, causing great mental distress. An officer told me that he had two dreams based upon two separate experiences which constantly recurred; one was attended the next day by a feeling of mental depression, the other by a certain degree of exhilaration. The former was the sight of the legless body of a Prussian that lay for days in front of their dug-out, and which it was impossible, and highly dangerous, as they had found to their cost, to move. The latter was his escape from a death struggle. He was in a trench, a Prussian threw a bomb at him, which just missed him, and exploded out of harm's way; he then threw a bomb, and it blew the enemy's head off, just as the Hun was preparing to throw another at him.

When these dreams cease, the patient is getting better. They are indicative of terror, which is contemplative fear continued and fixed in imagination, and the signs and symptoms these patients suffer from are largely due to the continued effect of fear on consciousness. It is obvious that this fact is all important to bear in mind when considering the mental hygiene of shell-shock. The principal objective signs and subjective

symptoms of shell-shock largely correspond with those of paralytic fear. We speak of being paralysed by fear, of giving way of the knees, of trembling or quaking with fear, of being dumb with fear, of 'blue funk.'

All these popular expressions regarding the influence of the emotion of fear on the human body are based upon actual experience, for paralysis, tremors, giving way of the legs, mutism, and cold blue hands are among the most constant signs of soldiers suffering with shell-shock.

The Influence of Fear on Phonation and Speech.

A frequent condition met with is aphonia and mutism or inability to speak even in a whisper. This in no way differs from hysterical aphonia and mutism.

It is the conscious mind operating on the centres in the brain controlling phonation which causes this affection of speech, for mutes often shout in their sleep, and this may be the prelude to the recovery of their speech; one man recovered his speech on being told that he had been talking in his sleep by a comrade who slept in the next bed; he was so surprised that he said, "I don't believe it." Another man recovered his speech when pitched out of a punt on New Year's Eve; he had been mute for more than six months. This lad could not whistle, could not phonate in coughing, could not blow out a candle, yet he was heard to shout in his sleep. An X-ray examination of his chest showed that the diaphragm hardly moved even when he made a great effort; the fear effect on his conscious mind had inhibited the respiratory movements necessary for phonation and the idea had become firmly installed in his mind. Breathing exercises to relax the contracted respiratory muscles may be usefully employed in some of these cases, and I have had two lady helpers (Miss Oswald and Miss Bush), teachers of elocution and singing, who have done excellent service. The latter has organised singing-classes, and it is astonishing how helpful these have been in restoring phonation and in curing speech defect, such as stammering, stuttering, mutism, and aphonia, by spontaneous imitation.

Mutism with Deafness.

Mutism is often accompanied by deafness; sometimes the patient recovers his speech and remains deaf. I have had a

great number of cases of mutism and mutism with deafness, and in only one instance have I been unable by suggestion or other means to restore the function. A particularly intractable case came to the hospital, who had been deaf and dumb for nearly a year; I tried strong electric shocks, tuning-forks to the head, and sudden noises and hypnotism, without any result, but Dr. Yelland, of the National Hospital, Queen Square, cured this man. I think the imposing array of electrical machines, coloured lights, and other strong suggestive influences, were partly instrumental in accomplishing what I had failed to do, but also I think the knowledge of success in other difficult cases, attending Dr. Yelland's effort, played a very important part in curing by strong suggestion this apparently hopeless case.

To illustrate the value of suggestion in this particular class of case, I may select another incident. I told a man, who was deaf and dumb, and had been so for some time, that he would recover his hearing and speech on a particular day. When I visited the ward on *the* day, I said: "Sister, does D— speak?" "No," she said; "but he was heard to speak in his sleep." I saw a way out of my difficulty, for I wrote down: "You spoke last night in your sleep; you will certainly recover." Now this man, impelled by dreams, used to go through the pantomime of bayoneting Turks in the trenches, of which he was quite unconscious in the morning. He fell out of bed while doing this, cried out, and awoke, having recovered his hearing and speech. Sometimes the men do not want to recover the speech too quickly, and speak only in a whisper. When I have thought a patient was thus consciously prolonging his disability, I have said to the sister aside, but loud enough for the patient to hear: "This man must be kept in bed on No. 1 diet, and when he can ask loud enough for you to hear, he can have a bottle of stout and a mutton chop." I have had several get well the next day by this treatment.

Hysterical Sensory Dissociation.

The deafness may be partly functional, partly due to injury of the drum of the ear, or wax may be damped against the drum. Only about 17 *per cent.* of the cases of deafness are really due to, or partly due to ear disease; the majority of the cases are purely functional, and due to dissociation of the

sensory perceptive centres of hearing of the brain. They do not hear the tuning-fork, although they feel the vibration. There is usually dizziness, but there are signs which clearly serve to differentiate this functional cortical brain deafness from the deafness due to damage of the organ of hearing and equilibrium, or the nervous structures in it.

Sometimes a man is blind, and an examination of the eyes shows that there is no injury or cause in them to account for the loss of sight. Vision may be lost suddenly and restored suddenly; suggestion plays an all-important part, not only in dissociating the visual perceptive structures in the brain from the nervous tracts which convey the light stimuli of the blinding flash from the eyes, but in restoring the sight by re-associating them. Again darkness may by suggestion cause blindness, as was shown in the following case. A man suffering with shell-shock, crept into a culvert and lost his sight there, so that he was unable to find his way out; a wounded man came in, and by their combined efforts they got out; the blind man carried or helped to support the wounded man, and the wounded man directed the blind man.

Another interesting case was that of a grenadier who was blind, deaf and dumb, and this case like many others I have seen, illustrates the fact that, when an individual is deprived of the use of one or more of the sensory perceptive centres of the brain, the mind is more alert in receiving stimuli arriving by the remaining avenues. Thus, this grenadier who was quite blind, deaf and dumb, was most sensitive to touch, so that he started back when the feeding cup was put to his lips. The day after admission he had an hysterical fit, owing to abdominal pain, and suddenly recovered his sight. The next day he was able to write down his name, regiment, native place, etc., but of his experiences in France he knew nothing, although he had been out a considerable time. He was very distressed that he could not hear or speak. A few days later he had another emotional outburst, and thereafter recovered his speech and hearing. We subsequently found that he had been blown up and buried by a shell, but of this he had no recollection. He made a rapid recovery. This was a true case of shell-shock, causing a functional neurosis by disassociation due to commotion of the brain.

Here I may say how important it is to ascertain how long

a man has been in the front line in estimating how much of the functional disorder or disability is due to a pre-war neurotic condition.

The Differential Diagnosis of Shell-shock.

Shell-shock is a term applied to severe forms of war neurosis, usually associated with *commotio cerebri* or concussion, and not infrequently attended by burial and the inhalation of poisonous gases while lying buried or unconscious. The shock may be so severe as to cause instant death by arrest of the vital centres in the medulla, or complete loss of consciousness may supervene of varying duration. Upon the return of consciousness the patient may be unable to recollect past experiences for a variable period of time; there is a retrograde amnesia, sometimes so complete as to leave the whole past a blank. In severe cases, instead of a complete restoration of consciousness, there may result a condition of deep anergic stupor, which may in rare instances continue for weeks and months; more frequently there is a dazed, somnolent condition, associated with mutism, and a vacant, mindless, apathetic expression in the eye and face; the stuporose state is accompanied by an emotional indifference to surroundings. The depth of the amnesia is reflected in the expression of eye and face, and the malingerer is usually unable to simulate successfully the mindless expression, which is associated with a complete loss of memory, for he generally overacts that part of the business which lies within his conscious power to overact.

Cases of exhaustion psychosis have been mistaken for dementia præcox; especially when, associated with the stupor, there have been auditory hallucinations, fragmentary delusions, mental confusion, and outbursts of impulsive violence. I have seen patients, even thus afflicted with such serious symptoms of mental disorder, get well. Consequently, when there is a history of shell-shock, or a reasonable belief that the patient has suffered shell-shock, it is well to wait before giving a bad prognosis. Two youths, under my care for months, suffered from anergic stupor, and recovered; it was curious that when speech returned, their language in mode of utterance and modulation of the voice, was like that of an infant. When asked how they felt (although in hospital at different times), they each gave the answer in the same way—"me bet-tah."

An exhaustion psychosis from shell-shock may be associated with a restless, choreiform, motor delirium; several of these patients had suffered in early life from chorea. Some of the patients suffering from psychasthenia are troubled by one or other of various phobias; the commonest of which are claustrophobia and agoraphobia. All patients with shell-shock complain of inability to concentrate their attention, and they are easily fatigued by mental or bodily effort; some of them suffer with asthenopia; nearly all complain of headache, occipital, frontal, or through the temples. Hyperacusis and being startled by noises, is usually present. Tremor of the hands is usual, less often of the upper lip and of the legs. The knee jerks are exaggerated, otherwise normal. The pupils are equal and react normally.

Of the various types of neurasthenia associated with shell-shock, the spinal, cardiac, cerebral, and gastric were the most common.

Only a few of the cases relatively suffered with signs and symptoms of sexual neurasthenia; where sexual neurasthenia occurred, the cases were usually of men who had not been at the Front, or if they had, had not remained there long.

The symptoms of the spinal type were, generally speaking, the result of suggestion; *e.g.*, the patient had received a blow on the back, or a superficial wound of the spine, or there was a history of burial. In addition to the usual group of neurasthenic symptoms, there was pain and tenderness of the spine and tremor and giving way of the legs, and not infrequently functional paraplegia, or a condition of *astasia-abasia* (inability to stand or walk, although able to move all the joints of the legs while lying in bed). The abdominal reflexes are normal; the sphincters are unaffected and the plantar reflex is flexor.

The cardiac form of neurasthenia also is common. Such cases have frequently been labelled D.A.H. as a systolic murmur has been discovered. The knowledge of this has in many cases led to a concentration of the mind on the precordium; they feel pain and discomfort in the region of the heart; they suffer with palpitation and breathlessness on exertion; and in some cases there is a non-conducted systolic murmur and physical manifestations of dilatation. The heart's action in these cases is rapid, 120-160 (tachycardia); it is accelerated by emotion and apprehension, but mental diversion will diminish

it. The pulse has sometimes been markedly diminished in frequency when I have taken the patient's mind off himself by asking him to pull against me.

It is of great importance to gain the full confidence of the patient by making a thorough examination in these visceral neuroses the better to be able to assure them that their organs are not diseased, and that the symptoms they are suffering from, and which alarm them, are due to nervous exhaustion and apprehensive contemplation by the mind of the vital organ. As Dejèrine truly says : "*C'est la fol qui saure—on qui guérit.*"

Treatment of Shell-shock in the Early Stage.

I am informed by medical officers at the clearing-stations that there is an increase of pressure of cerebro-spinal fluid in true shell-shock cases, and that sometimes even it is blood-stained or contains albumin ; also that relief of symptoms occurs by withdrawing fluid by lumbar puncture.

The *treatment* of cases of shell-shock varies to some extent in different individuals, according to symptoms and signs, but there are some symptoms which are seldom absent in all true cases, *viz.*, insomnia and terrifying dreams. I have found the continuous warm bath of great value in the treatment of these cases when they come over from France. The water in the baths is kept continuously at the temperature of the blood by a special mechanism of heat regulation ; the patients are kept in the bath for a quarter to three-quarters of an hour, or even longer. The effect is most soothing on the nervous symptoms, and one can understand how it is so from the fact that the whole of the sensory nerves of the skin are acted upon by the warmth ; the tired muscles are relaxed, and the blood is withdrawn from the internal organs, including the brain, to the skin. These baths are extremely useful in cases of maniacal excitement. Often the bath, with a drink of warm milk at bed-time, suffices without hypnotics to produce sleep. But if hypnotics have to be given, the quantity required is less when combined with the baths. The hypnotics I recommend are trional, gr. x—gr. xv, preceded by mist. paraldehyde ℥ij, or this alone. Pot. brom. or chloral, of each 15 gr., and either tinct. opii ℥ xv., or tinct. cannat. ind. ℥ x. Dial two $1\frac{1}{2}$ gr. tablets. In maniacal excitement hyoscin in $\frac{1}{75}$ — $\frac{1}{100}$ gr. doses hypodermically. It is

better to avoid drugs if possible, but sleep is indispensable. The next thing is to attend to the general bodily condition by nourishing, digestible, and easily assimilated food ; and lastly, very important is attention to the primæ viæ, by which auto-intoxication and cerebral congestion can be relieved. A dose of calomel and saline in the morning is the usual practice. The severe headache from which these patients suffer, requires relief by an ice-bag to the head, aspirin, phenacetin, and other drugs which relieve neuralgic pains.

After the patient has recovered from the more serious condition of shock, and the mind is becoming more alert and interested in its surroundings, we have to consider how best to allay the symptoms, which nearly all suffer from, *viz.*, headaches, dizziness, tremors, feeble circulation, and exhaustion, readily brought on by mental or bodily effort. As a sedative and nerve tonic I usually prescribe dilute hydrobromic acid, quinine, and strychnine. I have found pituitrin useful in cases of low blood-pressure. When the symptoms point to hysteria, bromide and ammoniated tincture of valerian are prescribed. If the patient is sufficiently well to sit up, it is better that he should do so, at first for a few hours a day, if possible in the open air. To severe cases, the noise of gramophones, pianos, the click of billiard balls, and even musical instruments, excite and aggravate symptoms ; quiet repose in single rooms, such as we have at the Maudsley Hospital, is undoubtedly a most important and necessary mode of treatment in the early stages of severe cases.

At the same time these patients should not be left alone ; quiet and unstimulating diversion of mind should be encouraged to avoid introspection and dwelling upon the terrible experiences they have gone through. These men are often too tired or unable to read on account of inability to concentrate attention, and fatigue of the muscle of accommodation and the mind may be diverted by simple games, knitting or wool work, bead work, basket work, and net-making.

Mental Hygiene in Later Stages.

As soon as they are better, patients are encouraged to play billiards, cards, and other games, in the winter time especially ; also there are frequent concerts and popular lectures, all of

which serve to divert the mind and produce an atmosphere of cure which is very essential. Soldiers will put up with a good deal provided they have good and abundant food, and it is essential for recovery that there should be no grouching.

Grumbling and grouching are contagious, and it is always well to get rid of a soldier from a ward if he is exciting discontent in the others. Discipline is very essential; laxity of discipline, over-sympathy and attention by kind well-meaning ladies giving social tea-parties, drives, joy-rides, with the frequent exclamation of "poor dear," has done much to perpetuate functional neuroses in our soldiers. The too-liberal gifts of cigarettes has produced a cigarette habit in officers and men, which is highly detrimental in these cases of war neurosis, especially in cases of irritable-dilated heart, or in cases of cardiac neurasthenia.

Again, in many cases of functional paralyses, the idea of a permanent disability requiring pension for the rest of a man's life may become a fixed idea, owing to wrong diagnosis, over-sympathy, and misdirected treatment. In many of these cases, as I have found, what is required is merely strong suggestion to the patient that there is nothing the matter with him except the idea that he is paralysed, which has become installed and firmly fixed in his mind, by prolonged bed, daily massage, and electricity, which has kept suggesting to him that there is an organic disease causing his complaint. I have seen many cases of inability to stand or walk, who yet could move their legs in bed, and by the tests I have described exhibited conditions definitely pointing to functional paralysis and not to organic disease. Being thus sure of my ground, I have told the patient to get up, and I would support him and see that he did not fall. I have then engaged his attention by asking him questions about himself and his former life while gradually relaxing my hold, until he was standing without any support. After a little while, I say to him, "Now, you did not know that you have been standing about five minutes without any support." I have often succeeded in making such a patient walk. Men have come who have been using crutches for a long time, and I have told the sister to take the crutches and put them in the museum, for this patient did not want them.

Sometimes, however, there may be so much trembling and shaking in the legs that the man is unable to walk without

support. I induce him to try with sticks, and gradually get to one stick, and then to no stick, thus re-educating the muscles. Others come walking like quadrupeds, bending their backs and supporting themselves on the sticks: a little good-natured chaff and taking away the sticks has cured these.

Some patients, owing to an injury by a fall caused by an exploding shell, have developed a functional paralysis on the side of the injury, either arm or leg, or one of these limbs.

Supposing it is the arm that is so affected, I perform a number of associated movements of the two arms together—the healthy one and the paralysed—myself assisting the immobile arm, telling the patient at the same time to help me by thinking of the same movement. After a little while, he may be doing the main part of the movement himself. In all these functional paralytic conditions of an hysterical nature, a great tonic is to tell the patient that it is not at all likely that he will ever be sent back to active service, for he would be no use, and that what we want to do is to discharge him from the service in such a state that he will be fit to resume his previous occupation, or we can put him to some work useful to the State, whereby he will not be a burden to himself or the community.

I am quite sure that if this method were adopted early, in a large number of cases known by an expert to be temperamentally unfit for military service, a great economic saving would be effected.

Of course, precautions would have to be taken against malingerers. I am sure that machines employed by doctors as a means of making the functional paralytics move their limbs, are wrong in principle and in practice, and I entirely approve of the methods adopted by Col. Deane at the Croydon Hospital of restoring function by natural methods, in which the mind is exercised. Thus, I had a boy with functional paralysis of the right arm; boxing and gymnastic exercises soon put him quite right. Col. Deane lays especial stress upon the value of associated movements, such as we get with the parallel bars, the climbing rope, skipping, football, Indian clubs, and the nautical wheel, and the ordinary apparatus of the old-fashioned gymnasium. My contention is, that this apparatus can be applied to any man who is capable of any movement. The inestimable advantage is, that his mind is projected into his paralysed limb,

and all his sound limbs are being exercised at the same time. Constant change and adaptation is another advantage, especially when associated with mental occupation in the work. Diversion of the mind by useful occupation, both in the workshop and in the garden, have been most successful in restoring health and strength to these disabled men. Now, before discharging soldiers suffering from these functional neuroses, either as permanently unfit, or under C1 (garrison duty at home), C2 (agricultural work), or C3 (sedentary occupation), I always tell them that they must show themselves fit to be discharged, by having so far lost their symptoms that when they do return to civil occupation, people should not say, "What are those blessed doctors doing in discharging a poor fellow in a condition like this"; and before they can leave the hospital they must give evidence of being in a fit state. I also tell them that I will prescribe for them two hours' occupation in the morning, either in the carpenter's shop or in the garden. This treatment I have been enabled to carry out through the generosity and kindly interest of Lady Henry Bentinck, who, at her own expense, has built in the grounds at Maudsley Hospital a large workshop fitted with every appliance for carpentering, cabinet-making, and metal work, and with a first-rate instructor. Numbers of officers and men are daily employed in this workshop, and almost daily Lady Bentinck comes to encourage them by her presence, and to supply any need for the successful prosecution of the work. The War Office pays for nothing.

Fortunately the Maudsley Hospital is situated in extensive grounds (for London), and the soldiers have, under my direction, done much to beautify the waste that followed the building operations; they have even made a fountain and flower-beds, which the King and Queen admired when they visited, and were greatly interested in. I might say here that the soldiers have built a poultry-house, and they are now hatching the eggs, in which process they take great interest. Since everybody has to grow vegetables, I have utilised a large amount of the garden for this purpose, but we should have been unable to have done this satisfactorily but for the prompt and generous manner in which Lady Bentinck purchased the tools required for a gang of twenty men, and also supplied the seed potatoes and other seeds necessary for cultivation.

As soon as the men show that they are fit to undertake work of this nature, we feel that they are sufficiently recovered to be discharged from the hospital under C2 or C3 ; but very often we find they suffer from dizziness or they easily tire, or say they suffer from dizziness or tire ; in fact they are not an energetic crowd, and many of them would prefer to patrol the Walworth Road or visit the cinemas. In the carpenter's shop the men receive such remuneration as the sale of the articles they make, less the cost, brings in ; orders for handicraft are received by the instructor. There are patients, however, who cannot stand the noise of the hammering and tapping.

Agricultural Employment During and After the War.

We have discharged a number of neurological cases to Bermondsey Military Hospital for auxiliary agricultural employment, and I have heard that this experiment has been successful. There are twenty-five acres of land at that hospital which can be utilised for agricultural purposes. The experiment, therefore, might be extended with great advantage, for I am convinced that occupation in the open air is a very beneficial mode of treatment of nervous cases in convalescent stage. It does not, however, always seem to be popular with a certain type of case. In commencing the treatment of convalescents by manual labour, it is essential to regulate carefully the character of the labour and the numbers of hours per day, and the work should be so arranged and graduated as not to induce more than that gentle sense of fatigue that promotes appetite, interest, sleep, and the general sense of well-being. Each case, therefore, has to be inquired into and the individual encouraged to take interest. When a shell-shock case is discharged from the Service who by upbringing or inclination has a desire to work on the land, means should be provided whereby he can do so. The money he earns for his labour should be supplemental to the pension money or gratuity.

In concluding this lecture I feel it my duty to associate with the name of Chadwick as a pioneer of sanitary science the name of Maudsley as a pioneer of mental hygiene. This great philosopher and philanthropist gave a large part of his fortune eight years ago to the London County Council to build a hospital for the treatment of acute mental diseases, with a view

of preventing them from becoming chronic and being sent to the county asylums. In the recent report of the Asylums Committee of the London County Council reference is made to the generosity of Dr. Maudsley, who is now over eighty years, in permitting the War Office to utilise it for the treatment of soldiers suffering from shell-shock and war neuroses, for which it is so admirably constructed and equipped. We only hope that he may live to see it utilised for the purpose he intended. When the King and Queen visited the Maudsley Hospital a few months ago they expressed themselves as very pleased with all the arrangements for the comfort and treatment of the many soldiers who have been sent over from France suffering from "shell-shock."

(¹) Some abridgments and additions have been made, but practically the lecture remains as it was given, with the exception of a section on "Diagnosis," which would have been unsuited to a lay audience.—(²) Since this lecture was delivered I have had the opportunity of examining the brain of a man who died suddenly the day after he had been brought from the clearing station. He had been exposed to heavy shell fire; there was no history of gas or burial. There was no visible external injury, and Capt. Stokes, who made the *post-mortem* examination, from his findings came to the conclusion that the man had died of shell-shock. Microscopic examination showed no punctate hæmorrhages in the white matter which I have described as characteristic of gas poisoning, and which I have demonstrated as being due to thrombosis or embolism of terminal arterioles or venules. Nevertheless there were ruptured vessels in the medulla oblongata, the pons and the corpus callosum, and the condition of the heart and lungs showed that arrest of the cerebro-respiratory centres might have been the immediate cause of death. The full account of this case and another of death from the explosion of a large amount of cordite will be published shortly in the *Journal of the Army Medical Service*. The reader is also referred to a communication read before the Pathological Section of the Royal Society of Medicine entitled "Punctate Hæmorrhages of the Brain in Gas Poisoning," *Proc. Roy. Soc. Med.*, vol. x, Pathological Section.

Madness and Unsoundness of Mind. By CHARLES A
MERCIER, M.D., F.R.C.P., F.R.C.S.⁽¹⁾

IT is considerably more than a quarter of a century since I first promulgated the doctrine that madness and unsoundness of mind are not the same thing; that madness includes more than unsoundness of mind, and that unsoundness of mind very often occurs in the sane, and is, indeed, one of the most frequent disorders of the sane. This doctrine has always seemed to me as manifestly true as the doctrine of natural selection, and, like the doctrine of natural selection, needs, it appears to me, only to be stated to secure the adhesion of

every reasonable mind. In fact, I have found by experience that to the immense majority of my acquaintance it does only need to be stated to secure their adherence. Nearly everyone—everyone outside the membership of this Association—to whom I have stated it, without a single exception, has, in fact, accepted as self-evident that what matters in influencing our judgment of madness or sanity is not what a man thinks or feels, but what he says or does; not his mind, but his conduct. Even within this Association the doctrine has many adherents among the younger members, for I often receive letters from them, telling me how great an assistance it has been to them; so that things are moving, and I trust that before long we shall reach the stage that I predicted in a correspondence in the *British Medical Journal*, when not only will the doctrine be universally admitted to be true, but also we shall all declare that we never held any other, and that any claim of mine to have originated it will be strenuously denied. However, *littera scripta manet*. The minute-book of the Educational Committee will show that when I urged that conduct, as being the most important factor in madness, should be systematically studied, I could not secure even a seconder. When I subsequently brought the subject forward in this Association I had not one supporter. Nor had I when I brought it before the Royal Society of Medicine three years ago. In the third edition of Dr. Craig's book on *Psychological Medicine*, which has just appeared, the doctrine is not so much as even mentioned, and Dr. Craig says that insanity cannot be defined. This he says in face of the fact that at the Royal Society of Medicine I showed that there are several different concepts confused under the name of insanity, and I carefully defined every one of them; nor has any one of my definitions ever been impugned. I venture to assert that if these definitions had emanated from a German source they would have been welcomed with enthusiasm and received with reverence.

I am weary of going over the old ground, but I suppose I must traverse it once more. I say, therefore, that to regard madness as disorder of mind alone, or as equivalent to unsoundness of mind, is manifestly an imperfect, inadequate, lopsided, and inexcusable view to take, and cannot be taken except by those who see no difference between mind and conduct, between feeling and thinking on the one hand and

speaking and acting on the other. To them I have no more to say. If they cannot now see the difference between thinking and speaking, between thinking a man is a fool and calling him a fool; if they cannot see the difference between feeling and acting, between desiring money and stealing money, I have no more to say to them. They are beyond the reach of any argument of mine, and I must leave them. To my mind, and to the minds of very many others both within and without the medical profession, to whom I have opened the subject, the view of insanity as primarily disorder of conduct is the greatest advance that has been made in our contemplation of insanity since it ceased to be regarded as demoniacal possession, and came to be looked upon as disorder of mind.

It is disorder of mind—in part. Disorder of mind enters into the concept of insanity, but it is not the whole of the concept nor the most important part of the concept. Disorder of brain-function is another part of the concept, but first and foremost comes disorder of conduct; and for this reason, that conduct and disorder of conduct can be directly observed. We can see it or hear it. It is made evident to our senses. Disorder of brain-function cannot be directly observed. Disorder of mind cannot be directly observed. They can neither be seen, nor be heard, nor be felt. They are completely hidden from observation. In as far as they exist in madness they can only be inferred, and inferred from the observation of conduct; that is to say, of what a man says and of the way he acts. I do not argue this, for again I say that those who cannot see it are beyond the reach of argument. It is, I submit, as plain that disorder of conduct enters into the concept of insanity as that two and two make four. It is as plain that disorder of mind alone does not constitute insanity as that two do not make four until we add the other two.

That, then, is one of the theses that I have been trying for twenty-seven years to get this Association to accept, and I understand that at length I have been in large measure successful; but there are still some who bow the knee to the old Baal of the doctrine that madness is unsoundness of mind and unsoundness of mind is madness.

I assert, on the contrary—and this is the second part of my thesis—that there are many disorders of mind that are quite compatible with sanity, that often occur in the sane

without compromising their sanity in the least, and that no one would or could consider insane. At the last meeting of the Association Dr. Steen read his paper on "Hallucinations in the Sane." I pointed out at the time that hallucination is disorder of mind; and if hallucinations may occur in the sane, and it is common knowledge that they do, then disorder of mind may occur in the sane, and this knocks the bottom out of the doctrine that madness is the same thing as disorder of mind. Let me now point out that among the hallucinations of hearing, which are common both to the sane and the insane, is tinnitus. Tinnitus is not usually considered to be hallucination, but unquestionably it is so. If the hearing of voices when there are no voices to hear, no sound-waves impinging on the tympana, is hallucination, then the hearing of musical notes or of blowing off steam when there are no musical notes or there is no blowing off of steam to hear is equally hallucination. I say if, for I have taught that it is very doubtful whether there is any true hallucination of hearing. Certainly in many, and I believe in all, cases of so-called hallucination of hearing there are impressions on the auditory nerve coming either from without or from within the body; but these impressions are misinterpreted. In that case they would not be hallucinations, but illusions. But what we call them does not matter. In any case, they are sensations received and interpreted by the mind—by the mind, I repeat—and the erroneous imagination or misinterpretation, it does not matter which, is disorderly action of the mind. Aurists speak of noises in the ears; but alienists know, or ought to know, better. The noise is not in the ears, but in the mind, just as the blue colour of the sky is not in the sky, but in the mind. Tinnitus, then, is disorder of the mind; and does tinnitus never occur in the sane? Is this disorder of mind the same thing as madness? If disorder of mind is insanity, then tinnitus is insanity. From this conclusion there is no escape. It cannot be denied; it cannot be controverted; it cannot be disputed. But if reasoning that is rigorously exact leads to a conclusion that is manifestly absurd, where is the flaw? What is wrong? It is the premiss from which we started, and this premiss is that disorder of mind is madness, and madness is disorder of mind.

Then if madness is not disorder of mind, or unsoundness of mind, or disease of mind, what is it? Disease of brain,

you will say, perhaps, but that won't do. Cerebral tumour is disease of brain, but cerebral tumour is not madness, and may exist without a discoverable trace of madness. Cerebral hæmorrhage is disease of brain, but cerebral hæmorrhage is not madness, and may exist without a discoverable trace of madness. It is not proved, and it is not provable, but it may be that in every case of madness there is disease of brain, and for my part I believe that in every case of madness there is disorder of the function, or of some function of the brain ; but madness is certainly not the same thing as disorder or disease of the brain, for if it were, we could never observe it ; for we cannot observe disorder or disease of the brain, at any rate, without opening the skull ; and we do not open the skull in order to recognise insanity. It is not proved, and it is not provable, but it may be that in every case of madness there is disorder or disease of mind, or unsoundness of mind ; but madness is certainly not the same thing as disorder, or disease, or unsoundness of mind, for if it were we could never observe it, for certainly we cannot observe what is going on in the minds of other people.

On the other hand, it is provable and it is proved that in every case of madness there is disorder of conduct. When we certify a person as mad, we certify to facts indicating insanity that we have ourselves observed, and we certainly have not observed disorder of brain or disorder of mind. What we have observed is something the patient has said or something the patient has done ; and what the patient says or does is not part of his brain or part of his mind ; it is part of his conduct. If there is no disorder, or failure, or defect, or fault in anything he says or does, it does not in the least matter what the state of his brain is or what the state of his mind is. He is not mad, and no one could possibly consider him to be mad, and the question of his madness or sanity would never arise and would never be inquired into. Whatever the state of a person's mind may be, he is not considered mad if he behaves in every respect like a sane person ; and if he behaves as a madman, he is mad, whatever the state of his mind may be. It is behaviour, it is conduct, that we go by. And behaviour can be directly observed. We can see it or hear it. Disorder of brain we can neither see nor hear. Disorder of mind we can neither see nor hear. Neither of them can be observed. We

are to put in our certificates facts observed by ourselves, and the only facts we can observe are facts of conduct or behaviour. We cannot see or hear the delusion in another person's mind ; all we can see or hear is the expression of it in speech or gesture or some other mode of conduct.

Really, gentlemen, I am ashamed to have to put before you such elementary truisms as these. Of the innumerable persons outside this Association before whom I have placed them I have never found one that did not tumble to them instantly. The Royal College of Physicians has officially adopted my views. The Royal Commission on the Feeble-minded officially adopted my views. The Home Secretary, in framing the Mental Defective Bill, officially adopted my views. Parliament, in passing the Bill, officially adopted them. How long will this Association lag behind ?

Some views I do not hold are commonly attributed to me in this connection. I am sometimes jeered at for holding and teaching that conduct is the only disorder in madness ; that madness is disorder of conduct, and nothing else. I have never said so and never thought so. I am always careful to say that madness is *primarily* disorder of conduct ; that is to say, that disorder of conduct is the *most important* ingredient in conduct. I am sometimes supposed to hold that in insanity there is no disorder of mind at all. Since I deny that madness is disorder of mind, and nothing else, it is assumed that I deny there is any disorder of mind in madness. I have never said so and never thought so. The very first time I stated my doctrine, seven and twenty years ago, I said : " No doubt disorder of mind is always present in insanity, and salt is always present in sea-water ; but salt is not the same thing as sea-water and disorder of mind is not the same thing as insanity." Again, it is commonly foisted upon me that since I hold madness to be primarily disorder of conduct, therefore I hold that all disorder of conduct is madness. I submit that my critics have no right to attribute to my mind the muddle that exists in their own. I make these protests, well knowing that they will be ineffectual now, as they have always been ineffectual in the past. My critics make up to me for rejecting the doctrine that I do hold by attributing to me other doctrines that I do not.

I shall be curious to discover what the attitude of the

members of this Association now is to this doctrine of mine, that disorder of conduct is the primary ingredient in insanity. Will they scout it as so manifestly absurd as not to be worth discussion, as they scouted it when I brought it before the Educational Committee? or, short of this, will they discuss it, but discuss it with contempt, and unanimously reject it, as they did last time I brought it before the Association? or will they discuss it as a doctrine worth discussion, and be divided in opinion over it? or will they declare that they have always known it and agreed with it; that there is nothing new in it, and that I am making a potter about nothing? That is what I hope to gather from the discussion that will follow.

(1) Read at the Annual Meeting of the Association, held in London on July 25th, 1917.

Materialism and Spiritualism. By HENRY MAUDSLEY
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OF all the consoling illusions which mankind have harboured to irradiate, hearten, seduce and dupe them in their onward way to the perfection, universal peace and brotherhood which they hope and expect to approach, if not attain—after the devastating deluge of this long war for an unknown Divine event is over—none is perhaps more wildly irrational than that of a complete regeneration of human nature, and the coming of a perfect transformation scene on the troubled earth; for all the world as if the method of vital progress which has been since the beginning of life is appointed to come abruptly to a stop, or to be reversed; with the optimistic belief, too, that life shall be thereby exalted and glorified immeasurably. Could the fatuity of egotistic optimism go farther? Was the universe specially created to be a stage on which man—equally with other species and the rest of animate nature—lives, suffers, decays, and dies, might play his transitory part? Was that the illusive goal which at its outset launched it on its transcendental aim and its mysterious career, along which it has groaned since in long protracted travail? Naturally in that matter the devotees of

religion believe the most, hope the most, cry aloud the most ; otherwise their faith might be rudely shaken.

Yet the fond opinion is the fixed belief of many persons who seldom think what they profess to think when they try to think. Holding the traditional age-consecrated opinion, theological and metaphysical, grafted in them in infancy, fostered by education, enjoined by authority, sanctioned by custom of thought and conduct, embodied in the very words of the language they use, they are sure that everybody, whether idiot, imbecile, or man of genius, is a dual being having a material and a "spiritual body" —joint corporeal and incorporeal bodies. They think that the soul has an existence independent of its temporary bodily tenement, which at any moment it may leave at will without thereby suffering harm to itself, nay, in the idiot's case with positive advantage, and that it shall ultimately mount high into the boundless blue—they know not how, and know not where—to rest in unknown regions of everlasting felicity. The peace, happiness, and perfection denied them on earth they are sure will be granted there. Why? Simply and solely because they wish and yearn for such a happy issue out of the afflictions of their mortal lives. Loving life while it lasts, and longing for its continuance, as they needs vitally must, they cannot endure, shrink with aversion from, the unwelcome thought that they may end when they die and turn to dust. Self-preservation and self-love resent and reject the repugnant idea. How, indeed, can they do otherwise? The essential instinct of life is to live ; to lose that instinct is gradually to lose life.

But is that a sure and safe guarantee? The motive force of every conscious activity, that which supplies the impetus, is desire, which is itself unlimited, really illusion, one of Nature's pretty ironies ; the inanity of the particular desire being only seen and felt when it is gratified. Vanity of vanities is then the soberly sad verdict of experience and just reasoning.

Thence, however, it comes naturally to pass that they are eager and pleased to foresee in this greatest, most barbarous and destructive of all wars ever waged, waged too exultantly with all the accumulated gains through the ages of human development, the advent of a new heaven on a new earth. Awe-inspiring and mysterious as the order of events may appear, they are sure that there is no disorder, but that all things shall work well at last for the happy progress of the

human species, which alone of all organic things, though born, grown, decaying, and dying like them, is destined not to perish everlastingly.

Given this belief in an immortal soul and a continued progress of mankind to perfection on earth, the probability, amounting to virtual certainty, is that there will, after the war is over, be a furious recrudescence of spiritualism in its various disguises, its fantastical and fanatical forms, its neurotic vagaries. Materialism, which it is now the fashion and consolatory belief of the theological and metaphysical mind to pronounce quite discredited, though it persistently raises its bruised head, as it always has done, will be utterly scouted as an ignoble, obsolete doctrine; always despicable, and never worthy to have been entertained by noble spiritual beings, constituted and destined to move onwards indefinitely on earth, and upwards eventually to heaven. At all cost of thought the incontestable and grossly revolting materialism of the present war, which has for a time amazed and appalled the minds of the most pious believers in a Divine guidance and direction of the progress of mankind to perfection and bliss, will be dismissed as a passing anomaly or an insuperable mystery.

Is it to be contemplated without dismay that so dire and mortifying an exhibition of barbaric fury, with its detestable atrocities devised deliberately and methodically practised—such a foul eruption of the fund of human nature—should ever be seen again on the now blood-deluged Europe? And *that* by a generation which, having learnt the lesson of a bad and sad experience, will assuredly profit by it? Incredible is the impious suggestion, it will be said. There shall be an early, if not an immediate, regeneration of human nature; Christianity, which for nearly two thousand years has not been truly Christian, and is now sometimes pronounced bankrupt, shall then be vitally Christian; men shall not learn war any more; nations shall with one consent join together in reciprocal services; live in peace, concord, and amity. It is not for frail and erring human thought to appreciate or accuse the hidden ways of Omniscience and Omnipotence: they are past finding out.

Nevertheless, judging the future soberly by the past, and the constitution of human nature being what it essentially is, the exhilarating vision of a vast confederation of humanity stretching from pole to pole is not so bright and fair as the sanguine

optimist would fain have it be. Had the war, fought as it has been, chanced to have been sagaciously predicted, the prediction would assuredly have been contemptibly scouted as the outrageous blasphemy of a madman, or the impious utterance of a fool.

The portentous event was nowise fortuitous nor capricious. It came to pass as a Divine event with mathematical precision from remote, often obscure, yet deeply concatenated causes and conditions, in consequence of the constant, stealthy operation of immutable, rigorous laws; being at bottom just as strictly natural and Divine as the earthquake which ruthlessly overwhelms a city and a whole citiful of its inhabitants. Ought it not indeed to have been justly foreseen by adequately instructed intellect, priding itself on its height of development and past conquests, loudly vaunting its present conquests, sure of their accelerated increase in time to come? Yet men were blind to that which was secretly fermenting, deaf to its menacing mutterings, insensible to the thick darkening clouds, until the sombre brooding storm burst furiously on them.

For the optimistic expectation of a regeneration of human nature there is no reasonable justification in fact. What visible ground of reason, even of well based hope, what shadow of proof in history is there to assume and declare that peace, not war, is the normal and destined purpose of the race in its struggle to advance, increase, and multiply? A settled optimistic faith, it is true, yet optimism is the natural offspring of an enthusiastic temperament, which may after all be of small value, and is pretty sure for the most part to be individually over-valued. As long as nations are not constituted alike—and such sameness is not rationally to be looked for—so long will their constitutional differences have their special developments, these always liable and often likely to come into collisions and collusions, and to breed consequent animosities; whence must ensue conflicts of interest and conduct. Self-interest, latent, open, or disguised, cannot ever be rooted out of human nature; its fundamental impulse is vitally inherent in all its manifold and various activities. It is the essential instinct of vital self-conservation and increase.

Life, be it clearly understood, is *motion*, that its essential nature; wherefore vital stagnation necessarily leads to vital corruption and decay, at any rate on earth, whatever be the case in heaven. Here below unquestionably it is the motion of

vital force which inspires and animates feeling as well as thought, mind as well as body.

For that reason mankind naturally and necessarily believe in progress, which is something never exactly defined. To define the soothing word would be to limit, and the blessing of progress is that it is illimitable. They can always go on expecting to advance, undismayed and undeterred by checks, interruptions, and delays, even by the apparent disorders in the human course. Herein there is nothing for astonishment, nothing for regret, nothing for despair, no reason even excessively to deplore the present devastating war into which nations have madly plunged, and are now heart and soul employed in. The mighty waves of organic being move irresistibly on, notwithstanding impediments, checks, and irregularities, everywhere flooding creek, cranny, cove, bay, and estuary; to ebb quietly back afterwards into the vast main.

Human insight, let it penetrate as far as it can, inevitably comes blindly to a stop; that is the fate of its finiteness. Omnipotence which has created and permitted evil and sin—"shall there be evil in the city, and the Lord hath not done it?"—yet omniscient omnipresence into which sin and evil do not enter! That is the perplexing problem by which the thinker is confronted; one too, that will require all the subtlety of the subtle theological intellect to overcome, should the attempt be frankly and seriously made. To call the problem a mystery and leave the matter there is a disappointing and disheartening procedure, which is inconsistent with a single-minded devotion to truth; it is to shirk it rationally. Just and adequate reflection surely teaches that no one can know evil without at the same time knowing good, nor know good without knowing evil; one word meaningless without the other to give it meaning. Bacon, I think, says somewhere that a mixture of discord in music doth ever add pleasure. In that case, however, the introduced discord must be judiciously timed and ruled; then it becomes a concordant discord which contributes to the general harmony. If that be so, why should not a mixture of evil and good in the universe be the concordant discord which adds to the supreme harmony of "the music of the spheres."

"Such harmony is in immortal souls,
But, whilst this muddy vesture of decay
Doth grossly close it in, we cannot hear it."

After all is said, the fundamental fact remains that man is a

part of Nature, contained in it, a portion and partial expression of its Divine Omnipotence, derived from and embraced in its mighty unity, controlled by its order in its orderly sequence, and not perhaps so responsible for his deeds as he is prone egotistically to imagine.⁽¹⁾ In the unknowable universe or its universal plan is the unsearchable Power, the great Cause of Causes, which directs and guides the incalculable course of events; and for the infinitesimal fraction of it which man is to hazard an exploration of its infinitude (which, truly thought, is really a mere negative word), and to justify its ways to his understanding is to inflate ambition to its utmost height of absurdity: not a less folly than it would be to try to fathom the unfathomable. Is it not in fact as supremely ridiculous as it would be for a microbe to comprehend the human body which it joyfully inhabits? Man's conceit of self, his inordinate vanity, takes too much upon himself, thinks too much of himself; his birth he hails as a benefit and a blessing, his death he fears as an evil and a calamity. Self-centred and viewer of things from that subjective standpoint, necessarily tintured as it is with his passions, interests, and prejudices, he appraises the world too seriously, sees it not clearly and truly; instead of looking on it purely objectively as a transitory scene in which his function is to play his part well, and thereupon to gratify himself, not with the vanity of his personal prowess but with the good work which he can persuade himself he has faithfully done. Let him think to reap only what he has rightly sown; in no case will he fail to reap what he has sown.

Haply and happily then may be justified the soothing saying that the *vox populi* is the *vox Dei*, which, be it so or not, is the voice of might and right, if not of what men from their finite point of view think and call justice; seeing that things come to pass inevitably by necessary laws and cannot be other than they are, Nature knowing neither good nor evil, nor sin, nor virtue; moral or immoral be its course according to finite or relative notions, the infinite and absolute "Power above" will surely at last bring the painfully prolonged and confused travail of the long-suffering race to an end on earth, when the anticipation of its perfection in heaven will no more be needed, yet may be devoutly embraced by pious souls. Blessed they then in their bliss if desire has not proved to be a delusion. This is a thought which, though it concern him not now, may be offered

as a soothing balm to the painful pilgrim in his sore travail of toil, suffering, and sorrow through this mortal vale of tears, "and the miseries of this sinful world," from which he gives Almighty God thanks when death mercifully delivers him. (2)

What now is the final question to be answered by dispassionate and impartial inquiry? The question is rightly twofold: firstly, whether the doctrine of materialism is defunct, as spiritualists would fain have it be, and persuade themselves it is, or dormant only in a state of suspended animation; secondly, whether the doctrine of spiritualism, when closely scrutinized, and made definitely intelligible to clear thinking, differs in essence from materialism. Is it not at bottom perhaps a difference not of things but of names only? The rose remains what it is though it be called by any other name.

As regards the doctrine of materialism, the vulgar opinion, that also of many persons who think themselves much wiser than the vulgar, is that of a lump of coarse and apparently passive and inert matter, a clod of clay, of lump of lead, or the like; which is an absurdly inadequate and quite false notion. They do not realize that matter is made up of molecules, that molecules are made up of innumerable atoms, and that in every atom there are countless electrons or ions ever whirling with inconceivable rapidity in the most subtle and yet most potent motions. They are uninstructed, do not observe, take no thought of what is hourly or daily before their eyes. Were they thoughtfully to watch the alert, active, untiring—yet then comparatively slow and sluggish flight—of a fly on a summer's day, and justly reflect what a source of latent energy its activities within the compass of its small body imply and signify, they might form a truer notion of what materialism at its deepest bottom actually is. For their lack of observation and thought they have no excuse and are rightly to blame. An appropriately imposed penalty on their thoughtless indolence might be to be tormented on a hot summer's afternoon by the pertinacious persistence of the fly, when they would gladly go to sleep, or worse still, when lying prostrate on a bed of mortal sickness, though sensible enough to feel the irritating annoyance, to be similarly pestered.

Thus much concerning materialism as it is in its inmost reality, not in the ignorant conceit which looks only on the surface of things.

Next, as regards spiritualism, what does the word mean when the reality is closely studied, not the mere name loosely used? Is there no sort of substance in the postulated soul begotten on body by body on earth in animal fashion? Is it motion entirely without form and void? To think on it as something real it is surely necessary to grant it some measure of substance, be that ethereal only. And if so, how does its extremely attenuated fineness—its subtilised, rarefied, and perhaps ultrageous condition—really differ from the exquisite fineness of the most subtile material motion? Spiritualism as a living thought, a substantive idea, and materialism in its deepest sense at bottom—do they not mean the same thing, signify the same reality? To say so might not offend tender prejudice were men not slavishly—or sometimes it is to be feared knavishly—to treat names as if they were things. Let them, by way of considerate, if not compassionate, trial, deign to condescend to lower thought and to acquiesce in the use of the expressions *spiritualized matter* and *materialized spirit*, and leave the matter there. Labyrinths enough there are in which they may find a more hopeful and promising prospect of exit. Alike beyond comprehension in the end are the infinite beneath and the infinite above. True thought ought to teach men that all nature is one, nothing in it single; that is the basic fact. Its fundamental unity includes the human soul, which, during its mortal existence, at any rate, is part, portion, and partial expression of it. To disrupt this fundamental unity would be to upset the entire order of nature, to destroy the value of all human aspiration, feeling, and thought, to make a chaos in the mind.

Certain it is in that case that there would be a gratuitous and confounding breach of the continuity of nature in its progressive development. Its observed course manifestly is, through all its multifarious and multitudinous differentiations, to more complex and higher unities of organic matter; that is the inherent tendency of the ever-aspiring vital force, the *conatus fiendi* of Spinoza, which now as *elan vital* is hailed as a new idea—the very essence of its being. Upwards and ever upwards it strives and rises to make separate parts and even individual mortals into more complex social unities: from the single family to detached and loosely scattered wandering families, from them to the tribe, from the tribe to the nation, from the nation eventually, it is presumed and

hoped, to universal brotherhood of the various alien races, differing in race, colour, and creed. How rightly understood this progressive evolution of organic evolution unless strict and close account be taken of the fundamental invisible material energies, ever inconceivably active, deep down beneath all manifestations of visible energy? It is surely lawful and right, nothing else than an indispensable condition of fruitful thought, carefully to study and truly apprise the value of the infinitesimally minute forces of invisible matter.

Few are the persons, prescient and precious rarities in the world—not two perhaps in two or ten thousand—who have sufficiently studied nature and are fully apprised of physical causes, or of the effects they must necessarily produce. As Spinoza justly insisted—“No one can understand this distinctly (the union of body and mind) unless he first adequately understand the nature of the human body. He remains in that case ignorant how far the powers of nature extend and what its capabilities are.”

Few persons again—happily for them—sufficiently realize how great is the tyranny of the particular social system in which their lot is cast. Let the reader frankly ask himself if, had he chanced to live in Dahomey or other barbarous country, he would not have conformed to its savage and sanguinary “customs” rather than have been put to a cruel death? “Custom doth make cowards of us all.”

Furthermore, were he a minister of religion in a particular sect, dependent in it on his stipend for a livelihood, would he not, in his own interest, repeat its formulas, and conform to its doctrines and ceremonies, although all the while perhaps thinking them silly? Yes, probably, and thereupon practise all the arts of sophistry, subterfuge, and prudent reticence to prove to himself that he was doing right.

Prejudice by selective affinity craves and lays hold of that which nourishes and fortifies it. Then it is apt to become a vice, which is not unlikely to be deemed a virtue by its owner. The person likes to be deceived, likes to deceive himself, and is by natural law deceived—*vult decipi decipiatur*.

Interweaving here a brief but not unrelated interlude with regard to a class of minds not unlikely to start or join in the crusades of spiritualistic revivals, it is incumbent not to overlook or under-rate the value of the work done by the minor prophets or

passionately inspired enthusiasts, whom common opinion probably looks upon as narrow-minded fanatics, faddists, or fools. Yet in time, when groups of them are gradually formed, their fiery zeal penetrates and usefully affects the stolid mass of indifference, and the flaming zealots are seen not to have been merely shrill shriekers, quite futile in their day and generation. As matter of fact, they are not so much resented and repelled by the average person as is the man of great genius, who lives a life apart and aloof from their narrow enthusiasms; they are in congenial sympathy with the apathetic mood of their like-minded and like-feeling fellows; whereas he is not understood, seems alien, hostile, remote when he appears, perhaps wholly antipathic, and is deemed a social or anti-social, or, at any rate, is called unsocial. The existing social environment cannot abide him if he will not conformably admire its structure and functions and become subservient to them. As he is thus isolated, it is prone to excommunicate him, which is literally to cast him out of the communion. When he does rarely from time to time appear, all the common people join in common consent to make common cause against him; you may know him then, as Swift said, by that token. All the dogs join in unison to bark at him. He goes where no one has gone before, and where no one goes near him for a while. In due season, however, others, with slow and stumbling feet, tread in his footsteps.

Manifestly the problem of the origin of life on earth, among other problems which most persons pronounce insoluble, cannot be solved so long as men neglect or ignore these fundamental energies of matter, ethereal or quasi-ethereal matter. Here, as with other mysteries, although silence is imposed by saying that the oracle has spoken, it is right to recognize and bear in mind that it is those who know least who are always most sure that a problem is insoluble and would bar more inquiry. History is full of instances of problems which our less instructed ancestors in their day thought insoluble, but are now commonplaces of knowledge. Silenced by the Roman Inquisition Galileo was forced to recant. Pope Gregory excommunicated as blasphemers and atheists those who accepted the discovery that the earth moved in its orbit round the sun. Descartes even found it prudent to leave France and die in a foreign country. There is no real difficulty among adequately instructed persons, who do not treat words as things, in foreseeing a discovery of the

probable mode of origin of life on earth, where somewhere at some time it did naturally emerge from the maze of material forces and conditions, and perhaps secretly emerges now. The plain trend of advancing scientific research and thought is towards that desired achievement. Although man did not invent life, he need not despair of finding out how it was invented. Nature is not yet barren; it has many resources, will make many experiments and inventions, will effect probably new developments, before it fulfils its aspirations and accomplishes the will of its destiny.

Picture it, think of the disastrous spectacle which is presented to rational thought by those who, sure that life cannot have originated naturally, believe that there was once a sudden breach in the continuity of natural law, in order to bring life miraculously from above into the world, and what the statement really means. Were the law of gravitation suspended for a single instant would it fare well with the constitution of the universe? Were the laws of thought in the human mind put a stop to for a time—laws which after all only reflect more or less clearly and distinctly so much of external nature as each mind, whatever its structure, is constitutionally capacitated to come in contact with—what would become of human reason and sensible conduct?

What, then, is the conclusion of the whole matter? That the expected recrudescence of spiritual speculations and extravagances is not fated to kill materialism. It would be a pity indeed if they did, seeing that man, whatever his inmost composition, is undoubtedly a largely material compound. Let him strive to his utmost by all the self-inflicted sufferings and penances of a rigorous asceticism, as ascetic fanatics have done in cold comfortless cells and dreary deserts, by unwholesome gropings into his own overfostered and overstudied feelings, by frequent and fervent prayer to eradicate the lusts and affections of the flesh, the flesh still remains; in no case can he deliver himself from "sin, the flesh, and the devil," any more than he can get out of his own skin: his component elements have ever retained and must ever retain their properties and functions. Indisputable therefore is the truth that the deepest bottom of nature is matter; spiritual theories, be they fanciful and foolish, or well founded and wise, being at last emanations from the whole bodily self. "Conceived in sin," as he is taught, he must

suffer its effects. Nothing has the immortal soul during its mortal mission on earth ever felt or thought into which the body has not vitally entered, and the functions of which it has not strictly determined. Severed from the body in heaven it must surely be another self, happily oblivious there of its former discarded self and its deeds under the sun. When all is said, the salvation of an individual soul by constant devotion and sole service to its welfare, now that theological religion is becoming social and merging gradually into a religion of humanity, is seen to be a selfish and antisocial procedure.

A final materialistic conclusion which may deserve to be pondered is that insensible and most subtile *rhythms* probably pervade and perpetually affect the entire body. By them is the harmony of its parts and a graceful whole maintained. It might indeed be profitable work to try to make practical use of their insensible operations in order to maintain the health and grace of the body. It is not the body's visible joints only, those of fingers, trunk, and limbs, which ought to be kept supple by fit, regular exercises, but all the insensible rhythms might be put into exercise, so far as possible; which is not perhaps so utterly impracticable a business as at first sight it appears to be. As attention to a disturbing sensation or a positive pain notably augments it, so may the infraconscious, insensible rhythms affect the particular muscle, organ, or selected part on which attention is specially concentrated.

The suggestion will not be worthless if it excites reflection on the underlying, ceaseless, subtile bodily motions which go on below consciousness. Consciousness, let it be emphatically stated, is not itself an energy, nowise an imagined entity which does work, as commonly said or implied; it is an index only of the underlying energy. The best work of the truly inspired poet, artist, writer, person of genius of any kind, is done in secret physiological depths, silently implicit; its silent gestation, its actual creative function, is done unconsciously. He may cackle with announcing delight, like the hen which has laid an egg, after he has produced his egg, but he is not in the least aware how the egg was formed. It has now become necessary for the psychologists to make large use of an infraconscious mind, into which receptacle they put what they like and draw out what they like to do the work which the conscious mind does not do; they may therefore in due time realize that consciousness is not a

working entity but an index of the material work silently done by the brain.

(1) As Wordsworth taught in the familiar lines, which the mystically ecstasized witnesses to a soul are never tired of quoting:

“The soul that riseth with us, our life's star,
Hath had elsewhere its setting,
And cometh from afar:
Not in entire forgetfulness,
Nor yet in utter nakedness,
But trailing clouds of glory do we come.”

And similar quotations might be multiplied, e.g.,

“Soul of the sparrow and the bee,
The mighty tide of being comes
Through countless channels, Lord, from Thee.
It springs to life in grass and flowers,
Through every grade of being runs,
While from creation's lofty towers
Its glory flames in stars and suns.”

I quote from memory, which is not what once it was, but in the main, I believe correctly.

(2) “We give Thee hearty thanks for that it hath pleased Thee to deliver this our brother out of the miseries of this sinful world, etc.”—*Burial Service of the Church of England.*

The Orientation of Human and Animal Figures in Art.

By J. BARFIELD ADAMS, L.R.C.P., L.R.C.S., M.P.C.

PROLEGOMENA.

Mlle. JOSÉFA IOTEVKO in her learned articles on *La Théorie Psycho-Physiologique de la Droiterie*, which were published in the *Revue Philosophique*, June and July, 1916, and of which an epitome appears in this number of the Journal, quotes largely from the works of Mlle. V. Kipiani, an enthusiastic educational reformer, who advocates a certain method of reading and writing, the object of which is the avoidance of unnecessary eye-strain. The method, which is fully described in the epitome, is not new. It is simply the boustrophedon mode of writing employed centuries ago by the Ancient Greeks, and abandoned by them for the method which is now used by European nations.

Carried away by her enthusiasm, Mlle. Kipiani has made certain statements with regard to the orientation of children's drawings, and of the figures in the pictures of ancient and modern artists, which appear upon careful examination to be incorrect.

In Mlle. Ioteyko's second article (pp. 69 and 70 of the July number of the *Revue Philosophique*) occur the following passages :

"Passing to *drawing*, Mlle. V. Kipiani proves that nearly all children orient to the left the profiles which they are asked to draw. Further, in examining the original pictures of numerous painters as well as the reproductions of the pictures from all the picture galleries of Europe she proves that the majority are only oriented to one side alone (to the left). Men, horses, bicycles, aeroplanes, all that moves on the earth or in the air, says she, all that is oriented by the hand of man, looks, walks, runs, and flies towards the left on canvas or on paper. What an error of orientation! What lack of observation, what abnormality of the sense of space!

"What is the cause of this hemiplegic orientation? The principal reason is the movement of writing with the right hand which commences on the left; the eyes being carried from left to right. This cause, besides, is itself subordinated to the laws of the anatomy and physiology of the muscles of the hand, which designs with more facility in that direction.

"It is because we design with the right hand only that we orient our pictures and our drawings to the left. It is the most easy habit, the most facile, the least reasoned out, and that is why it is most general among children. The artist frequently changes it, thanks to his virtuosity, and also for reasons of convenience, symmetry, and æsthetics; nevertheless, here also, it is the orientation to the left which predominates.

"It is then permitted to say, concludes Mlle. V. Kipiani, that the exclusive, so to speak, usage of one hand alone gives us only an inexact and fragmentary notion of space; instead of orienting his figures in all possible directions, in accordance with the reality which surrounds us, the right-handed draughtsman gives them a stereotyped direction, always the same. These drawings might be called 'hemiplegic drawings,' to such an extent has the exclusive use of only one cerebral hemisphere made incomplete beings of us.

"Examples of left-handed, or ambidextrous artists, who orient their personages in the opposite direction, are a demonstration of the sound foundation of this opinion.

"The orientation of personages among the ancient Greeks and Egyptians was by preference to the right. It is the same

in the case of the drawings of the Chinese and Japanese. Mlle. Kipiani attributes this result, among others, to their centripetal handwriting.

“Mlle. Kipiani draws attention to this interesting fact, that among the Europeans the principal idea of the picture is found on the left side, among the Chinese and Japanese it is on the right side that the principal scene unrolls itself, and it is from the right side that the personages and objects are oriented.”

I.

The games, which children play in the streets of a town appear to follow a law of periodicity as inexorable as that which rules the movements of the planets or the coming of the seasons. Marbles, peg-top, and tip-cat enjoy a passing vogue and then disappear as regularly as the delicate blossoms of springtime give place to the brilliant flowers of summer.

During the last few weeks, hop-scotch has been the fashionable pastime in the streets of Bristol, and, as everybody knows, a piece of chalk is convenient, nay, almost necessary, for outlining on the road or pavement the geometrical figures required by the game. A child, and—dare we say it?—a grown-up person, endowed with an artistic temperament tires quickly of watching the skill of his companions. Means and opportunity—and artistic genius like sin requires means and opportunity to develop itself—of otherwise amusing himself are at hand, and with the chalk for his brush and the pavement for his canvas the future Royal Academician proceeds to exercise his budding talent, while his playmates continue to hop after the foot-driven stone. That is why it is so rare to come upon a spot, where hop-scotch has been played, without finding close to the chalked squares and oblongs of the figures of the game a number of rough drawings of human beings and other objects.

One day recently, I found seven profiles chalked upon the street pavement. They were, judging by the up-turned moustache, intended for portraits of the Kaiser. They were not complimentary, neither were they well drawn, but they would have delighted the heart of Mlle. Kipiani for they were all oriented towards the left.

Another day, I saw two little girls, who, tired of playing hop-scotch, were drawing on the pavement. They were drawing human figures, but not in profile. There was the usual full-moon face, with the features more or less successfully indicated, the hair standing on end like the periwig of Shock-headed Peter, and a large, round body, to which attenuated limbs were attached at impossible angles. The method of drawing adopted by the younger child—she was eight years old, I was afterwards told—was curious. She was kneeling on the pavement, and as she proceeded with her design, she crawled round it in such a way that she always drew the chalk towards herself in making each line and curve.

I asked the children to draw a man sideways, and after some explanations, for, as it is well known, children have no intuitive idea of drawing profiles, the elder girl, who was eleven years of age, began. The figure, which she drew, had an enormous nose, and faced to the left. As soon as she had finished it, and without pausing to admire her handiwork, the young artist commenced a second figure which faced towards the right—the two figures looking towards each other. When the child was asked why she drew them facing different ways, she said: "They were talking together." It is to be observed that the child drew the figure facing to the right as readily and as easily as she drew the one facing to the left.

On another occasion, I found a procession of four figures chalked on the pavement. Two of the personages, a man and a woman, were taller than the others, whose father and mother they were probably intended to represent. They were all four drawn in profile, and faced towards the right.

Generally speaking, girls are fonder of drawing on the pavement than boys. As to subjects, men are preferred to women, and just at present soldiers are preferred to ordinary individuals. I have seen the puttee and the outside pocket in the skirt of an officer's tunic indicated not unsuccessfully in some of these chalk drawings. Naturally, profiles are comparatively rare, but when they are met with, they as frequently face to the right as to the left.

Miss Beatrice M. Sparks, M.A., the head mistress of the Colston's Girls' Day School, Bristol, very kindly permitted the children in the Kindergarten and the first form of the

school to draw the figure of a man in profile. The majority of the young artists succeeded in their task.

In the Kindergarten the ages of the children ranged from four years and nine months to eight years and seven months. From this department thirty-two drawings were sent in. The quickest children drew the figure in three minutes, the slowest in seven. The greatest possible care was taken to prevent the children from copying from one another. All the children found profile drawing very difficult. Some of them said they had never seen a man sideways. Several of the younger artists were so decided on this subject, so "adamant," as the Kindergarten mistress expressed it, that we were compelled to accept full-face studies. One child stood up and tried to look at herself sideways, in order, as she said, "to see what my arms do." Another small person hit upon the ingenious idea of drawing first a back view of a man, and then of looking sideways along the paper to try if she could obtain a side view of her own drawing.

Twenty-two of the Kindergarten children could write more or less well, though some of them had very little control over their pencil. Four of the children could only print letters, and six could not write at all. No child was left-handed, nor had any inclination to draw with the left hand.

Of the thirty-two drawings sent in, two were failures. The first was so confused that it would hardly have done credit to a prehistoric artist's design scratched with a sharpened flint on a mammoth's tusk or a piece of reindeer horn. It might almost be called prehistoric, for it was the artist's first day at school, and he was only four years and nine months old. The second failure bore more resemblance to an article of furniture than to a human being, and so we had to pass it over. Eight of the drawings unfortunately were full-faced.

The profile drawings were twenty-two in number. Three faced to the left, and nineteen to the right. In some of the drawings it was only possible to make out the orientation of the figure by observing the direction of the nose or the feet. But a few were remarkably good, both for the correctness of the anatomical proportions, and the expression of life and movement.

In one case—the figure was evidently intended for a soldier, was very well drawn, and faced to the right—the Kindergarten

mistress observed that the child "continually turned the paper round and round so that he could always draw the pencil towards himself." This child's method of drawing and that of the little girl, mentioned above, who crawled around the design she was chalking on the pavement, approximate to Mlle. Kipiani's idea of centripetal writing.

In the first form, the ages of the children ranged from seven years and three months to ten years and three months. Seventeen drawings were sent in. The time allowed for the work was ten minutes. All the children in this form could write. No child was left-handed, nor had any inclination to draw with the left hand.

Although the form mistress remarked that all the children found great difficulty with the face, they all succeeded in correctly indicating the profile. Some of the figures were very well drawn. In a few cases, the relative proportions of body and limbs were, to put it mildly, deceptive.

In these seventeen drawings, nine of the figures faced to the right, and eight to the left. Compared with the drawings made by the children in the Kindergarten this reveals a considerable proportional increase in the orientation of the figure towards the left; and if Mlle. Kipiani had stated that such orientation was an acquired habit due to education, she might very properly point to this increase in confirmation of her theory, seeing that it occurred among older children, who could write better, and had been accustomed to write during a longer period. But education and acquired habits are not included in the premises of her proposition. She simply says: "That nearly all children orient to the left the profiles which they are asked to draw."

This brings us to another point. There are a large number of children, especially those endowed with artistic genius, who draw, and sometimes draw well, before they are taught to write. How does the movement of the writing with the right hand from left to right influence them in the orientation of their drawings? The answer, I suppose, would be that the influence is phylogenetic: the parents, the ancestors, wrote with the right hand from left to right, and consequently the children orient their drawings in the opposite direction. (Why opposite direction?) But for how many generations have these ancestors been able to write? Three or four generations back,

100 or 120 years ago, the majority of our ancestors—for, if we consider the ever-widening fan of backward genealogy, the bluest modern blood must be mingled to a great extent with the red stream that coursed through the arteries of lower, and lower middle-class progenitors—could do little more than sign their name, even if they could do as much as that. Go back eight, ten, twelve generations, 200 or 300 years, and it was generally a case of “Bill Stumps, his mark.” Certainly, the time for the operation of phylogenetic influences has been very short.

Mais revenons à nos moutons. The result of the examination of the work of the thirty-nine school children, who succeeded in drawing a human figure in profile, is that twenty-eight oriented the figure to the right, and eleven to the left. The orientation of the pavement drawings was more equal. Two little patients of mine, one aged six years, who could not write at all, and the other eight years, who could write fairly well, both drew profile figures facing to the left.

One cannot draw any positive conclusion from these figures. They are too few in number. But they are sufficient to challenge Mlle. Kipiani's statement that “nearly all children orient to the left the profiles which they are asked to draw.” There is little doubt that children orient their drawings exactly, as grown-up artists orient theirs, and that is, as I shall presently show, in accordance with the dictates of their fancy or the supposed requirements of the scene they are depicting. The child, who, when she had drawn two figures facing one another, and consequently oriented in opposite directions, said that “they were talking together,” touched the thing with the point of a needle.

II.

Mlle. Kipiani states that “in examining the original pictures of numerous painters, as well as the reproductions of the pictures from all the picture galleries of Europe, she proves that the majority are only oriented to one side alone (to the left). Men, horses, bicycles, aeroplanes, all that move on the earth or in the air, says she, all that is oriented by the hand of man, looks, walks, runs and flies towards the left on canvas or on paper.” She adds also that “among the Europeans the principal idea of the picture is found on the left side.”

I have no hesitation in saying that these statements are incorrect. If one took the trouble to examine every picture in all the European galleries, it is quite possible that it would be found that there was a bare majority in which the general orientation was to the left. But it is quite as possible that a bare majority might be oriented to the right. What I assert is, that artists orient their figures and the direction of the movement of their figures, and place the principal idea of the picture on the canvas how and where the working out of their conception requires; and that they are totally uninfluenced by any conscious, unconscious, or subconscious tendency to left-handed orientation at the bidding of their left cerebral hemisphere or of "the laws of the anatomy and physiology of the muscles of the hand which designs with more facility in that direction."

I have visited several of the English and Continental picture galleries. I cannot, of course, remember the details of all the pictures that I saw in those galleries, but those details which I do remember, and in which my memory is assisted by reproductions now at hand, fully bear out my assertion.

In the *Mauritshuis* at The Hague hangs Rembrandt's well-known "Lesson in Anatomy." The principal point of interest in the painting, "the principal idea," as Mlle. Kipiani terms it, is the dissected hand and forearm which is to the right of the centre of the picture. The face and figure of the dissector, Prof. Tulp, is oriented towards the left, whilst the faces of the seven other figures in the picture are turned more or less directly towards the right.

From the wall of another room in the same gallery, Paul Potter's famous bull gazes serenely at the spectator. The bull's body is turned towards the left, while that of its master, if the human being in the picture bears that relationship to the animal, is turned towards the right. The bull is certainly the point of interest, and occupies the centre of the canvas.

In Jan Steen's "Portrait of the Artist and his Family," four of the human figures and the dog look to the right, two look to the left, and three face the spectator. In this artist's pictures there are often several points of interest. In this one there appear to be two: the child on the old woman's knee, on the left; and the boy playing the flageolet, on the right.

Of the many portraits in the *Mauritshuis*, I have only two reproductions. One is the painting of the Infante Karel

Balthazer (Don Balthasar Carlos) by Velasquez. This faces to the left. The other is a portrait of J: P. Olycan by Franz Hals, and it faces towards the right.

In the *Stadhuis* at Haarlem, naturally, we see nobody but Frans Hals, and we come away remembering no one but him. In four of his great Regent pictures, the faces of the figures look right and left in about equal proportions. In one, the "*Officiëren van den St. Joris Doelen, 1639,*" the majority of the faces—all of them except three—look to the left. In Frans Hals' portrait of Nicolaes van der Meer, the face and figure are turned towards the right. In that of Nicolaes' wife, the face and figure are turned towards the left.

Going on to the *Rijksmuseum* at Amsterdam, we find that we have exchanged one master for another—Frans Hals for Rembrandt. It is not that the famous Dutch picture gallery is poor in the works of other artists. On the contrary, it is exceedingly wealthy in treasures of art, and you are only too conscious of it as you walk down the great central gallery—the Gallery of Honour—with its eight alcoves, which one can only compare to the side chapels of a cathedral. But Rembrant Van Rijn is the man whom Amsterdam delighteth to honour above all, and you feel that when you see the loving care with which they have enshrined his masterpiece, the so-called "Night Watch."

You leave behind you the "Gallery of Honour" with its chattering sightseers and busy students, who chatter also when a friend stops beside them to look at their work. You pass along a corridor, and ascend a short flight of steps. You cannot lose your way, for a hand painted on the wall points to the words: "*De Wacht van Nacht,*" "*La Rond de Nuit.*" You open a door and enter a large room. What a change from the great, noisy picture gallery! This is a room of silence and subdued light. It is like entering a church, or a death chamber.

On the wall immediately in front of you hangs a picture—one picture—"The Night Watch." The windows are on the left, and are draped with black velvet curtains, which can be adjusted so that the light may always be suitable for the proper appreciation of the painting. There are, perhaps, a dozen people in the room. There is no talking. Occasionally, one whispers to one's neighbour—a criticism, an eulogy. For

the rest, the silence is only broken by a visitor moving from one bench to another that he may see the picture from a different point of view, or by someone stepping forward to study more closely the technique of the master.

Truly, Rembrandt's masterpiece is worthy of the honour paid it. But look at it from the point of view of the subject under discussion, and you will see that though a few of the figures are oriented towards the right, the majority look towards the left and, further, that the movement proceeds from the right to the left. Was Rembrandt a hemiplegic because of this orientation?

Perhaps, he redeems his physiological character in "The Syndics of the Cloth Merchants' Guild." Here two figures are turned towards the right, two towards the left, and two face the spectator. But Rembrandt lapses again in his portrait of *Vrouw Bas*. This dear old lady, in her fur-trimmed gown, her starched cap, ruffle and cuffs, turns towards the left, although she looks you straight in the face.

In Nicolaes Maes' picture of an old woman asking a blessing over her midday meal, which hangs in the third alcove on the left of the "Gallery of Honour"—you looked at it before you went to see "The Night Watch"—the figure occupies the left of the painting, and is slightly turned towards the right. The light also comes from the left.

In De Hoogh's "The Cellar," one figure looks towards the left, and the other towards the right; the point of interest being slightly to the left of the centre. In Ruisdael's "*Windmühle am Wasser*," the windmill and the mass of the picture are on the right. One would be inclined to say that the point of interest was on the right also.

Leaving Holland and going to France, we visit the Louvre. Do the portraits panelled in the Apollo Gallery all face one way? From the wall of the Salon Carré, *Mona Lisa* looks down on you with her sardonic smile. She is not a whit changed since her visit to her native country. She looks towards you, but her body is turned towards the left. On the opposite wall of the Salon hangs the "Marriage of Cana" by Paul Veronese, with all its beauty of colour and its wonderful composition. Do the many figures in those many groups follow a fixed line of orientation? Can you discover the hemiplegic touch in that picture?

Go a little further on into another room, and look at Greuze's

“Village Bride.” In this picture, seven figures look towards the right, and three towards the left. One, the bride herself, faces the spectator with downcast eyes. The point of interest is to the right of the centre of the canvas.

In another room you will see Chardin’s “*Le Bénédicité*.” In this picture, one figure looks to the left, another to the right, and a third faces the spectator. In Delacroix’s “Dante and Virgil” most of the figures are oriented towards the left. The boatman, who is struggling with his oar, turns his back on the spectator. The point of interest, whether it be the two poets or those marvellous studies of anatomy, the nude figures clinging to the side of the boat, is in the centre of the picture.

In the *Uffizi*, at Florence, you will see Botticelli’s “Birth of Venus.” Two of the figures look towards the right, one towards the left, and the fourth, that of the goddess, faces the spectator. In the same gallery is Bernardino Luini’s “Salomé and the Head of St. John the Baptist.” In this picture, one face looks towards the right; the three others, including that of the decapitated head, are turned towards the left. In Fra Filippo Lippi’s “Virgin and Child with two Angels,” also in the *Uffizi*, the Madonna looks towards the right, the Christ-child and one of the angels towards the left, and the other angel faces the spectator.

Two of three examples may be added from English galleries.

In Hogarth’s second scene of “Marriage à la Mode,” which is in the National Gallery, we see that all the human figures, and even the bust and statuettes on the mantelpiece, are oriented towards the left. Only the dog looks the other way. This orientation is serious. I never heard or read that Hogarth suffered from hemiplegia. He died rather suddenly—possibly from an apoplexy—but death did not allow time for the development of paralytic symptoms.

In Millais’ “The Order of Release,” which hangs in the Tate Gallery, two of the figures look towards the right, and two, including the baby which is asleep in its mother’s arms, are turned towards the left. The dog, which has its back to the spectators, turns its head to the right.

In Rossetti’s “Dante’s Dream,” which is in the Walker Art Gallery at Liverpool, three of the figures look towards the right, while only two, including the dead body of Beatrice, are oriented towards the left.

As to Scotland—do you remember Sir Noel Paton's two pictures of the quarrel and reconciliation of Oberon and Titania in the Edinburgh Gallery? They are full of life and movement, and yet they are "such stuff as dreams are made on." The colour is marvellous. The iridescence of the fairies' wings is a touch of mannerism perhaps, but very, very charming. I have no reproduction of these pictures at hand, but I looked at them so often in my student days that I am sure I am correct when I say that the elves peep out from flower and foliage in every direction, and trip and dance upon the sward, hither and thither, as the artist's fancy willed.

All the above examples, taken indiscriminately from among the better known pictures in British and Continental Galleries, support the assertion that artists orient the figures in their paintings according to the necessities of the picture, and not in obedience to some unconscious impulse which compels the almost constant orientation of animate and inanimate objects from right to left.

It may, however, be argued that it was only in the later centuries, when artists had acquired complete command of their art, when they knew the advantages and limitations of tempera, oil, and water colour, when they had studied anatomy, and had solved the mysteries of chiaroscuro and perspective, that they succeeded in overcoming the influence of their left cerebral hemispheres and the muscles of their right hands; that in earlier times they oriented their figures from right to left with the positional regularity of coaches in a railway train which was always moving in one direction. Facts do not support this argument. I will deal with pre-historic and early historic pictorial orientation in a later part of this paper. For the moment, let us compare, from this point of view, pictures painted in the fourteenth and fifteenth centuries with those painted in the nineteenth.

Giotto, in the fourteenth century, in the fresco of "Joachim among the Sheepcotes," at Padua, orients the figures as he thinks necessary. One figure looks towards the right, the other two towards the left. The sheep, if those wooden-looking things, which seem to have come out of a child's Noah's ark, are sheep, move from right to left.

Van Eyck also, in the fifteenth century, orients his figures in accordance with the requirements of the picture. In his

"Adoration of the Lamb," which is or was—for, owing to the thievish and destructive habits of the cultured officers and men of the Imperial German armies, one cannot say what may have happened to the panel since 1914—in the cathedral of Ghent, it is seen that the two groups of figures on the left of the painting look towards the right, and the two on the right look towards the left, while the point of interest is exactly in the centre. In another picture, "The Virgin and Child and Chancellor Rollin," by the same artist (it is disputed whether the picture be by Hubert or John Van Eyck, but, as far as our subject is concerned, the period is the same), which is in the Louvre at Paris, one figure looks towards the right, and three, including the tiny angel which is holding a crown over the Madonna's head, are oriented towards the left.

Let us pass on to the nineteenth century.

In Whistler's (1834-1903) "The Artist's Studio," which is, I believe, in a private collection, two figures are oriented towards the right, and one, the lady with her back to the spectator, towards the left. Of course, in the case of Whistler, I do not forget the portrait of his mother, in the Luxembourg at Paris, and that of Thomas Carlyle at Glasgow, both of which look stolidly towards the left, and—especially the portrait of his mother—remind one of silhouettes.

Two pictures by G. F. Watts (1817-1904) may be mentioned: "Hope," which is in the Tate Gallery, and in which the figure is oriented towards the right; and "Love and Life," also in the Tate Gallery, in which the female figure is turned towards the right, and the male figure is partially oriented towards the left, whilst the movement is from left to right.

It may be further urged that the examples, that I have so far brought forward, are too few to be argued from. To meet this objection as far as possible, I have made a systematic examination of the pictures in the Bristol Art Gallery, the only one that the limited time at my disposal has allowed me to visit.

This collection is a modest one, and has not been in existence many years. It is, however, fairly representative of modern art, and as such will answer the purpose I have in view. It is no richer in masterpieces than many other provincial galleries, and is perhaps a little overcrowded with local talent; but,

thanks to the generosity and taste of certain wealthy citizens, it possesses pictures which rank high as works of art. Among these may be mentioned—without prejudice to the claims of perhaps twenty others—Didier-Pouget's "Heather in Bloom: Morning," with its glorious wealth of colour; Mondineu's "Bear-baiting in Gascony," full of light and dramatic life; and last, but not least, Miss Lucy Kemp-Welch's "Timber-hauling in the New Forest."

It is when one looks at such a picture as the last that one feels the absurdity, the falseness of Mlle. Kipiani's estimation of the psychology of an artist. "What error of orientation!" cries the scientist. Look at that team of horses struggling up the slope, and at the great trunk of the fallen tree dragging behind them, and, crushing, as it moves, fern, grass, and heather! You can almost hear the voices of the men as they urge on the horses, the heavy breathing of the beasts, and the dull thud of the timber as it bumps on the uneven ground. And mark! the movement is from left to right.

"What lack of observation!" Look at the postures of the men, the straining muscles of the horses, the stretches of fern, the leafy trees, the light and shade. Look more closely. Is that not a tiny bit of yellow broom peeping up among the green fern and purple heather? Has the artist lack of observation? Has she failed in execution?

"What abnormality of the sense of space!" Good heavens! Look at that valley in the mid-distance, in which the air vibrates with subdued sunshine. Look at the wooded hill in the background, and, above its crest, at the faint bluish suggestion of yet further distance. Has the artist no conception of space, of distance, of atmosphere?

The three pictures I have mentioned perfectly demonstrate an artist's power of expressing the idea of space. In "Bear-baiting in Gascony," the painter has represented not much more than the half of a circular space, twenty or thirty yards in diameter, ringed in by stretches of canvas or sail-cloth, and overshadowed by plane-trees. In Miss Kemp-Welch's picture we have a bit of wooded England—a valley half a mile or so across. In Didier-Pouget's "Heather in Bloom," the landscape stretches from the hillside, covered with purple heather, across the gorge-seamed uplands of Corrèze, far away, a hundred miles away, to the distant Pyrenees.

In the Bristol Art Gallery, I examined 170 landscapes, 86 *genre* pictures, 22 historical pictures, and 21 portraits—299 in all. These were all the pictures in the five large rooms at the time of my visits, except a series of small water-colours by W. J. Müller, which were in a bad light, and were consequently difficult to study, and a very fine set of engravings from Turner's *Liber Studiorum*. I did not examine these engravings because I wished my conclusions to be drawn from the works of the greatest possible number of different artists, and to add 71 pictures, all by the same man, to the small total of 299 would, I think, have been unfair.

In classifying pictures, landscapes give us the least trouble—they are landscapes and nothing else. Occasionally, it is true, a "Landscape with Cattle"—for example, some of H. W. B. Davis' paintings—will cause us to hesitate. But the hesitation is only for a moment, we nearly always put them into the *genre* picture category forthwith.

When we first look at a landscape, our attention is generally arrested by a striking mass of form or colour or both, which in most cases appears on one or the other side of the picture. Occasionally, such a mass is seen in the centre, or filling up the background. More rarely, a mass occurs on both sides of the picture; the masses balancing one another. For instance, in Corot's "*Souvenir d'Italie*" two trees with their mass of foliage fill up nearly the whole of the right-hand side of the picture. In Constable's "Hay Wain" the trees and the house are found on the left. If you look at Millet's "Church at Gréville," you see that the ecclesiastical building occupies the centre of the painting; and in the same artist's "Spring," the wooded hill in the background catches the eye rather than the apple-trees in the mid-distance, partly because of its bulk, and partly because of the way the light is thrown upon it. Claude Lorrain, the great master of classical landscape, had a veritable *penchant* for symmetry. In his "Queen of Sheba," the Corinthian column, pilaster and architrave on the left are balanced by a palace with Doric columns on the right.

This mass, which first strikes the eye, is not necessarily the principal point of interest in the picture. For example, in Corot's "*Souvenir d'Italie*," one would probably be inclined to say that that delightful glimpse of an Italian town in the left mid-distance was the principal point of interest in the landscape,

and not the trees and their dense mass of foliage in the right foreground. Neither need such a mass be always a portion of the darker part of the picture ; it may be bathed in sunshine, whether it be the corner of a forest, a stately palace, or merely a cloud effect.

It must be a great temptation for such a poor hemiplegic creature, as Mlle Kipiani believes an artist to be, to dump down this mass on the left-hand side of his canvas. He appears, however, bravely to resist the temptation, and to place the mass where his artistic sense deems it to be required.

In 70 of the pictures examined at the Bristol Art Gallery, this mass was found to be on the left-hand side. In 51 it was on the right-hand side. In 15 paintings, there were two masses, one on either side. As these figures show, such marked symmetry is rare. It is not very pleasing. Even Claude Lorrain's "Queen of Sheba" gives one rather the idea of a scene on the stage of a theatre. In 34 pictures, the mass was in the centre, the actual figures being as follows : in 2 it was in the exact mid-distance centre ; in 4 very slightly to the left, and in 3 very slightly to the right of the mid-distance centre ; in 3 it was in the centre of the background, and in 2 in the centre of the foreground.

"Men, horses, bicycles, aeroplanes, all that moves on the earth or in the air," says Mlle Kipiani, "all that is oriented by the hand of man, looks, walks, runs and flies towards the left on canvas or on paper." This statement is certainly incorrect. Figures of men or animals are not, of course, essential to a landscape, and frequently when they appear in a picture, they are little more than dots of colour, and it is impossible to make out in which direction they look or move. In only 128 of the landscapes, which I examined, was I able to distinctly make out the orientation of the figures. In 27, they looked or moved towards the left. In 7, they were looking backwards, or travelling from the foreground towards the background. In 10, they were facing the spectator, or advancing forwards from the background. In 37, they were looking or moving towards the right, and in 47, they appeared to be looking or moving in about equal numbers in different directions. Roughly speaking, this is what one would have expected from what one sees in everyday life. Certainly, the artists have committed no error of orientation, nor shown any lack of observation.

In a few pictures, principally seascapes, it was possible to detect the direction of the wind. In 14, it blew from left to right ; in 5, from right to left ; and in one, from the background forward.

The study of the direction of light in landscapes is very complicated. In 39 of the pictures examined, it came from the background forward. In 65, it came from the left side of the painting, and 43 from the right. In 14 it came diagonally from the left background forwards towards the right foreground. In two pictures, one being early morning, the other mid-day, it appeared to come from above. In 3, it came forwards diagonally from the right background towards the left foreground. In three others, the direction of the light appeared to be from the foreground towards the background, and in one from the left foreground diagonally towards the right background.

In *genre* or subject pictures, as in landscapes, a mass of form or colour usually at first arrests the eye. It may consist of a group of figures, or a building, or, in the case of interiors, of a piece of furniture or an article of domestic use, and it may occupy any position in the picture.

In the *genre* pictures examined at the Bristol Art Gallery, this mass was found to be on the right in 22, and on the left in 20. In 24, it was in the centre, in 7, slightly to the right of the centre, and in 8, slightly to the left of the centre. In 5, a mass appeared on either side of the picture. In this class of paintings, it is seen, therefore, that symmetry takes the wooden spoon.

Light in this class of pictures is as important as it is in landscapes, though it is not so difficult to study. In 33, it came from the left side of the painting, and in 28, from the right. In 4, it passed diagonally from the left foreground towards the right background, and in 1, from the right foreground to the left background. In 9, the light came from the back towards the front, and in 4, it passed from the foreground towards the back of the scene. In two pictures, the light streamed diagonally from the right background towards the left foreground, and in two others, in an opposite direction. In two cases, the light came from the centre of the picture, in one from a fire, and in the other from candles. In the last painting of the series, the light was diffused over the scene from a number of Chinese lanterns.

"Mlle. Kipiani draws attention to this interesting fact, that among the Europeans the principal idea of the picture is found on the left side." "The principal idea" is developed in the *genre* class of picture more than any other, except the historical. In those examined, the principal point of interest, "the principal idea," was in the centre in 44; in 18, it was slightly to the left of the centre; in 9, it was slightly to the right of the centre; in 8, it was actually on the left side; and in 7, it was actually on the right.

In historical pictures, the mass that first arrests attention was observed on the left in 10, on the right in 5, in the mid-distance centre in 4, and once in the centre of the background. In two cases, there was a mass on either side of the picture.

The orientation of the figures in these historical pictures was from right to left in 3, and from left to right in 6. In 12, the number of figures which looked or moved in opposite directions was about equal; and in one, the figures faced the spectator.

The light in this class of paintings came from the left in 3 pictures, and from the right in 4. It came from the background forwards in 5, and passed from the foreground backwards in 2. It streamed diagonally from the right foreground towards the left background in 2, and in the opposite direction also in 2. It came from the right background diagonally towards the left foreground in 3, and in the opposite direction in 1.

In these historical pictures, the principal idea was found in the centre in 16, slightly to the right of the centre in 3, slightly to the left of the centre in 2, and actually on the left side of the canvas in 1.

Of the portraits: the two in profile were turned towards the left. Of the three-quarters face, 9 were oriented towards the right, and 6 towards the left. Of the full-length portraits, 2 fairly faced the spectator, and 2 had the body slightly turned to the left.

Portraits in profile do not appear to be popular. Certainly they are not at all common. The three-quarters face, sometimes approaching closely to the profile, with its greater scope for indicating delicacies of light and shade, and for expressing likeness, is more generally met with. I have looked over some sixty or seventy reproductions of portraits by Romney,

Gainsborough, Reynolds, Raeburn, Lawrence, Dürer, Van Dyck, Holbein and others, and have only found three in profile. Two are by Reynolds: "Mrs. Hoare and Child," in the Wallace collection, and "The Duchess of Devonshire and Child," at Chatsworth House. The first looks to the left, and the second to the right. The third is the portrait of Erasmus by Holbein, now in the Louvre. This face is turned towards the left.

The consideration of the profile brings us to another important point in the subject under consideration, namely, the orientation of the head on coins, medals and seals. In designing these objects, the artist is in no way bound to pay attention to "reasons of convenience, symmetry, and æsthetics." He is not hampered by locality as in landscapes. In short, in no other work of art can he allow such free play to the influence of his left cerebral hemisphere and the muscles of his right hand—if such influence exists—as in die-engraving.

The results of the examination of a few modern coins is as follows :

The head on a bronze (?) coin of the First French Republic looks towards the left ; so does that on a five *centime* piece of the Third Republic (1872). Napoleon III looks in the same direction on his coins. In England, George II, Victoria, and George V do the same. The head of Vittorio Emanuele II on a ten *centesimi* coin (1863) is oriented towards the left. The same orientation is observed on the silver coins of Willem II of Holland (1848), and of Queen Wilhelmina (1906), and on a one cent coin of the United States (1859).

On two large copper coins of George III (1797), the head looks to the right. On a brass medal, commemorating the coronation of William IV and Queen Adelaide (1831), the heads are turned towards the right. Edward VII's head on a penny (1902) looks to the right. Louis Philippe, on a silver quarter-franc (1842), also looks to the right. Wilhelm Koenig Von Preussen, on a *silber groschen* (1866), turns towards the right. The head of Isabel II of Spain, on a silver two reals piece (1857), is oriented towards the right, as is also the case with the allegorical head on a silver coin (1895) of the *Confœderatio Helvetica*. And lastly, the head of Willem III of Holland, on a silver half-guilden (1863), looks to the right.

If space allowed, I might lengthen this list indefinitely with

the results of the examinations of ancient, mediæval and modern coins, medals and seals, and also of cameos and engraved gems. But the conclusion would be always the same; namely, that artists in all countries and in all ages oriented their work according to the dictates of their fancy, or their discretion, or the demands of the customs of the countries or periods, and in no way obeyed any physiological law.

I am not a philatelist, and I cannot at this moment refer to a large collection of postage stamps. I believe that the heads or figures on these stamps are generally oriented to the left. But this is not a universal rule, for, on the envelope of an Italian letter, which is now lying before me, I see that although the king's head on the five *centesimi* stamp is turned to the left, that on the twenty *centesimi* one looks towards the right.

III.

"The orientation of personages among the Ancient Greeks and Egyptians was by preference to the right. It is the same in the case of the drawings of the Chinese and Japanese. Mlle. Kipiani attributes this result, among others, to their centripetal handwriting."

With regard to the Chinese and Japanese, I regret that at the present time I have not the opportunity of studying a sufficient number of the drawings of artists of those nationalities to produce evidence for or against the part of the proposition which refers to them. But in that which concerns the Ancient Greeks, Egyptians, and several other peoples of antiquity, one finds ample material among the remains of the decorative and plastic arts practised by these races to prove the correctness or incorrectness of the above statements.

By the expression "centripetal handwriting" (*écriture centripète*) I presume that Mlle. Kipiani means handwriting which is written and read from right to left.

Wallis Budge tells us, in his little book, *The Dwellers by the Nile*, that "the arrangement of the hieroglyphics in inscriptions varies, but generally they face to the right, and are read from right to left like Arabic, Syriac, Hebrew, etc. Sometimes they face to the left, and are read from left to right; but very often they are arranged in perpendicular rows, with carefully drawn lines separating each row. Instances have occurred

where the characters face in one direction, but are to be read in the other."

With such a liberty of choice in the orientation of what one may call their handwriting, one may assume, in perfect accordance with Mlle. Kipiani's theory, that the Egyptian artists had a liberty of choice in the orientation of their drawings. Certainly, of this liberty they took full advantage, for they oriented their designs, not "by preference to the right," but either to right or left; and even upwards and downwards, exactly as they liked.

If we examine the hieroglyphics, we find that the symbols, which represent animals and human beings, or parts of the anatomy of animals or human beings, often (always, in the facsimiles I have examined) face towards the left recently. Even the serpents stand up on end and look to the left. This arrangement of anatomical and zoological symbols seems perfectly reasonable if they are to be read from right to left. It would not be surprising if the Ancient Egyptian artists, in sculpturing their mural decorations and drawing on papyrus, had always oriented their figures towards the left, in continuation of a habit which they had acquired from their mode of writing, which was largely ideographic; and in doing so they would have been much more logical than modern European artists would be, if, as Mlle. Kipiani would have us believe, they always oriented, or at any rate, had always a secret desire to orient, their figures towards the left, because they were accustomed to write a phonographic form of handwriting which ran in the opposite direction; that is to say, from left to right.

May I be permitted a digression? The theorist, whose propositions we are considering, appears to have overlooked the fact that with most, if not with all, races the art of drawing preceded that of writing. The Aztecs, the Ancient Egyptians, the early peoples of Crete, and many other primitive folk were at first picture writers. Some of them never advanced beyond that stage, but others, more capable of culture, by the aid of their own mother wit, or by borrowing from others, arrived at employing a conventional and stereotyped alphabet in writing. The process of evolution can sometimes be traced. In the hieroglyphics and in the ancient Cretan script, ideograms and phonograms are found side by side. Indeed, phonograms

are only ideograms become conventional. Even in early cuneiform inscriptions there are reminiscences of picture-writing: for example, the sign for a gate, or that for a star. I cannot remember any race which has invented a form of phonographic writing which was not evolved from primitive ideograms. If a race adopted phonography without having passed through the ideographic stage, it received it as a culture-drift from its neighbours.

The effect of these facts upon the hypothesis under consideration is obvious.

Returning to the Ancient Egyptians: although they still made use of the system of hieroglyphics, with its mixture of ideograms and phonograms, yet from early historic times they employed two other forms of writing, the hieratic and the demotic or enchorial, both of which were phonographic and cursive. Possibly these, and not the hieroglyphic, are the modes of handwriting to which Mlle. Kipiani attributes the preference which, she says, the Egyptians had for orienting their personages to the right.

If they had such a preference they have concealed it with marvellous skill, for in all their sculptures and paintings, whether on the walls of their tombs, on their papyri, or on their mummy-cases, they have oriented the figures of men and animals precisely as they considered the scenes depicted required. To demonstrate this point, it will be perhaps most convenient to refer to *The Book of the Dead*. This ancient literary work may be said to be profusely illustrated, and as facsimiles of whole chapters of it are to be found in nearly every European museum, it may be readily examined. But the papyri of *The Book of the Dead* are very numerous, and it is rare to find that the arrangement of the chapters or scenes depicted are exactly alike in any two manuscripts, consequently the orientation of the figures in other copies may be exactly reversed from those I am about to mention.

In the scene, which shows us what the Ancient Egyptians thought life was like in the Elysian Fields, we see the "cycle of the great gods" facing towards the right. The deceased himself is paddling his boat vigorously towards the left. Cows are driven in the same direction. The reaper turns towards the left as he reaps the celestial barley or the heavenly corn. In another scene, a boat is rowed by six kings

towards the right. In the Judgment Hall of Osiris, the great god gazes towards the right, and the forty-two judges look in the same direction. But Thoth, Horus, and Anubis, and a very ugly-looking animal all face to the left.

In order to make our study of the orientation of figures in pictorial art as complete as possible, let us glance for a few minutes at the mural decorations found in Ancient Babylonia and Assyria. But before doing so, it will be interesting to consider the mode of writing formerly employed in those countries. A pen was not used, but a small iron rod, which was triangular at the end. This was pressed on the surface of a slab of moist clay, which was held in the left hand, and the direction of the wedge-shaped or cuneiform marks was determined by a turn of the right wrist. In this case, if Mlle. Kipiani's theory be accepted, "the laws of the anatomy and physiology" of a different set, or at any rate of an additional set, of muscles of the right hand and forearm to those employed in modern penmanship must have influenced the orientation of the figures designed by the artist, when he put aside his writing materials and turned to painting or sculpture. We expect to discover evidence of this altered orientation. But strange to say, the early Babylonian artist orients his figures in the same directions as does his modern European brother, that is to say, he orients them according to the requirements of his ideas.

In the British Museum there is the representation of two winged female figures standing before the sacred tree. One figure looks to the right, and the other to the left. On the well-known cylinder of Adam and Eve in the Garden of Eden, Adam—I suppose the gentleman with horns on his head is Adam—looks to the left; Eve, who wears what looks like a fashionable hat—no doubt *le dernier cri* of Ur of the Chaldees or some other Babylonian Paris—looks to the right. The serpent, which stands on its tail behind the lady, if it be oriented at all, is oriented towards the right.

In Perrot and Chipiez' magnificent work, many illustrations may be found which support this view of the orientation of figures in Chaldean art.

In the case of the Assyrians, we are dealing with a people who geographically, historically, in literature and in art were closely connected with the Babylonians. They also employed the cuneiform mode of writing. On the Assyrian cylinders, as

on those of their southern neighbours, the figures of gods, men, and genii face right or left as the subject requires.

Perhaps the finest specimens of Assyrian art are those which decorated the royal palaces, such as those brought to light by Layard's excavations in the Nimrud Mound. Here you have battle-pieces, diplomatic meetings, hunting scenes, etc.; and you will observe that the orientation of the figures follows no rigid rule, but that each man, animal, or vehicle, looks and moves in the direction that the scene requires.

Near the town of Kirmanshâh, on the road from Hamadân to Baghdad, in the region where our gallant Anglo-Indian Army is now fighting, rises the Rock of Behistûn. It is a landmark for many miles around. On the smoothest face of this rock, and in so lofty a position that it was inaccessible to destructive hands—thank heaven! it was never exposed to the scientific iconoclasm of a modern German horde—"Darius, the great king, the king of kings, the king of Persia," sculptured the story of his ancestry, and other little matters. He added an illustration to the document, and you may see, carved in the living rock, a row of captives, who, roped together by the neck, turn towards the left, facing the king—a fine man, head and shoulders taller than those about him—and two of his officers, who are all three looking towards the right.

Other illustrations of an artist's freedom in the orientation of his figures might easily be found in Ancient Persia. It will be sufficient to mention the famous Lion Frieze at Susa. This is formed of glazed tiles of various colours. Looking at it, one sees white, yellow, and green lions—the anatomy of the animals is more true to nature than the colouring—moving one after another from right to left over a ground of turquoise blue.

Turning to the artistic remains of a people altogether different, and probably in a different stage of civilisation to the nation which occupied the valleys of the Euphrates and the Tigris, and the lands towards the east of these valleys, to those of the Hittites, which people Dr. Haddon classes with the Alpine races, we find art in a cruder form. The pseudo-Sesostris—it is to Herodotus that we owe the idea that this figure was that of the Egyptian monarch, carved at a spot that was perhaps intended to mark the extremity of his conquests—is sculptured on a rock in the pass of Karabel, not far from Smyrna. The figure is carved in profile, and, armed with a

spear, and having a bow slung across his shoulder, the warrior appears to be marching from left to right. Other figures of men, also supposed to be Hittites, may be seen at Keller, near Aintab. They are moving from right to left.

Let us leave Asia Minor and go to one of the isles of the West. Comparatively recent excavations in Crete have thrown new light on ancient history and on ancient art. The frontispiece of *The Dawn of Mediterranean Civilisation* by Angelo Mosso, translated by Marion C. Harrison, shows us a portion of a painted sarcophagus from Haghia Triada. Three figures are there represented, all facing towards the left. On p. 54 of the same book there is an illustration of a steatite vase, on which is the figure of a soldier facing to the right.

Before considering the art of the Ancient Greeks, important for its own sake, and for the fact that Mlle. Kipiani has appealed to it in confirmation of her theory, I must beg the reader's patience for a moment while we glance at the mural paintings and other decorative work of the Ancient Etruscans.

In Mrs. Hamilton Gray's *Tour to the Sepulchres of Etruria* in 1839, we find many illustrations of the artistic work of this interesting race. The frontispiece of the book gives a representation of a procession of souls with good and bad genii, which is taken from the wall of the Grotta del Tifone at Tarquinia. Two of the figures in the procession face the spectator, but all the others are looking towards the left.

The walls of the Grotta della Querciola were richly decorated, and the authoress provides us with some exceedingly beautiful specimens of the paintings. There are two pediments in which naturally the figures on the right face to the left, and those on the left face to the right. On the friezes, there are many figures of dancers and players on double flutes. Seven of these figures face towards the right, and six towards the left. In three of the figures, including one of the musicians, the artist has succeeded in conveying the idea that they are actually turning in the movement of dancing. Sargent's "La Carmencita" is about to dance; the Ancient Etruscan artist's figures are dancing. The former is the future tense of the infinitive, the latter is the present of the indicative.

On the walls of the Grotta della Querciola, there are also hunting scenes. In one, four of the human figures and one of a horse are oriented towards the right, and one human figure

towards the left. In another scene, which represents a boar hunt, five of the human figures and all the animals, dogs, horses, and the boar itself, are facing towards the left, and two human figures towards the right.

The frontispiece of Dr. Isaac Taylor's *Etruscan Researches* gives the reproduction of a painting on one of the walls of a tomb discovered at Vulci in 1857. The subject of the picture is the sacrifice of Trojan prisoners; and of the ten figures, five face towards the right, and five towards the left. The woodcut, Dr. Taylor tells us, has been taken from the magnificent work of Noël des Vergers, *L'Étrurie et les Étrusques*, Pl. XXI.

On p. 112 of Dr. Taylor's book there is reproduced a picture, or rather a scene, taken from a bronze mirror now in the Berlin Museum. The subject of the illustration is Orestes killing Clytemnestra. Two of the figures face towards the right, and one towards the left. The scene is very dramatic, and the movement is from left to right. Below the principal design, apparently filling in the lower curve of the mirror, is the recumbent figure of a man, supposed to be Orestes, struggling with a serpent or dragon, which is in the act of devouring him. The human figure faces towards the right, and that of the reptile towards the left. The woodcut is taken from Gerhard's *Etruskische Spiegel*, Pl. CCXXXVIII.

Mlle. Kipiani states that the Ancient Greeks and Ancient Egyptians oriented their personages by preference to the right. We have seen that the latter exercised no preference in the matter, but followed the necessities of circumstance. The Ancient Greeks acted precisely in the same way.

But from the point of view of the influence of handwriting on the orientation of figures in art, the case of the Ancient Greeks is peculiarly interesting on account of the changes in the direction of their writing which occurred in historic times. First, they wrote from right to left, as Arabic, Syriac, and Hebrew are written, which habit they may have acquired from the Phœnicians, if, though this is now disputed, they received the alphabet and the knowledge of writing from that nation. Then, they adopted the boustrophedon (*βούς στρέφω*) method—that is to say, they wrote first from right to left, and then back again from left to right, in the same way as oxen plough furrows in a field. Prof. A. H. Sayce informs us that the Hittites

employed the boustrophedon mode of writing, and he suggests that the Greeks learned "to write in such a fashion from neighbours who made use of the Hittite script."

This boustrophedon method of writing is precisely what Mlle. Kipiani advocates. She proposes that books should be printed in the following way: "One line should be printed in ordinary characters and read from left to right in the ordinary fashion; the following line should be printed *en miroir*, and read from right to left, and so on." The object of this innovation, or rather, as we have seen above, this return to an ancient method, is to save the eyes from the unnecessary labour of constantly going uselessly back from the end of one line on the right of the page to the beginning of the next line on the left.

But to return to the Ancient Greeks: after a while, for some reason or other, they gave up the boustrophedon method, and took to writing from left to right as we do at present. This new mode of writing is said to have been introduced by Pronapides of Athens in the time of Homer. Probably, the Greeks borrowed the idea—from whom it is difficult to say, for their literary neighbours, including the Etruscans according to Dr. Taylor, wrote from right to left. The Greeks were far more given to borrowing than to inventing. They were the greatest plagiarists that ever lived. It is true, that when they got hold of another person's idea, they improved upon it. They borrowed a rough diamond, and they gave back a faceted gem. But they borrowed it all the same. Still, in whatever way they became acquainted with the idea of writing from left to right, they probably had excellent reasons for abandoning the boustrophedon method.

Homer is generally supposed to have been born between 900 and 1000 years before the Christian era. If then the Greeks have employed the method of writing from left to right since that period, the works of Greek art, in which we can study the orientation of the figures, were created under the same cerebral and muscular influences (if any) as those which now govern modern artistic work; and Mlle. Kipiani is wrong in attributing to their "centripetal handwriting" the preference which, she says, the Ancient Greeks showed for orienting their personages to the right.

But it is unnecessary to lay stress on this point. It is

unimportant. The direction of handwriting had no more effect on the orientation of the figures in the works of Greek artists than it had or has on that of the figures in the works of the ancient artists of Egypt, or of those of the great Mesopotamian empires, or of the artists of modern Europe. This statement can be verified in almost any museum, or by reference to any illustrated work on Greek art. I need only give two examples.

In the Bristol Museum are casts from the East and West Pediments of the Temple of Athenè at Aegina. The date of the building is approximately B.C. 456. The originals of the casts are now in the Glyptothek at Munich. The subject of the sculptures is a battle between the Greeks and Trojans. In the left half of the East Pediment, the three figures, one being recumbent, face towards the right. In the right half of the same Pediment are two figures, one of which lies prostrate on the ground, but both face to the left. In the left half of the West Pediment, four figures are oriented to the right, while in the right half, three figures turn towards the left. In the centre stands the statue of Athenè which faces the spectator. At each end of this pediment is a recumbent figure; that on the left looks towards the left, that on the right towards the right.

It may be suggested that this orientation and arrangement of the figures were due to architectural reasons. It is possible.

In the Bristol Museum there are also casts from the frieze of the Temple of Apollo Epicurios, in Arcadia, about five miles from Phigaleia. The temple was discovered in 1812, and the date is probably B.C. 430. The originals of the casts are now in the British Museum. Here the orientation and arrangement of the figures are not affected by architectural considerations. The frieze from the west side of the temple represents a combat between Centaurs and Lapithæ. Eleven of the figures face to the right, and twelve to the left. The frieze on the north side of the temple represents a combat between Greeks and Amazons. Nine of the figures face to the right, and four to the left.

Mlle. Kipiani for confirmation of her theory has appealed to the designs of the child artists of the schoolroom, but she has not appealed to those of the artists of the childhood of the world. Let us see what the latter have to tell us.

If we examine engravings of the well-known specimens from the Dordogne caves, we find: (1) on a piece of reindeer's horn

the figure of a fish, which is swimming from right to left ; (2) on another piece of reindeer's horn there is the representation of the head and chest of an ibex, the orientation of which is towards the left ; (3) on a third piece of reindeer's horn are two horses' heads, which face towards the left, and an eel or a serpent or something of the sort, and a human figure, both facing towards the right ; (4) a group of reindeer (it is not stated on what material these figures were scratched) which face to the left ; (5) on a piece of a mammoth's tusk, the drawing of a mammoth which faces towards the left. The engravings, from which the above descriptions are taken, are those in Lord Avebury's *Pre-Historic Times*.

On October 20th, 1913, a communication was made to the *Académie des Sciences* by M. Douvillé on behalf of Dr. Lucien Mayot of the University of Lyon, and M. Jean Pissot of Poncin, Ain, concerning certain prehistoric discoveries which had been made in the subsoil of the rock-shelter of La Colombière. This rock-shelter is situated on the right bank of the River Ain, about twenty *mètres* above the present level of the river, between Poncin and Neuville-sur-Ain. Among other finds were certain pieces of limestone, evidently smoothed and prepared for artistic work, on which were scratched, engraved, if you will, various designs.

Reproductions of four of these prehistoric sketches appeared in *L'Illustration*, October 25th, 1913. One represents the well-drawn figure of a horse, which faces towards the right. A second presents an interlacement of lines, among which it is possible to make out the figures of a zebra-like horse, a bison, and some animal of the *felidæ* genus. They all face towards the right. A third represents the upper part of a human figure with an outstretched arm. This figure is also oriented towards the right. The fourth represents the head of a mouflon (*ovis musimon*) facing towards the left. The left end of this stone has been partially carved into the profile of the animal.

All these examples demonstrate that the prehistoric artist obeyed no fixed and rigid law in the orientation of his figures, but followed the dictates of his fancy, or, if he were drawing from nature, copied the actual position of the model.

Conclusion.

The statement, therefore, that "all that is oriented by the

hand of man, looks, walks, runs and flies towards the left on canvas or on paper," is incorrect. All that is oriented by the hand of man, on canvas or on paper, looks, walks, runs and flies towards the left or the right as the fancy of the artist dictates, or the necessities of the picture require. The corollary follows that the statement, that "it is because we design with the right hand only, that we orient our pictures and our drawings to the left," is also incorrect.

There is neither jot nor tittle of evidence that orienting our pictures and our drawings to the left "is the most easy habit, the most facile, the least reasoned out." And, as we have seen there are instances which give us the right to challenge the statement that such a habit "is most general among children."

Undoubtedly, artists change the orientation of the figures in their pictures "thanks to their virtuosity, and also for reasons of convenience, symmetry and æsthetics." But it is absolutely incorrect to say that "it is the orientation to the left which predominates" in their work.

Both Mlle. Ioteyko and Mlle. Kipiani write as though the two hemispheres of the brain were two separate organs—as separate as the two kidneys. They write as though there were no decussation of the pyramids; as though the Corpus Calløsum, the great commissural pathway between the two hemispheres, did not exist. They ignore the unity of the nervous system. Further, they write as though only one of the cerebral hemispheres, only one of these *separate* organs, functioned. The left hemisphere, according to them, is active; the right passive. Indeed, at times, they seem to regard the right hemisphere as being so passive that to all intents and purposes, as far as its action on intellectual and somatic economy is concerned, it might be non-existent. All this is bad anatomy and bad physiology, and consequently the psychology, which is based upon it, is bad also.

There are some scientists who worship Broca's area with an adoration equal to that which was paid to the pineal gland in the days of Descartes.

As far back as 1878, Ferrier showed experimentally in monkeys and other animals that the oro-lingual centres had a more or less bilateral action. P. Marie and his followers have collected many cases of lesions of Broca's centre without aphasia; and, more important still, cases of aphasia due to

disease of the right cerebral hemisphere in right-handed people have been recorded.

In the elucidation of physiological and psychological problems, the evidence of the *post-mortem* room is as trustworthy as that of the experimental physiological laboratory.

In his work, the artist has to do chiefly with colour and form, and it is the latter which is concerned with the orientation of the figure in drawing. The blind man obtains his wonderful idea of form largely from the tactile sensibility of both his hands, not his right hand only. Those who are endowed with sight, receive their ideas of form principally through the medium of the oculomotor nerves. The briefest possible consideration of the central connections of these nerves will, I think, demonstrate the impossibility of our conception of form being a concern of one hemisphere only.

The central connections of the third nerve are with the anterior portion of the somæsthetic area, and with the cortex about the visual area of the occipital lobe of the opposite side of the brain. It has probably associations with the cerebellum, and with the sensory nuclei of the other cranial nerves. The trochlear nerve, a nerve of the greatest importance in the estimation of form, has similar central connections. And it is necessary, from the point of view of the subject under consideration, to emphasise the fact that it is the only cranial nerve the fibres of which undergo a total decussation. The sixth nerve has similar central connections to the other oculomotor nerves. It also is of the greatest importance in the estimation of form, on account of the connection of its fibres with the third nerve of the opposite side, and through it with the opposite internal rectus muscle.

How is it possible that the left cerebral hemisphere should exercise, as Mlle. Kipiani's theory asserts, such an overwhelming influence on the orientation of the figure; that is to say, on the artist's execution of his conception of form?

The whole brain is none too big for the artist. He makes use of every centre, every neuron, every association fibre, every projection fibre. His sensibility must be acute enough to receive the most delicate impressions from the outside world. His will must be perfect in all its complexity. The flaw that mars a genius is more often in the will than in any other function of the mind. The artist fails because he cannot execute his

conceptions. It is this that lies at the root of the faulty composition of many an otherwise excellent picture. His perception must be of the keenest, and his memory of the surest. And, above all, he must be gifted with the most subtle powers of discrimination. The true artist represents the highest form of intelligence. The poet and the musician may equal him in intensity, but he far surpasses them in breadth.

Yet it is after contemplating the work of a man, endowed with such powers of conception and execution, that the scientist exclaims: "What an error of orientation! What lack of observation! What abnormality of the sense of space!"

Psycho-analysis in Relation to Sex. By HAVELOCK ELLIS.

IN 1895 an unostentatious book quietly appeared in Leipzig and Vienna entitled *Studies of Hysteria* (*Studien über Hysterie*), written jointly by two authors, Dr. Josef Breuer and Dr. Sigmund Freud. There was no public ready to receive the book, it attracted little attention, and had a small sale. In England and America it remained almost unknown, so that it is now a satisfaction to the present writer to recall that almost the first full exposition in English of the views set forth in this book appeared in the first volume of his own *Studies in the Psychology of Sex* in 1898. Yet these studies of hysteria, as an attentive reader could scarcely fail to realise, turned over a new page in medical psychology, and the new page was of fascinating interest. A case of hysteria was no longer to be regarded as, on the psychic side, almost beneath a physician's serious attention, nor was it to be settled merely by an accurate description of the physical symptoms, after the manner of Charcot's school, to which school in the first place Freud himself had belonged. It was a mystery to be patiently investigated, a mystery to which the key often lay far back and forgotten in the patient's history, and when skilfully used, with knowledge and insight, the patient's medical history acquired not only psychological significance but something of the interest of a novel. Freud himself clearly recognised this and stated, even in this first book, that it was by a representation of psychic processes, "such as we are accustomed to receive from the poet," that he had gained his insight into the nature of hysteria.

Priority in the inception of the ideas contained in this book, and the treatment based on them, belongs, as Prof. Freud has since acknowledged, to the elder writer, Dr. Breuer. After acting as the missionary for the conversion of his more famous colleague, Breuer disappears from the psycho-analytic scene. He was indeed an unconscious if not unwilling missionary in this field. He pointed out the road but could not accompany the disciple far along it. He signed with Freud the statement in the preface that "sexuality plays a leading part in the causation of hysteria," and elsewhere makes the emphatic statement on his own account that "the great majority of serious neuroses in women arise from the marriage bed." But it would appear, from what Freud has more recently said, that on this fundamental question of sex Breuer never fully shared the revelation; as Freud has himself put it, Breuer guided him to an insight which he himself never gained.

The process, so far as the change of attitude towards sex is concerned, may deliberately be termed "conversion," and it is that term (*Bekehrung*) which Freud himself applies to it, for we may best understand it as of the nature of a religious conversion, a changed attitude towards the world and the revelation of a mission in life.

We have to remember that Freud was the pupil of Charcot, and under Charcot's inspiration was preparing to devote himself to the physical aspects of nervous disease and to physical treatment, especially electro-therapeutics. Charcot was indifferent to the psychic side of his cases and, following the French medical tradition and well seconded by his disciples, he regarded the recognition of a sex element in the causation of disease as degrading. That attitude was the outcome of the whole of Charcot's temperament and habit in approaching disease, as was clear at once to anyone who saw him—as I still vividly recall him—in his dealings with patients at the Salpêtrière. One realised that he felt he had a complete mastery of the case and that he regarded it as a purely physical problem; for the patient himself, and for any communication that the patient might be able to make, he felt evidently an almost contemptuous disdain. There could be no attitude more directly opposed to that which Freud ultimately reached. But it was in that atmosphere Freud was trained to approach nervous disorders. We can well believe that, when at length faced by the mysterious Sphinx of

sex he had flouted and met with the stern demand why he had persecuted her, Freud passed through a deep spiritual upheaval, a complete revolution, comparable to that experienced by a still greater Jewish apostle of truth in days of old, on the road to Damascus. If we are tempted to think, as most of us certainly are tempted to think, that the convert has sometimes been dazzled by his new vision and drawn by his convictions to excess, we may learn to view these results with a more sympathetic tolerance if we understand how, certainly on the basis of a favourable soil, they were originally brought about.

It can scarcely be said that there seems to us much excess to-day in this early volume of *Studies on Hysteria*, although, Freud tells us, its unconventional views sufficed to create around him a vacant space even in the circle of his friends. Much as the Freudian doctrines and formulas have been transformed since, not only was the sexual element in the causation of hysteria here clearly recognised at the outset, but the chief lines of its psychic mechanism were set forth. The doctrine of the "suppression" of unpleasant, and usually sexual, experiences into the unconscious was there, and, Freud has lately declared, "the doctrine of suppression is now the foundation pier on which the structure of psycho-analysis rests." There was also the doctrine of "conversion," by which an emotional experience may be changed into a physical, and usually pathological, phenomenon having no conscious or apparent resemblance to its emotional cause, which this process, more or less, relieves and removes, so that, as Freud expressed it, "the hysterical symptoms are built up at the cost of the remembered emotions"; at the origin the physical pain or disability had been associated, in time, with the emotional experience, but the link had never been recognised in consciousness. We see again in this book the conception of "symbolism," which was afterwards to play so important and so much discussed a part in Freud's teaching; in this first book, however, the symbolism of objects was, as Freud has since acknowledged, overlooked though present, and the symbolism revealed was a symbolism of situations, a sexual situation being represented by an analogous situation on a different and more avowable plane; it was, therefore, more a physiological than a psychic symbolism. In this first book, once more, we have the tendency for the sexual exciting cause of the disorder to be traceable further and further back towards early

life, although there was, as yet, no definite assertion of "infantile sexuality," which was not put forward until 1905. Finally, the Freudian method of treatment was in principle here established as a method of drawing out and bringing to the surface of consciousness a repressed and corroding element, a method by Breuer termed "cathartic," though Freud himself later termed it "analytic," probably because he felt unable to accept Breuer's conception of "a foreign body in consciousness." No extreme position at any point can, indeed, be said to be taken in this first book, and it is probable that many to-day who view psycho-analysis with horror might peruse the volume with a degree of assent they would not have felt when it was published, for even the opponents of Freud have now absorbed some of the ideas he has flung into modern currents of thought.

For my own part, it seemed a fascinating book even when it was first published, and I read it with sympathy and real enlightenment, if perhaps some reserve of judgment. The attitude of Charcot towards sex in relation to hysteria was by no means universally shared in England. Various physicians had stated their belief that the sexual emotions, by no means necessarily or usually in their coarser aspects, played an important part in the causation of hysteria. I had myself, a year earlier (in *Man and Woman*), ventured to express the opinion that the part played by the sexual emotions in hysteria was under-estimated. So that I was fully prepared for the general attitude of the authors of the *Studien über Hysterie*, and, indeed, read the book with rare intellectual delight, apart from any agreement with its thesis, simply because that thesis was presented with a sympathetic intuition and a power of skilful analysis which had never before, even by Janet, been expended on the delicate and elusive mechanisms of the disordered emotions. I still think that there is no simpler or more persuasive introduction to Freud's work than his first book.

Freud was pleased with my recognition of the book, and from that time began an exchange of publications and occasionally of letters. He found in my *Studies* helpful suggestions in the development of his own doctrines, suggestions which I had not myself been inclined to carry to an extreme or dogmatic form. In this way he was encouraged by the "Histories" of normal persons in the third volume of my *Studies*, as well

as by an instructive article published by Sanford Bell in the *American Journal of Psychology*, to follow up the task he had already begun of pushing back the sexual origins of neuroses to an ever earlier age, and especially to extend this early origin so as to cover not only neurotic but ordinary individuals, an extension of pivotal importance, for it led to the Freudian doctrine becoming, instead of a mere clue to psychopathology, an alleged principle of universal psychological validity. He thus finally reached that conception of constitutional "infantile sexuality" which he regards as so fundamental, and his opponents as so horrible. He also adopted some of my terminology, such as "auto-erotism" and "narcissism." The first of these two terms, however, I may remark, the Freudians have often perverted and confused. This was not entirely due to Freud himself, who, when in 1905 he first adopted the term, found its chief significance in the fairly legitimate sense of a sexual impulse which was not directed towards other persons, and found its satisfaction in the individual's own person. But, subsequently, Freudians have often used the term to indicate a sexual impulse, which not only found its satisfaction within the individual's own person, but was actually directed towards his own person. Now, that is what I term "narcissism," and regarded as a subdivision of the great group of auto-erotic phenomena. The essential characteristic of an auto-erotic manifestation, as I had devised the term, was that the erotic impulse arose spontaneously and from within, and was not evoked from without in response to the developed normal appeal of an attractive external influence. I formed the word on the model of such words as "automobile," which means moving *by itself*, and not, as the Freudians would have it, *towards itself*. I regard erotic dreams in sleep and erotic reverie in waking life as the typical form of auto-erotism, and the term seemed to me a convenient way of grouping together a large number of phenomena for which no common name had previously existed. That is why I consider that the Freudian tendency to limit the term to a single group of manifestations is illegitimate and confusing; it stultifies a useful name for which there is no other convenient equivalent. So far as I know, indeed, no Freudian has attempted to justify this perversion of the term.

The point is worth mentioning because it indicates a frequent

Freudian tendency to looseness in definition. This is to be noted, but not altogether to be blamed. Definitions are not so essential in the biological sciences as in the mathematical sciences. Moreover, the Freudians are at the beginning of their science—if science it may be termed—while precisely accurate definitions come at the end of an investigation and not at the beginning. This looseness of definition has been a part of the vital growth, the perpetual shifting new development, which has so strikingly marked Freud's work.

Freud's conceptions have indeed grown marvellously. The *Studien über Hysterie* have long been left behind. He is perpetually remoulding his ideas, as his experience widens and his insight becomes more penetrating, introducing new ideas, extending them into new fields. From hysteria psycho-analysis was applied to other groups of psycho-neurotic disorders, first to morbid obsessions and impulses, then to all sorts of psychic disorders, including various forms of insanity, though it may be doubted whether it has worked out as well in any of them as in hysteria, and in the severe forms of mental disease, as Freud himself has pointed out, it is helpless. The application of the Freudian idea to the normal child was, as has been said, a pivot on which the whole doctrine has turned. It involved, first of all, a new elaborate analysis of all that is meant by "sexuality." The infant, the young child, is, of course, not sexual in the limited and localised sense which we have in mind when we think of sexuality in the adult. In the young child, as viewed by Freud, sexuality is generalised, and may take on many forms, forms which in later life, if we found them associated with a specific underlying sexual impulse, we should call perverse. Therefore Freud regards the child as "polymorph-perverse," and, as is indeed well recognised (and as my own investigations had repeatedly shown), the sexual perversions of later life may largely be regarded as a persistence of, or a return to, the impulses of child life. The extreme and pronounced way in which Freud set forth his doctrine of infantile sexuality aroused much opposition and resentment among many people, who failed to realise that sex in early life is a different thing from sex in adult life. Later, Freud deprived this objection of its force by a dexterous turn of the artist's hand, which became necessary at the point he had reached; he enlarged the whole conception of sexuality,

and "Libido" for him became practically the manifestation of any pleasurable desire. The extension of the Freudian domain to cover the normal child necessarily led on to the inclusion of the normal adult and all his activities. Freud was greatly helped and encouraged here by the application of psycho-analysis to dreams. We may all, he holds, apply psycho-analysis to ourselves, and demonstrate the validity of its principles, by studying our dreams. He attaches supreme importance to this field of investigation: "dream interpretation is the foundation stone of psycho-analysis." His largest and most elaborately detailed book is on dreams, *Die Traumdeutung*. It was certainly a legitimate and hopeful field of investigation, though there are some of us, some even who have given special study to the analysis of dreams, who doubt whether the great and rich field of dream-life can be so entirely squeezed into the limits of the Freudian formulas as Freud has asserted, and who cannot possibly accept the wild statement that before psycho-analysis dreams were regarded as "a purely bodily phenomenon" outside psychology. Only one further extension of the Freudian conception was possible, and that Freud eventually took. Having included individual psychology in his domain, he proceeded to incorporate also therein collective psychology, so that finally psycho-analysis could be applied to all the highest social manifestations of human development.

A few years ago Freud himself published a schematic outline of the various sciences to which psycho-analyses had been applied or become applicable⁽¹⁾: (1) It helps to explain much in the science of language. (2) It modifies the hypotheses of philosophy and stimulates philosophic activities in new directions. (3) It affects biology, not only by, for the first time, doing justice to the place of the sexual function in humanity, but by acting as a mediator between biology and psychology. (4) Psycho-analysis brings new contributions to our conception of evolution, showing that the old axiom that the development of the individual repeats the development of the race applies also in the psychic sphere, and indicating that infantile psychic formations persist in the adult. (5) It also contributes to the history of civilisation, not only by helping to explain myths and legends, but by illuminating the origin of great human institutions as attempts to relieve human needs which cannot be directly gratified. (6) In the fine arts it plays a similar

part, explaining alike the hidden motives of the artist and of his audience in seeking to resolve a conflict which might otherwise work out disastrously. (7) It likewise concerns sociology, for the forces which cause repression and suppression of the individual are mainly engendered by docility to social demands. (8) Psycho-analysis is, further, of the greatest importance for the sciences of education by revealing the true nature of childhood, and enabling the educator to avoid the danger of too violently repressing instincts which may seem to the adult vicious and abnormal, but which are only rendered dangerous by the adult's futile attempts to crush them, instead of allowing them in due course to be sublimated, for "our highest virtues have arisen as reactive sublimations from the foundation of our worst predispositions."

What is Freud's vocation? One is tempted by this enumeration of the fields in which he claims to be working to ask a question to which the answer may not be quite obvious. He started as a medical psycho-pathologist, but medicine covers now only a small part of his field. We cannot even describe him as a man of science, for he attaches himself to no particular science—even as a psychologist he is too large to be fitted into any school—and his activities are individualised, intuitive, and conceptual to a degree which removes them from the impersonal and objectively verifiable basis of science. He enters the philosophic domain, and might by some be termed a metaphysician; but here, again, apart from the fact that, as he himself has frequently observed, he has always deliberately avoided the study of philosophic literature, he by no means lives, as the philosopher is bound to live, in the world of ideas, but is primarily absorbed in the active manipulation of human nature. His activities are, indeed, above all, plastic and creative, and we cannot understand him unless we regard him as, above all, an artist. He is indeed an artist who arose in science, and to a large extent remains within that sphere, with disconcerting results alike to himself and his followers when he, or they, attempt to treat his work as a body of objectively demonstrable scientific propositions. It has thus happened that nearly all the chief and ablest of his early supporters—Bleuler, Adler, Jung, and Stekel—have successively left him. For in art we are concerned with matters of taste and sympathetic insight, which one person may feel and another not, or

even the same person may feel to-day and cease to feel to-morrow. Freud himself has stated that he cannot psycho-analyse a patient unless he experiences sympathy towards that patient; it is the artist's attitude. What is peculiar about Freud's art is the novelty of the medium in which its plastic force is exercised. It is not a physical medium, it is not even a purely intellectual medium, such as is dealt with by the philosopher, who also is, in his way, an artist. Freud's art is the poetry of psychic processes which lie in the deepest and most mysterious recesses of the soul. He began with themes which, novel as they were, at the same time were not difficult to follow. But as his art developed he proceeded to weave ever subtler and more daring harmonies, as his technique became firm, often choosing the simplest theme for development into an elaborate structure. A beautiful instance of this is his essay on Leonardo da Vinci, in which he builds up the whole of Leonardo's character from one slight childish reminiscence which that great man chances to have recorded. Freud's daring virtuosity is perhaps shown even more remarkably in his essay on Jensen's novel, *Gradiva*, in which he elaborately psycho-analyses an imaginary story; the results are altogether disclaimed by the novelist, but they perfectly illustrate the psycho-analyst's conceptions. Truth or fiction, to the artist it is all one, even when the artist is a psycho-analyst, for he is only concerned with truth to his art.

Freud's method is so complex, so novel, so startlingly opposed at many points to accepted belief (and, therefore, so apt to arouse both bitter hostility and ardent enthusiasm), that it is not possible to expound it fully and fairly in a small space. A brief outline of some of his main positions may perhaps be helpful.

As Freud views the psychic field the largest and even the most important part of it lies in an unconscious region. A main part of the art of the psycho-pathologist, and indeed of the psychologist generally in Freud's sense, consists in tracing the passage of infantile impulses into the unconscious, in discovering the processes of conversion which take place in this obscure region, and in bringing them again to the conscious surface of life, in which transformation not only is the abnormal rendered normal, but those sublimations take place in which human culture consists. Normally, the process is a part of

human evolution ; abnormally, in neurotic persons, the process miscarries, and the help of art is necessary to render the process natural. This art is the whole of psycho-analysis.

Freud traces back the processes with which he deals to roots in early childhood, to an infantile disposition with certain resultant psychic mechanisms, and that is largely why they are lost from ordinary view in the unconscious. The later psychic developments are highly important, but they are always obscurely connected with more fundamental roots, however concealed, in childhood or infancy, even though ultimately they are shaped by human imagination into the great figures and conflicts of Myth and Religion and Art.

This infantile source of later psychic processes is, in Freud's view, sexual, though, as already indicated, a dexterous sleight of the artist's hand has later enlarged the conception of sexual pleasure by combining it with all pleasure, thus taking away the ground from the anti-Freudians' feet. On infantile "sexuality," and on its significance for all later life, he lays great stress. The infant's sexual life he regards as highly complex. It primarily consists in simple tactile pleasures, in thumb-sucking, in friction of the various body openings, or of other sensitive spots. It develops into a special interest in the activity of the excretory functions. Extending to other persons, it tends to attach itself in the boy's case to his mother, in the girl's case to the father, as well as between brothers and sisters, and it also tends to ignore the adult distinction of sex; "You will not be wrong," Freud says, "in attributing to every child a fragment of homosexual aptitude." These special attractions may easily become special aversions. Fundamentally, however, they are wishes. A sexual wish is, in Freud's view, fundamental.

In the course of the development, however, the infantile wish, as a result of important conflicts, disappears into unconsciousness and is replaced in consciousness by some other manifestation. This is inevitable, for, as the subject grows older, the moralised emotions of shame and disgust, acting as censors, drive the infantile "sexual" wish out of the conscious field. Fragments, indeed, of this infantile state of desire may in some cases persist in the form of fixed perversions. Perversions are related to neuroses as positive to negative. In the neuroses the same original impulses are at work, but they are working from the unconscious side, all the intensity of the suppressed emotion

becoming transferred to the physical symptom. Disease is thus, in Freud's words, a flight from unsatisfying reality into something which, though biologically injurious, is not without advantage for the patient, for it is a kind of cloister into which, with his transformed infantile longings, the patient retires when deceived by the world or no longer able to fight against the world. We imagine that we can destroy our childish and primitive impulses by some miraculous process and change them into nothing. It is not so, says Freud. Nothing is destroyed. We can at the most shift our desires into the unconscious, convert them into morbid shapes, or sublimate them, and then not entirely, into exalted ideal impulses. Spirit is as indestructible as matter; that is Freud's great discovery. Freud's work is the revelation in the spiritual world of that transformation and conservation of energy which half a century earlier had been demonstrated in the physical world.

That is an abbreviated description of a state of things which, as Freud now views it, is of universal extension, and represents a fundamental human process of supreme importance. It is only in the rare cases in which it is intensified through occurring in abnormal persons that it becomes morbid and demands the physician's attention. The method by which the physician of Freud's school investigates this state of things, by bringing it to the light of consciousness and, in so doing, relieving it, is the famous method of psycho-analysis.

At first, when working with Breuer, Freud used hypnotism as the vehicle of his method. He has, however, long since abandoned that method as capricious and mystical, while in many cases the patients could not be hypnotised at all. He prefers to investigate the patient in the normal state by what he terms the analytic method. For a doctor to find out what he is ignorant of by addressing questions to an equally ignorant patient seems unpromising. But Freud remembered that he had seen Bernheim show at Nancy that, when a patient appears ignorant of what happened to him in a previous hypnotic state, his ignorance is not really absolute but may with skill be overcome. He found it was the same with the early emotional experiences which lay at the roots of these patients' neuroses. Freud encourages the patient to say everything, however irrelevant or indecorous or silly, which comes into his head, while he, as it were, stands by and watches these bubbles from the psychic depth, on the look-

out for those which furnish a clue to the nature of the process beneath. Jung developed a valuable branch of this psycho-analysis with his method of free association, which consists in reading out a string of words to the patient, telling him to say at once what each word suggests, and noting down the results, in the faith, often verified, that in this way the patient will unconsciously give away secrets that are unknown even to himself, not merely by the nature of the words that he responds with, but by his hesitation in responding at all to certain words. This method Freud regards as the psycho-analytic equivalent of the chemist's qualitative analysis.

As the patient's real history is thus brought to the surface and revealed, slowly and laboriously—and Freud admits that the process is extremely slow and laborious—the patient is enabled to become conscious of the morbid process, and in so doing is greatly assisted in casting it off. In that way the psycho-analytic method is, as Breuer terms it, cathartic, and, as Freud points out, it is the very reverse of the hypnotic method, for while hypnotism seeks to put something into the patient, psycho-analysis seeks to take something out, and is, as Freud has himself said, analogous to the sculptor's art.

This conception of psycho-analysis was a brilliant idea for which Freud deserves all credit. It has not, however, been pointed out, so far as I am aware, that Freud had a forerunner in the idea, though not in its clinical and therapeutical applications. In 1857 Dr. J. J. Garth Wilkinson, more noted as a Swedenborgian mystic and poet than as a physician, published a volume of mystic doggerel verse written by what he considered "a new method," the method of "impression." "A theme is chosen or written down," he stated; "as soon as this is done the first impression upon the mind which succeeds the act of writing the title is the beginning of the evolution of that theme, no matter how strange or alien the word or phrase may seem." "The first mental movement, the first word that comes," is "the response to the mind's desire for the unfolding of the subject." It is continued by the same method, and Garth Wilkinson adds, "I have always found it lead by an infallible instinct into the subject." The method was, as Garth Wilkinson viewed it, a kind of exalted *laissez-faire*, a command to the deepest unconscious instincts to express themselves. Reason and will, he pointed out, are left aside; you trust to "an influx" and the faculties of the

mind are "directed to ends they know not of." Garth Wilkinson, it must be clearly understood, although he was a physician, used this method for religious and literary and never for scientific or medical ends; but it is easy to see that essentially it is the method of psycho-analysis applied to oneself, and it is further evidence how much Freud's method is an artist's method.

When we survey the Freudian conception of psycho-analysis, it is manifest that the core of it is its doctrine of sex impulse as appearing in infancy, passing through various phases and processes, mostly involving conflict, and ultimately developing—except when by miscarriage it takes on morbid shapes—into the loftiest cultural shapes that humanity can create. It is not only the core of Freudism, it is also the chief point of attack for the opponents of Freud. It must be said that Freud has never compromised on the matter, and to-day he vigorously reproaches Adler and Jung, once his chief lieutenants, for seeking to minimise or explain away the sexual core of psycho-analysis. It may indeed be said that Freud has even gone beyond his own thesis in his emphasis of sex. He is quite aware that he uses the term "sexuality" in, as he says, "a much wider sense than is usual," and no one has so well shown how different the sexual world of childhood is from that of the adult as Freud himself in his study of the sexual theories of children; these theories commonly devised by children to explain the mysteries hidden from them are not only different from the adult's facts, they usually leave out entirely all that the adult means by sexuality. So that when the ignorant adult approaches the sexual feelings of childhood he is apt to make the crudest and most lamentable mistakes. Yet Freud himself has encouraged this error and exposed his position to quite unnecessary attacks by speaking of childish sexual psychology in terms of adult physical facts. This is notably the case as regards Freud's introduction of the term "incest-complex," and by his acceptance as typical in this respect of the altogether adult story of *Œdipus* and *Jocasta*. Although a very little consideration should have sufficed to show that these adult conceptions are on a different plane from the emotions and ideas of children, and though Freud had himself shown how totally unlike the adult's are the ideal and undefined sexual visions of the child, the leader's confused mistake has been followed by a sheep-like flock of Freudians, who have thereby copiously aided the

unnecessary indignation of their opponents. For the truth is that, with a different conception of "infantile sexuality" on each side, the Freudian and the anti-Freudian have each alike been fighting, in St. Paul's words, "as one that beateth the air."

We must at the same time remember that the Freudian emphasis on infantile sexuality, however careful and guarded the terminology adopted, would still have shocked and repelled the average conventional man and woman. In the matter of sex we are all a little mediæval. Hunger and Love, said Schiller, are the two great pillars which support the world. It shocks us not at all when the importance of the pillar of Hunger is emphasised, and even exaggerated, as it may be by the political economist. But it is another matter when we find the pillar of Love emphasised and even exaggerated. It is only the child of genius, trained to deal with facts and to follow Nature wheresoever she seems to lead, who is innocent of this prejudice and bewildered by the outcries he unwittingly evokes. A distinguished thinker, James Hinton, who, like Freud, began as a physician and gradually extended his speculations over the central facts of life, was such a child of genius worshipping and following Nature. "How utterly," he wrote, "all feeling of impurity, or reasons for special feeling at all, is gone from the sexual passion in my mind! It stands before me absolutely as the taking of food. I cannot even recall why the feelings of special impurity cling about it. It has taken its place in my mind absolutely afresh, and as one with all that is most simple and natural and pure and good."² It was in this spirit that Freud formulated his theory of "Libido," with its infantile manifestations and marvellous transformations, serenely pursuing his way, while the conventional world was shocked, and even his own chief supporters often fell away, Adler depriving "Libido" of its love constituent, and Jung even transforming it into a vague metaphysical abstraction.

There is, however, no need to fall back on this, the fundamental justification or condemnation—as we choose to see it—of genius. We may preserve our usual wordly attitude and yet be able to discern that, when the misapprehension arising from bad terminology and extreme statement are put aside, the essentials of the Freudian vision of life may still be found acceptable. We have refused to face them, but we have obscurely recognised them, and they have even been plainly

expressed, especially by poets and novelists. Let us take as an example one of the insights of Freud which has most aroused antagonism : the emotional relationship between mother and son, to which there is a corresponding relationship between father and daughter. This is notably a case in which feelings which are entirely plain to see have yet not been seen merely because people were unwilling to see them. Mothers had been suckling their children for untold millions of years before, a century ago, Cabanis pointed out the nature of the delicious pleasure often—or, it is probable, normally—experienced in suckling, and it is not surprising that another century should have elapsed before Freud pointed out that this pleasure is mutual, although in the infant it can only be termed “sexual” if we are careful to understand that sexual pleasure at this early period is an altogether different thing from what it becomes later. It normally remains a different thing even for a considerable period, and towards the mother it is permanently a different thing, for the son always feels as a child to his mother, yet on this basis, which we may regard as physically non-sexual and emotionally sexual, the relations of mother and son may be, Freud would be inclined to say quite normally, comparable to that of lovers. Let us turn to a novel, called *Comme tout le Monde*, written a few years ago, by Madame Lucie Delarue-Mardrus, one of the best women novelists of France to-day. As the title indicates, it is a commonplace story, the ordinary story of an ordinary middle-class girl, wife, and mother, who experiences the ordinary joys of life and the ordinary deceptions. Yet the story is told with such art and such insight that, commonplace as it is, and even because it is commonplace, we are made to feel that it is a completely veracious record. Isabelle, the young Norman lady, who is the heroine, has two sons, and the elder, Léon, adores her ; his earliest childish letters to her express this adoration : when he goes to school at the age of seven he kisses the little cakes his mother brings him because they have been in her hands. But in a few years’ time he becomes self-conscious and conceals his feelings ; he loves to be in his mother’s presence, but he is shy, reserved, and awkward, and is apt to get on his mother’s nerves, all the more so, as she, on her part, adores her younger son, through private emotional associations preferring him to the elder boy, who, in secret, writes verses, and addresses a poem to

Joan of Arc, whom he sees in vision "beautiful as my mother." While still a school-boy he dies, and only then it is that his mother realises the adoration expended upon her, and, too late, passionately responds to it. We may, again, turn to a recent English writer, "Anna Wickham," a mother of sons, who writes verse of a notably powerful, sincere, and poignant order. In a volume of hers we find the lines :

"My little son is my fond lover.

Sometimes I think that I'll be scarcely human
If I can brook his chosen woman!"⁽³⁾

These emotions are experienced, they are even expressed (perhaps especially by women, as the sex of the writers I have quoted indicates), but we have put them aside, have carefully avoided considering their significance, at the most have explained them, or ridiculed them, away. So that when at last the child of genius appears upon the scene, and sees, and realises what he sees, and proclaims it aloud—as the child in the fairy tale cried out: "The Emperor has no clothes on!"—the world is shocked, though it has only been told what in reality it already knew.

We must not, however, conclude that Freud has herein performed an altogether unnecessary task. True, the "incest-complex" is a terminological absurdity, since the sexual theories of childhood are absolutely unlike those of the adult, and the adult's attitude has no more meaning for the child than, it would usually seem, the child's attitude has for the adult. Yet the sexual emotions remain on the psychic side the same, however unlike the ideas and the objects aimed at. Freud, with his artist's instincts, sensitive to Nature—for both the artist and the scientist are explorers and revealers of Nature—has not only been more acutely aware of the existence of these infantile emotions than any before him, but he has more accurately investigated them, and he has, moreover, devised or created a dynamic mechanism into which they beautifully fit, to emerge at last, by a process of sublimation, in the highest manifestations of the human spirit.

The domain in which Freud works is largely that which he terms the "unconscious," the mighty treasure house in which all the apparently forgotten experiences of our lives are stored. It is a mysterious and gloomy region, admirably adapted for the

operation of Freud's artistic genius. But we may do well to remember that it is a vast region and contains many things. With his complete sincerity, simplicity, and natural gift of divination, Freud has been happily inspired, into whatever excesses of exaggeration we may believe he has sometimes fallen. But less finely gifted men may not fare so well in the Unconscious. They must select among the facts they find, and in their selection ordinary psycho-analysts who have not the sensitive *flair* of genius to guide them will be guided by the rigid and systematic theory which has them in its clutches. This has been pointed out by Poul Bjerre, of Stockholm, not an opponent of psycho-analysis, but himself a distinguished psycho-analyst, writing in Freud's own organ.⁽⁴⁾ He is especially referring to those who expect to find the "incest-complex" everywhere, and who accordingly find it. "Life cannot be pressed into a single theory," he adds, "however impressed it may be by the highest genius, and however comprehensive." If these wise words linger in our minds we shall view Freud and his opponents alike with toleration and often with sympathy.

It is not possible here to discuss those notable psycho-analysts who were once Freud's chief disciples and coadjutors and are now his rivals or opponents. It is the less necessary since, if we are mainly looking at psycho-analysis from the angle of sex, it cannot be said that they have added much to what Freud has brought forward, though they may sometimes have taken much away. They have all done good work. Prof. Bleuler was a distinguished psychiatrist before he joined Freud, of admirable solidity, judgment, and insight. Stekel is a capable, energetic, and industrious worker. C. G. Jung, belonging to Zurich, where the first large movement of Freudian appreciation began, was an early adherent. He not only devised the associative method of exploring concealed psychic states, but introduced the term "complex," a much used, and, as Freud thinks, much-abused if not unnecessary term, though, it must be added, Freud employs it himself. Of late years Jung has written copiously, and especially a very lengthy essay on the "Transformation and Symbols of Libido." In this luxuriant jungle of philosophy and philology Jung wanders with random and untrained steps, throwing out brilliant suggestions here and there, hazarding the declaration that "the soul is all Libido,"

and that "sexuality itself is only a symbol," conveying the general impression of a strayed metaphysician vainly seeking for the Absolute. He remains a psycho-analyst, but from Freud, who has never fallen into such extravagances, he has wandered far. Freud himself, in a contribution to the history of the psycho-analytic movement, written with all his transparent sincerity and instinctive charm, sums up an account of his former disciple's relation to the movement by saying that Jung has furnished the psycho-analytic instrument with a new handle and then proceeded to put in a new blade. Alfred Adler is entitled to more respectful consideration, and herein I am also expressing Freud's opinion. There is nothing of Jung's obscurity and confusion; indeed Adler may be said to err in the opposite direction by becoming too precise, narrow, and coherent. His chief conception is that of the "impulse of aggression" and the "masculine protest," on which he places extreme emphasis. This is the impulse by which we seek to fortify our weakest side, even that based on bodily defect, so that it develops into the dominant aspect of our character. We may often see this illustrated by those undeveloped persons who by dint of physical culture ultimately come to regard themselves, and, indeed, may actually become, superior to the average in physical development. This conception has proved fruitful, and Adler has succeeded in forming a school of co-workers. All these investigators are not to be despised. But Freud remains the man who first devised the instrument of psycho-analysis as it is now known, and who revealed the world in which it operates.

It must not therewith be concluded that any of the conceptions Freud has so artfully woven will of necessity endure permanently. He changes them so often himself that it would be foolish to suppose that his successors will not continue the same process. In this respect we may compare him with Lombroso, another Jew of genius, who also began as a psychopathologist and also gradually extended his conceptions over a wide sphere of abnormal and normal life. His theories have been proved to be often defective, even his facts will not always bear examination; he himself admitted that of the structure he had raised perhaps not one stone would remain upon another. Yet he enlarged the human horizon, he discovered new fields for fruitful research and new methods for investigating them. That was something bigger than either a sound theory or a

precise collection of facts, for we do not demand of a Columbus that he shall be a reliable surveyor of the new world he discovers. Freud, similarly and to a greater extent, has enlarged our horizon. He has shown the existence of a vast psychic field of which before we had but scanty intimations. The human soul will never again be to human eyes what it was before Freud explored it. He has revealed the possibility of new depths, new subtleties, new complexities, new psychic mechanisms. That is the great and outstanding fact.

(1) *Scientia*, vol. xiv, 1913, p. 169. (2) Mrs. Havelock Ellis, *James Hinton: A Sketch*, 1917, p. 107. (3) Anna Wickham, *The Man with a Hammer*, p. 44. (4) *Fahrbuch für Psychoanalytische Forschungen*, vol. v, 1913, p. 692.

On Psychosensory and Psychomotor Disturbances. By G. H. MONRAD-KROHN, M.B., M.R.C.P., Assistant-Physician to the Bethlem Royal Hospital, S.E.

THE large chapter of aphasia and allied conditions of psychomotor and psychosensory disturbances is still a chapter where there are great differences of opinion, and a great heterogeneity in nomenclature.

Since Broca first introduced the question of "Speech Centres" by describing his so famous Broca's centre, an enormous amount of work has been spent, and an enormous literature has been written on the relation between psychomotor and psychosensory functions and their anatomical localisation.

Looking through the literature of these subjects one cannot but receive a very forcible impression that as our anatomical knowledge in itself has progressed, the clinical investigation that has been done has not advanced correspondingly—and the whole chapter of aphasia and allied conditions is to-day marred by lack of exact clinical terms, and an abundance of semi-scientific terms mixing clinical facts and localisation hypotheses into a chaos—not only causing confusion, but definitely barring the further progress of clinical research on this so extremely difficult subject.

A comparison of the present-day clinical description of aphasia with Hughlings Jackson's description of aphasia⁽¹⁾ is not at all flattering to the former, and, although one cannot deny the clinical research work on this subject all progress, one

has to admit that a disproportionately large part of the work has consisted in a covering up of our ignorance by means of a number of hybrid names based on hypothesis and not on facts.

It is only necessary to mention a few of the terms that are in vogue to-day, which have even got a sort of hall-mark—and discuss their value—to see what a number of unnecessary, undesirable, and confusing terms we have in this chapter of psycho-neurology. Pointing at a few of these terms, one hopes also to start a process of “weeding” that will rid the present atrocious nomenclature of aphasia and allied conditions of all unnecessary and confusing terms which now take the place of clear clinical terms and descriptions, and make us take things for granted which are not proved.

Although one is firmly convinced that there is a very close connection between anatomical and physiological facts, and although one already possesses some quite valuable and definite knowledge in this respect, it has to be admitted that the relation between the psychomotor and psychosensory functions and their anatomical substrata is yet far from completely explored, and, therefore, it cannot be emphasised strongly enough that a nomenclature that mixes anatomy and physiology, and anticipates knowledge that we have not yet gained, cannot be anything but a cause of confusion and a bar against further progress of clinical as well as anatomical research on these subjects. From this point of view, such terms as “cortical subcortical, and transcortical aphasia” ought to be completely condemned. There can be no doubt that there are considerable individual variations in the relation between the different “speech centres” both in structural and educational respect (²), and it is an open question whether these individual differences are not the chief determining factors in the making up of different variations of the chief forms of aphasia. This again, shows how undesirable are these hybrid anatomophysiological terms.

“Internal speech” is another term that has caused much confusion. In his introduction to Hughlings Jackson’s writings on aphasia, Head writes: “One of the greatest obstacles to mutual understanding amongst students of speech has been the diverse use of the expression ‘internal speech’; ‘internal speech,’ ‘langage interieur,’ and ‘innere sprache’ have not even been used consistently in any one language.” One searches in

vain to find what advantage the invention of the term "internal speech" has for the investigation and understanding of aphasia. Personally, one would not hesitate in saying that it is less than nothing—a negative value. What clinical evidence have we of the hypothetical "internal speech?" Hughlings Jackson believed that *writing* was the key to the understanding of the "internal speech"; that may be, but there is no proof of it, and there is no proof of the existence even of a process that could be called "internal speech," which seems to be an unnecessary, and, therefore, undesirable synonym for "thinking."

Amnesic aphasia is another term that cannot be defined sharply, and it is therefore unnecessary and confusing. Memory is a secondary quality of any one nervous function (probably based on biochemic processes that are common not only to all nerve-cells but probably to all protoplasm). One can remember (and consequently also forget) a motor function as well as a sensory. One can with equal right call every kind of aphasia (motor or sensory) amnesic. The conclusion is that the term is superfluous and confusing and should be discarded.

It seems on the whole highly necessary for the further advance of clinical research on these important and complicated subjects that a thorough revision of our nomenclature should take place, and that clinical terms based on purely clinical facts should be standardised, and established, to the exclusion of terms that are unnecessary and confusing.

In the following scheme one has tried to outline a standard method for clinical examination of psychomotor and psychosensory functions and on the base of this one has tried to establish a set of purely clinical terms.

Anyone who has worked for any length of time on the subject of psychomotor and psychosensory disturbances will have been struck by the fact that everyone of our clinical tests is really a double test consisting of two different components:

(1) The perception of the sensory stimulus—a psychosensory reaction and

(2) The motor response—a psychomotor reaction.

When, *e.g.*, one asks a patient of ordinary intelligence how old he is and one does not receive an answer, then the reason for this may be either that the man does not understand or that he cannot speak. Which is the real reason can only be determined by other tests. When again one asks a patient to

lift up his left arm and he fails to do so, the reason may either be that he does not understand or that he is unable to perform the movement.

In other words, the cause of the defect may be either on the side of the motor or on the side of the sensory functions involved.

When we, to recapitulate, consider the tests that we employ for psychomotor and psychosensory disturbances, we find that they are all in this way double tests in so far as they comprise a sensory and a motor reaction.

It is, in other words, only through the psychomotor reactions that we gain information about the psychosensory processes, and the psychosensory functions are, on the other hand, involved in all our tests for the psychomotor functions as necessary for the transmission of the test stimulus.

Thus all our tests comprise one psychosensory and one psychomotor reaction, and it is only by a combination of tests that we can localise the defect to a distinct function⁽¹⁾.

E.g. a man is asked how old he is—no response; he is asked to lift his left arm up—no response; he is asked to write his address—no response. Now one *writes* to him asking him to say his name—correct response; to lift his left arm—correct response; to write his address—correct response.

From this we are entitled to draw the conclusion that his auditory perception of spoken language is deficient and that this is to blame for the lack of response in the three first tests.

It is now easy to see how one can evolve a complete system of tests, and how an absolutely logical and definite nomenclature can be established on the basis of this system of investigation.

It is well to enumerate first the different psychosensory and psychomotor functions we are interested in clinically, and, for the sake of an easy survey, they are here tabulated:

Psychosensory functions and their corresponding disturbances:

1. *Auditory perception* — disturbance = total auditory agnosia.
 - (a) Of words; disturbance = sensory aphasia.
 - (b) Of inarticulate sounds; disturbance = partial auditory agnosia.
2. *Visual perception*—disturbance = total visual agnosia.
 - (a) Of words; disturbance = alexia.
 - (b) Of drawings; disturbance = ("asymbolia").
 - (c) Of objects; disturbance = partial visual agnosia.

3. *Tactile perception* ; disturbance = **astereognosis**.
4. *Olfactory perception*.
5. *Gustatory perception*.

The last two are of comparatively little importance in the ordinary clinical examination of psychosensory functions, as the psychic functions connected with these sensory functions are very scanty compared with 1, 2, and 3.

Psychomotor functions.—There are only three ways in which man can give expression to his thoughts :

- I. By means of spoken language ; disturbance = motor aphasia.
- II. By means of written language ; disturbance = agraphia.
- III. By means of mimicry, demonstration, and actions ; disturbance = apraxia.

Consequently, the psychomotor reaction by which the patient responds to our different tests can only take one of three forms :

- I. Spoken response ;
- II. Written response ;
- III. Practical response (in the shape of actions, demonstrations and mimicry).

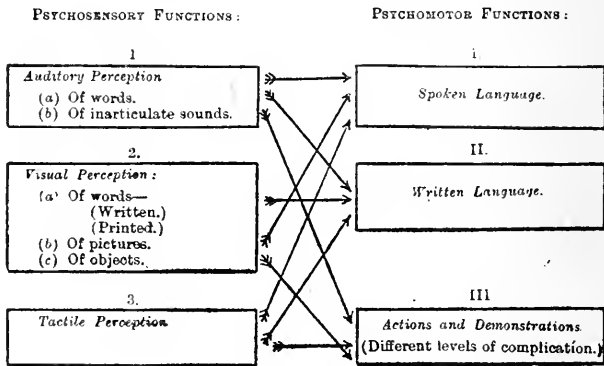
In order to have a complete system of examination for all these functions we have to couple each psychosensory reaction with each of the psychomotor reactions. Simple as this may appear at first sight, it will be found that the whole system, in order to be complete, will comprise a very large number of different tests—so many tests, in fact, that one cannot expect the whole “system” to be employed as a *routine* examination in every neurological case. But when dealing with a case of psychosensory or psychomotor disturbance with a view to research, nothing short of the whole complete system of different tests is, in the author’s opinion, satisfactory.

The order and sequence of the different tests can, of course, be varied from case to case, and so can the actual carrying out of the individual tests. The main thing is that the whole system of tests has been gone through in its completeness. To facilitate the orientation of the different combinations of psychosensory and psychomotor functions, the following diagram may be found useful.

In order not to make this diagram too complicated the olfactory and gustatory forms of perception are left out.

Perhaps it is as well to point out that the diagram is not meant in any way to have any anatomical significance. Nothing has barred the progress of the research in aphasia more than the unwarranted confusion of functions with anatomical centres. In all probability, centres proper—in the same sense as the centres for different simple movements in the motor area—do not exist for these complicated psychosensory and psychomotor functions, whose paths necessarily must extend over the various parts of the brain.

As regards the practical carrying out of this system of tests, one finds it, of course, advisable to alter the order of the tests to suit the different cases. The author has found it



practical in most cases to proceed in the following order: First (I), are all the different tests carried out in which the patient responds with spoken language; then (II), those tests to which he responds in written language; and then (III), those where his response takes the form of actions, mimicry, or demonstrations—"practical" response.

I. *Perception as evidenced by spoken response :*

1. *Auditory perception—*

- (a) Of words : How old are you ?
What is your name ?
What way did you come here ? etc.,
etc.
- (b) Of inarticulate sounds : The patient is asked to shut his eyes and tell what he hears :
Rattling of keys.
Whistling.

Imitation of various animals (dog, cat, etc.).

The patient may also here be asked if he can recognise a melody played on the piano, etc.

2. *Visual perception*—

(a) Of words: (Of course one must make sure that the patient has learnt to read)—

Various questions are put to him in writing: "When were you born?" etc.

He is let relate, in his own words, the contents of some printed matter that has been given him.

(b) Of pictures: He is shown different pictures, and asked to explain them.

One can also draw a simple sketch for him, and note in what stage of the unfinished sketch the patient can "diagnose" it.

(c) Of objects: He is shown different objects (pencil, cigar, book, etc.), and asked to name them.

3. *Tactile perception*:

The patient is told to shut his eyes, and to name objects placed in either of his hands (*e.g.*, coin, pencil, key—not keys that rattle, auditory perception).

4. *Olfactory perception*:

To name smells applied to his nostrils. (Compare the ordinary neurological test of the first cranial nerve).

5. *Gustatory perception*:

To name tastes of substances applied to his tongue. (Compare the ordinary neurological test for taste).

II. *Perception as evidenced by written response*.—Here the patient is asked to *answer in writing* to the same or similar questions as under I.

III. *Perception as evidenced by 'practical' response (actions, demonstrations, and mimicry)*.

I. *Auditory perception*:

"Lift your left hand up."

"Button your coat."

"Take the pencil and draw a house."

"Beckon to a person; show how you would use a key."

"Look angry" (mimicry).

Actions of graduated complication
—with object
and without
object.

2. *Visual perception* :

"Do what I write to you"—similar to 1.

3. *Tactile and visual perception* :

"How do you use this?"—a key, a brush, a tape-measure, etc. Strike a match, etc.

In addition to this system one lets the patient

Repeat words } Automatic actions without

Copy writing } any psychic content.

Transcribe printed matter into handwritten language	} Semi- automatic actions.
Read aloud	
Write to dictation	

That in every case the *spontaneous language* is to be closely observed need not be mentioned. It seems also superfluous to dwell on the difference between intellectual and emotional language (more or less highly associated speech) which is so important in regard to spontaneous language, and which has been so masterly treated by Hughlings Jackson.

That in educated persons, who speak several languages, the examination should be carried out in two or three languages is obvious from a research point of view.

On account of the variability of so many aphasic patients to tests (as already pointed out by Hughlings Jackson) one ought to examine every patient repeatedly.

The above system of tests represents nothing radically new, and is but an attempt to comprise all these related tests for psychomotor and psychosensory disturbances in *one logical system* which allows one to get a *complete* picture of each case.

Only when our clinical examination becomes as exact in its definition as the anatomical can we hope that a closer co-operation between the two will lead us to further advance in respect of cerebral localisation of these complicated functions.

By this minute examination one will also in many cases obtain a basis from which therapeutic attempts at re-education can be made. In this respect it is our object, helped by the still intact connections between psychosensory and psychomotor functions, to establish a new communication past the disconnection discovered—aided in this respect also by our knowledge of the natural evolution of language.

As regards the practical examination and the distinction between the different forms of psychomotor and psychosensory

disturbances it has to be admitted that the different psychomotor and psychosensory functions are interdependent. As on a lower level the control of the sensory function is necessary for the perfect execution of motor functions, so are psychosensory functions necessary for the perfect execution of the psychomotor functions. When the deep sensation becomes deficient in tabes the affected limbs become ataxic. In the same way, sensory aphasia leads to disturbances of speech, paraphasia—the control is lacking.

It has further to be borne in mind that motor aphasia is frequently combined with agraphia or apraxia or both. (Hughlings Jackson first pointed to the fact that aphasic patients often are unable to protrude their tongue when asked to do so although they immediately afterwards may be seen to lick their lips spontaneously.)

In fact, cases where a combination of psychomotor and psychosensory disturbances co-exist are on careful examination found to be more frequent than pure cases of only one psychomotor or psychosensory disturbance. On the other hand one finds cases where only the *connection* between a psychosensory and a psychomotor function is broken.

In labelling the different cases for purposes of research (and also for purposes of treatment by means of re-education) it is therefore highly desirable to indicate the "connections" interrupted, and in this respect one would propose a nomenclature based entirely on our clinical examination, as described above.

The proposed terms are best understood when represented in an analogous diagram to the one referred to in the description of the whole system of examination, and it is to be hoped that this second diagram will therefore need no explanation.

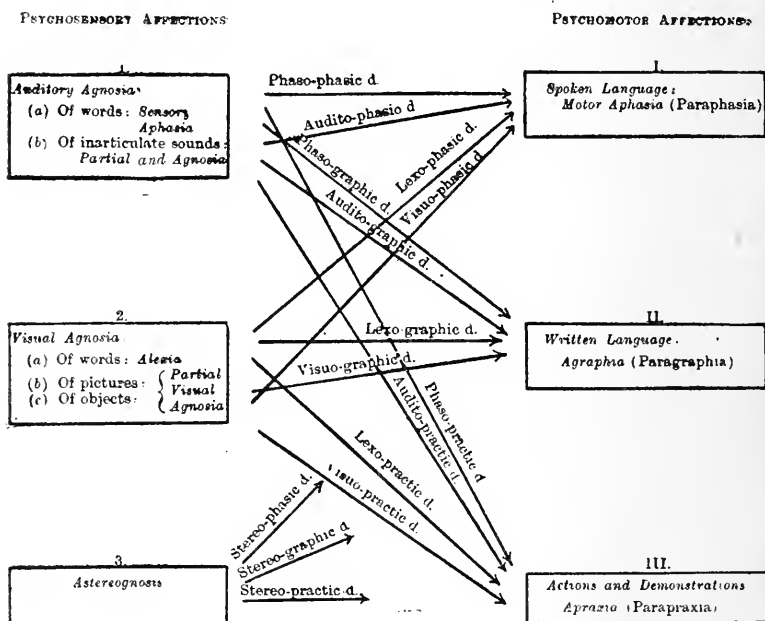
In this diagram, *d.* stands for *disconnection* when the test gives *no response*; for *disturbance* when it gives a *faulty response*.

The above nomenclature may at first sight appear very complicated but one will soon find that it is really not so. It has the advantage of expressing exactly what the clinical examination has given in terms that are purely clinical—*e.g.*, case of *sensory aphasia* with phaso-phasic, phaso-graphic, and phaso-practic disconnection and slight lexo-phasic and stereo-phasic disturbance gives at once a complete picture of the clinical aspect of the case. In this case the patient gives no spoken response

to perception of spoken language, no written response to perception of spoken language, and no practical response to perception of spoken language, whilst his spoken response to perception of written language and his spoken response to stereognostic perception are faulty.

The connections not mentioned as disconnected or disturbed are taken to be found in good working order.

A case where there is phaso-phasic, audito-phasic, lexo-phasic,



visuo-phasic and stereo-phasic disconnection is, of course, one of *complete motor aphasia*, and it will readily be admitted that for such a case this shorter and already well-known name is to be preferred, but there are—as already pointed out—many cases that cannot simply be labelled *motor aphasia*, *apraxia*, *alexia*, etc., and in these numerous cases the above nomenclature is intended to help to a more accurate classification. And for the sake of giving any localising value to the anatomical finding *post mortem* a minute clinical examination *intra vitam* and an *equally minute record of the examination* in standardised terms is obviously all important.

The number of cases of different psychomotor and psycho-

sensory disturbances that any one observer is fated to see and study is often not very great—and just for this reason it is all the more important that one recognised standard method of examining and one recognised standard nomenclature should enable the different investigators to compare their cases without confusion.

This is a condition, *sine qua non*, for an organised co-operation in the further research of psychomotor and psychosensory functions, their disturbances and their anatomical localisation.

What is needed is :—

Clinical standards in form of

- (1) *A standard examination* (which will not exclude original additions in the examination of individual cases), and, based upon this standard examination,
- (2) *Standardised clinical terms*.—This entails a thorough reformation of our present nomenclature.

One has in the above scheme tried to outline a standard for the clinical examination and, based upon this, a purely clinical nomenclature. It goes without saying that perhaps many will find that the above is not the happiest form for either, and perhaps others might do it better.

The author's chief point has been to *raise* the questions mentioned above. If they are taken up by others and brought to a more satisfactory conclusion, the author will still feel that he has achieved his object.

(¹) Cf. *Brain*, parts 1 and 2, vol. xxxviii, July, 1915.—(²) Cf. Grassel's term "tempérament polygonal."—(³) *N.B.* No anatomical localisation is meant here.

A Theory of Conduct. By ALAN MCDUGALL, Director of The David Lewis Epileptic Colony.

IN the beginning every creature was a patriarch: it was, philosophically, not only its individual self, but also all its potential progeny. Such a creature's whole conduct was directed towards the one goal of eternal life on earth. It so happened that in very many cases the creature's best chance of success involved association with other creatures of its kind, or even of other kinds. From this arose the complication of the acquirement of tribal instincts. Tribal instincts were acquired only for patriarchal purposes, though in very many cases they

proved to be the immediate cause of the creature's death. A further complication arose when certain of the creatures acquired intellect and took to thinking. Philosophically, a living thing exists only that it may produce a generation capable of producing yet another generation. A generation is important only as the cause of its next generation. Intellect often gave the creature an immediate advantage over rivals, but it glorified the individual self at the expense of the patriarchal self. This is recognised in the third chapter of Genesis, where intellect is called the serpent, and thinking is called (in Chapter II) the tree of the knowledge of good and evil. The statement that "in the day that thou eatest thereof, thou shalt surely die" declares that the race is kept going only by those who do not understand how to limit their families.

The explanation of conduct is made more difficult by the fact that it is, in the human race, only during adult life that patriarchal appetites are vigorous. During infancy and senility the patriarch is feeble, the individual rules. A further difficulty is that a normal appetite may be replaced, temporarily or permanently by an exaggeration or a diminution or an absence, or a perversion of itself, or by a substitute-appetite.

Nevertheless, in spite of all the complications that obscure the field of vision, it can be seen that conduct is the consequence of appetites evolved to procure the creature immortality on earth through progeny. Throughout manhood the normal man may be regarded as two-fold: he is an individual and he is a patriarch. The individual concerns himself only with his own personal welfare. The patriarch concerns himself with what may happen on earth after the individual with whom he is associated dies. The interests of the patriarch and those of the individual are often opposite. The creature has often the discomfort of being the field of battle between the two interests. Normally, that peace which the world cannot give comes only with the triumph of the patriarch over the individual. It is not everybody who is normal.

Zeal for the discovery of the abnormal must not outrun discretion. The substitute-appetite is not necessarily abnormal, more often perhaps it acts as a safety valve. Take, say, the very young man's appetite for fame. He has individual ambition, he is resolved to make an eternal name for himself. A while later he is found to be talking no longer about fame.

but about a girl. He may declare the great things his son is going to do ; but it is patent that he has lost his earlier intention of doing big things himself. The explanation is that the appetite for fame (immortality on earth through name) was a substitute-appetite ; a usurper that ruled while the true appetite, the appetite to be immortal on earth through progeny, lay sleeping. If the environment of the creature is such that the true appetite, if it awoke, could not be satisfied, the substitute-appetite may persist throughout life without being evidence of disease.

Infancy and old age are much simpler studies than the period of adult life. In them the individual rules : the patriarch is more or less dormant, or even dead. The Rubayat of Omar Khayyam and the Book of Ecclesiastes were both of them written by men who, through senile decay, had ceased to have patriarchal instincts, and had come to view the order of things from the standpoint of the individual. In normal childhood the patriarch is not non-existent : but he is the weaker partner. The study of senile conduct is complicated by the persistence of habit into old age. An old man planted apple trees. Was he still patriarchal ? Or did he simply think it a pleasing way of occupying his time ? Or had his next generation warned him that if he didn't show himself to be worth his keep he'd find himself in the workhouse ? There are many other possibilities, any of which may be the whole or the partial explanation in a particular case. The fact remains that normal infancy and normal senility resemble each other and differ from normal manhood by being more under individual than patriarchal rule.

There exists a very interesting set of abnormal people. In them throughout infancy, throughout manhood, throughout senility, the individual predominates : the patriarch is feeble or non-existent. Philosophically, the condition seems to be one not of arrested development, but of premature senility. They are a peculiar but a numerous people ; they are to be seen every day everywhere. Some of them fill high places ; of others the lot is humble. Some go to the top of their spheres ; others go to jail. Some of them are hailed as great thinkers, and are recommended to their more normal and healthier neighbours as guides, philosophers, and friends.

This theory of conduct is as old as literature. Though

probably not put by them into words, it was taken for granted by the authors of the Book of Genesis and by the folks whom they made immortal on earth through literature. In the days when Jacob said "I being few," the unphilosophical separation of a man from his progeny had not been made, and God, who punished only unto the third and fourth generation and yet showed mercy to the creature in thousands, needed no apology by doctors of divinity. He was easily understood of the people.

Clinical Notes and Cases.

Insanity from the Patient's Point of View.

After an interval of nearly six years from my recovery, I am describing from the patient's point of view an attack of confusional or stuporose insanity which lasted for five months. No notes have previously been made of my recollections, but as the period of my lapse from sanity stands out in my memory like a well-remembered dream, little difficulty is experienced in recalling my ideas and feelings at the time. A selection from these is made and they are joined together to form a consecutive history, which, indeed, the whole experience seemed as I lived it. Unlike a dream, the sense of time and its passage was present. My delusions also, were distortions of things presenting themselves to my senses and not solely a tangle of ideas subjectively produced, as dreams for the most part seem to be.

At the time of the commencement of the mental illness I was in one of our tropical dependencies, where I had been a medical officer for over six years. I was in camp with a number of other officials who were engaged in administering the affairs of some uncivilised tribes dwelling in a mountainous part of the dependency. I appear to have been somewhat violent at the onset, and was secured and sent to a European station some days' march away, and then on by train to a sanatorium in the hills. After a stay here, where I seem to remember a sort of struggle for my sanity and a consciousness that it was disturbed, I was removed to an asylum, at a coast town about twelve hours away by rail. I was first placed in a room in one part of the institution, and later removed to another with a verandah opening on to the garden.

It is not intended here to account for the cause of my insanity, but rather to describe from the point of view of an insane person his outlook and notions as to what was happening. I have waited so long before committing the recollections to writing because they were, naturally, somewhat humiliating and painful. The illness has, however, now receded so far that it can be calmly considered, especially as the interval has been free from relapse, and I have successfully resumed the practice of my profession. For convenience of narration the recollections that follow are

given in the third person, and comments given in the first person within brackets.

At the time when A— first realises that he began to distort the happenings around him, he remembers beginning to distrust the two principal officials of those who were encamped with him. One of them he imagined to be a Jesuit in disguise, the other a magician. He thought they were concocting devilish plots against him, and committed an assault upon one of them. He was also under the impression that the surrounding native tribes were about to attack the encampment. A— therefore loaded his revolver and kept awake for several nights so as to be prepared against attacks. [I think that the assault took place and that the revolver was so prepared, also that the insomnia was real, but whether the tribes had actually been menacing the camp or not I cannot be certain.] A— then remembers a confused journey from the camp to the European station, the journey being crowded with manifestations of black magic, wrought by his two enemies, the Jesuit and the magician. After reaching the station, which A— recognised, the principal incident he remembers was that of walking down a road between two persons who each held an arm on either side. A former acquaintance of his passed on a bicycle, and A— recollects having rushed up and kicked the bicycle, fancying that his conscience required him to do this. [Wherein lay the imagined offence of the cyclist I am now not clear.] A— next remembers travelling by train to the hill sanatorium with two attendants. In the same compartment was a stranger to whom A— paid particular attention, thinking him to be another of the officials with whom he had lately been in camp. This official he thought also to be a Jesuit and to be working against him. Finally, A— walked across the compartment and assaulted him. [I fancy this episode was true.]

A— then arrived at the hospital in the hill station, a place where he had previously worked and which he remembered. He also recognised the matron, and was at first pleased to see her. The doctor, who was a stranger to him, he at first welcomed. He remembers at this stage coming to himself for a short space, and knowing that he was struggling against insanity, but found himself compelled to yield to a rush of distorted ideas. One of his notions just then was that the hospital was full of the insane, whom he had been brought there to treat.

He also seems to remember being surrounded by a number of persons who forcibly fed him with a nasal tube, and being coaxed not to struggle by a half-caste nurse. A—, however, stoutly resisted what he imagined was a form of torture being inflicted by evil-disposed persons.

A— apparently began to resent the constant surveillance to which he was subjected. He got to dislike the matron, who he thought was spiteful, and the doctor he identified with Crippen. [I am told I used to address him by this name.]

In the garden of the hospital there were numerous hollyhocks and roses. A— imagined that these blossoms were whispering and beckoning to him, and their agitation by the wind he thought to be their endeavour to reach him as he lay in bed. He was at first charmed by the fairy-tale world into which he had thus penetrated. He soon wearied of it, however, as the flowers could not reach him, and their blandishments became monotonous.

A— next imagined himself to be alone in the garden, which had become a sort of disc, with a void beyond its edge. He later met some of his friends there, but they soon disappeared, and A— began to feel lonely. He was under the impression that he had died, and that his death had come about by suicide. He seems to have concluded that after death a series of heavens succeeded one another. These he figured as a number of discs one above the other, connected together by a central stem; in fact, an arrangement such as the dishes seen in certain old flower vases.

A— began to try and reach the next heaven, whither he thought his friends had gone. He could not discover the way to do so except by again committing suicide, which might be attained by diving over the edge of the disc into the void beyond. Whether he did so or not is not clear, but his next recollection is of having succeeded in reaching another heaven, where he again met the friends who had preceded him. This new abode consisted of a series of dim underground vaults, and through these A— wandered disconsolately, seeking a lady with whom he had once been in love. He finally came across her, but to his disappointment found that she had become black and wore native male clothing. Her features also had altered. He was repelled, in spite of his feeling that he should remain loyal to her. He began to consult with his friends upon some method of escape from their dreary abode. During these deliberations, Dr. Crippen appeared on a horse, bearing upon the saddle behind him a beautiful girl, with whom he galloped away to some place where he could not be followed. He did this a number of times, one of his captives being A—'s lady-love, now returned to her old self. This excited the intense indignation of A— and his friends.

To reach yet another heaven, A— discovered that he must submit himself to a series of tortures at the hands of various vague and wicked people. These tortures included the liberation from the skies of heavy weights upon his head, and the being tied down upon a table so tightly that the circulation was impeded. A number of evil people came and went in the execution of these and other tortures. A— bore them bravely, and was highly commended for doing so by various elderly relatives who seemed to be in the background. When he had lain for some time strapped upon the table, a beautiful woman came and released him. She appeared to be Eve, and A— consequently inferred that he must be Adam. Another supernatural being now came on the scene, and intimated to A— that the world had come to an end, and that there was a new beginning of things. This grave and saintly person proceeded to give A— a choice of how he was to pass his existence. A— appears to have chosen a somewhat lascivious mode of life, which he afterwards regretted and was ashamed of, for, though it was granted to him, it turned to dust and ashes.

The next event which emerges was A—'s existence on a wonderful vessel, a sort of airship, which lay poised above the world, which had come to an end. On the vessel were a number of celebrated persons, with whom A— met in conclave, deciding how to start a new world. A— was held in high esteem by these eminent persons, but he seems to have been conscious of being tongue-tied and of little assistance in

the discussion. [This sense of mental limitation and of inability to carry on a conversation was present continually during my mental aberration. It caused me distress, and disinclination for the society of my fellows.]

The next thing remembered was that the huge ship set out for a voyage through the universe, travelling over land and sea, as well as under the ocean. At first the voyage excited interest, as great tropical forests and mountains were skimmed over and various wild animals seen. At one point on the journey there was found seated by the road side the lady with whom A— had been in love, and whom in a vague way he had been searching for in his previous adventures. She was waiting for him there, with a crimson cloak around her. The airship stopped, and a happy meeting took place. The meeting was too brief, however, for A— had to return to the airship, which sped on, leaving the lady by the wayside. The airship was on some sort of circular tour, for in due course of time it again passed the lady, who was this time multiplied to two or more ladies, each exactly alike and clad in crimson cloaks. A— again met her (or them) with joy, but this was short-lived, because of the interference of a General Officer who appeared on the scene. [A military officer had been A—'s rival in real life.] The voyage of the strange vessel continued once more, but it came round time and again to the place where A—'s lady-love was seated. She increased in numbers each time, until there finally seemed to be waiting for him an endless row of ladies in crimson cloaks. This did not appear to A— to be humorous but rather the reverse. Another episode A— recollects to have occurred during a halt of the vessel. A— with ease and boldness dived to the bottom of a deep pond and secured the roots of the lotus lily, which had never before been secured by mortal man. These he presented to a Jewish girl of very great beauty, but the interview seems to have come to an untimely end.

[The period extending from the time I left the garden, which was situated on a disc, up to the point described above, appears to have been that spent on the railway journey from the Sanatorium in the hills to the Asylum in the coast town, a journey of eighteen hours. My idea of being tied down to a table may have had a basis of truth, as it is likely that I was unmanageable and required to be fettered. The notion of being tortured by having weights dropped on to my head possibly arose from the bumps of the train in passing over points, though my untrained attendants may have administered me some cuffs. The airship would be the train, and the occurrences on the journey the distortions of what was seen from the windows. What is described below took place at the coast town asylum.]

A— next found himself in an underground cellar, where he was in bed, with a series of military warders looking after him. He was detained there by the power of the "General," who kept him prisoner. Leading into the cellar were two wide dark passages; along these at intervals there thundered down towards him express trains, and A— was expecting, though with no great concern, to be run over by them. Such, however, was A—'s virtue or other power, that the trains invariably drew up hissing at the threshold of the cellar. One episode A— remembers was throwing his pillow at the lighted lamp and sending it

crashing over. [I am not sure whether this is only imaginary or not, and why I should have done it. Most occurrences of the kind, which seem to have been purely mischievous, were done under the idea that they were meritorious. A railway line passed close to the asylum, which gave a basis for the delusions about railway engines.]

Next, A— seems to have been removed to a large room, the walls of which appeared to have been covered with trophies. One of his ideas here was that the roof threatened to fall in, but A—, by drawing his arm across as he lay in bed, and pointing from one corner to another diagonally across the roof, was able by his inherent power to keep it up; constantly the roof threatened to fall in, but as constantly A— was on the alert, and by executing this manœuvre managed to keep it up. Two of the trophies on the walls, one at each end, he thought to be the tusks of elephants which had belonged to his grandfather [who had been of Jewish nationality and a magnate in India, owning some elephants there.]

These tusks gradually changed into the heads of two old Jewesses. One of these became very friendly with A—, and constantly spoke to him and gave him advice. By her help he managed to keep the roof a fixture, and the danger of its fall became less and less. The other old Jewess was an antagonist; she and her party somehow represented Cain, while A— seemed to be Abel.

A— constantly imagined himself to be pre-eminent, and among his other gifts felt his capacity for whistling to be distinguished by its power and musical quality. He began to hear the far-off whistle uttered by some maiden across the world. He whistled in reply, and she heard it. He was then thrilled by a love affair conducted by means of whistling. Finally, A— and the whistling girl drew together across the world and met. But here again intervention came, this time in the form of Cain and his old Jewish mother, and this love affair also ended abruptly.

[I was then conducted from the large chamber across a garden to a small room on the ground floor with a verandah opening out of it. I found myself able to walk over to my new abode. Up to this, I had lain in bed, and not been on my legs at all. I had apparently accepted this as a matter of course, not finding any necessity to account to myself for my lack of activity. Before leaving the large chamber, I had come to realise that the "trophies" on the walls were illusions, for they were merely the cornice of the ceiling with various stains upon it. This small room was the last of my abodes until I regained my reason. Though still full of delusions, my mind became more active, and I remembered interviewing various old acquaintances who came to see me. My delusions gradually tended to concern themselves more with what went on around me, and my mind was less occupied with figments of the imagination evolved introspectively as I lay stuporose upon my bed.]

One hallucination, and a pleasant one, was that of two rival choirs of angels singing divinely in the heavens. One choir was in the Christian heaven, and the other in the Aryan one. The two choirs, A— thought, sang in rivalry, each trying to allure him and to outdo the other.

A— was fond of watching the clouds sailing over the sky. To him

they represented real forms corresponding to various objects on the earth. Certain of these he got to know, one especially, which was a huge bear. He was usually able to distort any clouds he might see into the fancied presence there of this animal.

A— used to see daily various native patients of the institution who were employed to work in the garden. Some of these were old and withered, and his imagination identified them with the "hooluk" monkeys which A— had, when sane, often heard wandering in troops through the mountain forests, giving voice together in choruses of loud and not unmusical cries. The old natives squatting about in the dust he thought were hooluks, and he envied them their freedom and ability to spring up into the cool shade and swing themselves away across the forest. He envied also their exemption from the necessity of washing and personal toilet. [I was periodically lathered and shaved with a safety razor by a mixture of persuasion and force. I had also to undergo other necessary toilet operations, and felt them a burden. So I longed to become a hooluk monkey, as others had apparently grown to be in their old age, and to be able to grub about unclothed, untutored, and unwashed. Later, however, as I improved, I began to be more appreciative of cleanliness and tidiness. I remember that when a previous colleague was announced as a visitor, I wished to get dressed properly to receive him. I also became more anxious to have baths.]

To look after him, A— had four European attendants, who were, probably, soldiers from a regiment stationed in the same locality. One was quite a young fellow, who tried to be kind, but whom A— disliked for some reason. The second, was a Cockney, to whom A— had a cordial aversion, because the man was of a waggish turn, and had one or two nicknames for A— which appeared to him derogatory and indecent. They offended his dignity, and he resented the indecency. The third was an older man, whom A— got to dislike and be rather afraid of, as he was a powerful man, and used to retaliate for occasional assaults by hitting back pretty hard. The fourth attendant was one of the few people for whom A— seemed to entertain friendly feelings. Both the last-mentioned attendants A— imagined to be former friends of his, and he was at times somewhat put aback by the change in appearance that these friends had undergone, and at their inappropriate remarks when he referred to their former experiences together. The Cockney attendant, A— challenged to a fight, and they had a few rounds together. [When sane, I was by no means pugnacious, not being powerful in build nor constitutionally bold. I was surprised to find myself become so bold and ready to attack, and to bear deprivation and pain. These feelings of boldness and courage afforded me pride and pleasure.]

There were some other European inmates of the institution to be seen by day in adjacent verandahs of the building. Where their facial appearance at all permitted of it, A— imagined them to be former acquaintances of his, or celebrated persons. One he considered was Napoleon, another to be Lord Rosebery. There seem to have been two or three Napoleons, who appear to have multiplied in the same fashion as the lady of the scarlet cloak. A sense of fun, absent up to this, seems now to have returned, for A— was tickled by seeing the two

Napoleons, exactly alike pacing down the verandah, one closely following the other. Other comical incidents, which A— chuckled over, were the meetings of Napoleon and Lord Rosebery, who had frequent altercations on the subject of Rosebery's biography, "Napoleon: The Last Phase."

The birds that came about the garden seemed to A— to have a sort of human personality. He had an idea that each bird had its human counterpart or twin, and that certain persons were able to transfer themselves to their bird counterparts. The numerous crows that were about the place he imagined to be evil and mischievous spirits. One of them he identified as an old lady he had known, and was amused by her transformation into a mischievous crow, though he had been fond of her.

The groups of native patients who were led about the place seem to have puzzled him. On one occasion A— thought that a native who passed him whispered, with a meaning look, "I am Napier of Magdala." [This is curious, as this soldier was one of whom I had only the slightest knowledge, as one of the heroes of a past generation.] This seemed to strengthen the idea that A— was inclined to hold that there was a change of colour as well as of body after death.

On another occasion A— seemed to be reflecting upon his imagined ancestors. One of these, a celebrated warrior, suddenly appeared before him and shook hands. This red-haired giant seemed to A— to be very embarrassed, and to disappear as suddenly as he arrived. [I do not think that this incident arose out of any real one, but think that it was purely imaginary.] A— often thought he heard the Founder of the Christian religion calling from afar with a voice of surpassing power and sweetness.

A— began to weary of his imprisonment in the small room. He at times thought himself to be Daniel in the lions' den, though he did not appear to think it necessary to account for the absence of the lions. He began to try and puzzle out where he really was, and the reason for it. His thoughts began to get more lucid, and he appears to have been allowed more freedom in the garden. Suddenly, when walking there, the explanation dawned—he had been off his head and was in the asylum at R—, a place he had occasionally visited before his insanity. After this, his delusions dropped away, and he was shortly after discharged and sent to England. He suffered greatly from depression, and was acutely neurasthenic for the next three years, passing through a period of great mental distress. This seemed due to the fact that, though sane, his full faculties only gradually returned. He was incapable of sustained thought, and had to give up the practice of his profession. Memory was very defective, and his natural love for relatives and friends seemed to have forsaken him. Life was indeed a burden, but at the end of three years he rapidly mended and got back his interest in life. He is now fully recovered, and serving as a regimental M.O. at the Front in France.

My period of insanity may be described as a not unhappy time, though there were interludes of weariness and melancholy. Delusions of grandeur were constantly present, when I imagined myself as an exceptionally virtuous and gifted man, who was being persecuted for

these qualities by my fellow-men. The hostile attitude of my fellows, however, caused no fear or unhappiness, as I felt fortitude in opposing them and imagined myself as acting a praiseworthy part. I considered myself highly attractive to the other sex, and an erotic basis appears to have underlain a good many of my imaginings. Hallucinations of beautiful music, as detailed above, gave great pleasure. Certain delusions about the happenings around me were comical and quaint, and afforded interest and amusement. As my delusions dropped away, I lost some of them with conscious regret, for they had furnished me with pleasure and entertainment, and there seemed to be nothing to take their place.

A Hypothesis concerning some Manifestations of Insanity.

It is probable that consideration of the vastly long history of the human race and of its evolution from the stage governed chiefly by instinct, as one of the lower animals, onwards through the stages of primæval and savage man, to the complex civilisation of later ages, will assist in elucidating many of the manifestations of insanity.

Though man as a reasoning animal is of great antiquity, the anthropoid and preceding stages from which he emerged are immensely longer. When in insanity the highest mental faculties become confused or lost it is not unreasonable to suppose that there is revealed much of the mentality of primæval man and the instinctive impulses of the lower animals. Just as our bodies are evolved from the lower forms of life, and our erect forms and trained members are adaptations of the bodies of our four-footed progenitors, so it cannot but be that our minds have a similar derivation from their minds. Our civilised ideas are thus the superstructure upon a firm foundation of primæval mentality, which again rests upon the instinct that guides all animal life.

From a purely theoretical standpoint, such a case as one of progressive dementia might be considered to retrograde gradually through the stages of primitive man and of the animal back to a vegetative stage with an automatic existence dependent on reflex functions. Too strict a comparison of the insanity with savage man is, however, fallacious, as savages are not subject to hallucinations. Also, apart from dementia, the alteration of the higher mental faculties is a derangement rather than a loss, the manifestations of the primitive mind and of the animal one in the insane being partially controlled and obscured by the available remainder of the civilised faculties.

In illustration of the opening argument, three prevalent attributes of the insane may be considered. These are their superstition and belief in magic, their hostility and violence, and their erotic tendencies.

Magic, or the perverted applications of physical forces, are familiar explanations of the insane to account for their own unpleasant sensations, or for various happenings around them. By the savage, magic is called in as an explanation where effect is not preceded by obvious cause. By the insane, not even this degree of reasoning is required. In my own case, magical and supernatural happenings were accepted without question to account for whatever required explanation in my surroundings, although, before the insanity, I was the least superstitious

of men, and, indeed, almost a sceptic as regards religious belief. The mind of the child sheds some light upon early mentality, and it is notoriously prone to superstitious terrors, and to "make-believe" in its play.

The general violence of the insane, and what is part of it, their fearlessness, may be considered a manifestation of the more fundamental mentality of the animal. The life of the lower animals is one of constant physical strife with other species or with their own. They either prey upon others or are themselves preyed upon, or, within the same species, contend for the possession of food, mates, or resting-places. Thus the life of most animals is one of constant watchfulness against attack and of escape from sudden danger. Strain of such a nature would be unendurable were the nervousness of animals comparable to that of men under such trials. It is unlikely, therefore, that the sensation of fear or of pain among animals is more than a dull one compared with that of man, though they prudently flee at the least suspicion of danger. Most animals, though fearful of hereditary enemies, will freely engage in a trial of strength with their own kind.

With these facts in mind, may it not be suggested that the angry attitude of so many of the insane is a reversion to the primitive state of mind, when a possible antagonist is suspected in all who approach? There is, no doubt, another cause also for the combativeness of the insane. Civilised life is largely one of repression. While feelings of pleasure and friendship are allowed to have an outlet, those of anger and aversion require our constant self-restraint. When the check imposed by our reason is loosened, old pent-up animosities find expression. When an insane person exhibits hostility to any individual about him, he has often imagined him to be a former enemy or even a friend. In the latter case, old feelings of annoyance, such as may be caused even by friends, crushed down at some previous time, arise once more to the surface. The kindnesses, on the other hand, done by his friend would have found at the time their natural response in the expressed gratitude of the recipient. In this way may be explained the aversion to relatives with whom an insane person may previously have been on good terms.

By minds in this suspicious and superstitious state, compounded of the traits of brute and savage and civilised man, the restraint and the personal attentions that are necessary are all misinterpreted and objected to. The interference with liberty is resented by all the components of the mentality, civilised or other. Forcible feeding is looked upon as a personal violence, the act of enemies or demons, since its purpose is not understood. Unpleasant medicines are refused, just as the feeding of the animals is governed by their palates, the human remnant of reason regarding the offer of the unpleasant medicine as an endeavour to administer poison.

The third common manifestation of insane mentality chosen to illustrate the thesis of its recrudescence of primitive mentality is the erotic one. This is so important as to have given rise to the theory of psycho-analysis, in which the sexual feelings are considered to be the basis of the insane state. But, surely, sexuality holds in the minds of the insane no more than a position analogous to that held by hostility.

The checks which civilisation imposes upon the sexual passions, both in their entertainment and indulgence, are strictly comparable to those of the angry passions. What was said of the violence of the insane person applies largely to his erotic tendencies. With the civilised checks upon sexual thoughts gone, these repressed tendencies become manifest. His surroundings are imagined or perverted into being such that he may properly indulge these passions, because the people about him, perhaps regardless of age or sex, are readily metamorphosed into former lovers.

The lack of a sense of shame and decency is merely the loss of the most superficial of civilised feelings, and one that is largely a matter of convention among the different races of mankind.

The vague but ready acceptance of magic by the insane, dealt with on a previous page, is associated with a looseness in the recognition of the identity of form. Exactness of likeness is not required for accepting any stranger as an old friend, and, indeed, human acquaintances may be recognised in animals and birds. Such vagueness of visual recognition is common among the lower animals, where a dog will bring up a family of kittens substituted for her own, or a hen rear a brood of ducklings. The make-believe of children will readily accept such changes of shape, and an implicit belief be reposed upon the fairy-story accounts of such transformations.

Yet another characteristic of the insane, which may be described as an ancient heritage, is the love and appreciation of music. Creatures so far from our line of evolution and relatively so low as the birds are, curiously enough, most akin to man in the love of song, and this attribute may even be fitly ascribed to certain families of insects. It is not matter for surprise, therefore, that this ancient faculty persists even in far-gone insanity.

There may finally be dealt with one or two traits which are not here brought in as illustrating the primitive mentality of the insane, but because my own experience may shed some light upon them. The unsociability of the insane and disinclination for the society of others is largely due to their self-absorption. The strange world into which they have penetrated puzzles and disturbs them, and the thread of their old connections and interests are severed. The insane, therefore, are engaged either in a constant endeavour to explain themselves to themselves, or are in a world of happenings and imaginings all their own. This self-absorption necessarily crowds out an interest in others.

A second characteristic is the suicidal tendency that is so common. In my own case, the only time I thought of suicide was apparently early in my insanity, when I imagined myself alone in a garden from which I could not escape and was melancholy. I imagined I was dead, and that the only escape from the surroundings with which I was so out of harmony was by undergoing a second death. It is possible that the deliberate courting of death by other melancholics may, in some cases, be due to a similar belief on their part, namely, that they have gone through the portal of death and have entered into a world to which they do not belong. They naturally seek, therefore, an exit by the door through which they think they have entered, in the hope

of reaching a harmony between themselves and their surroundings, the conscious lack of which is the prevailing trouble of the insane.

A Case of Pellagra in Central Asylum. By WILLIAM F. SAMUELS, Licentiate in Medicine and Surgery, Dublin, Medical Superintendent, Central Lunatic Asylum, Tanjong Rambutan, Federated Malay States.

FOR some time past now cases of pellagra have been reported from different parts of the world. I attach notes of a case which I believe was pellagra which occurred in the F.M.S. Asylum at Tanjong Rambutan, F.M.S.

N.T.S., Chinese. Was transferred from Kuala Lumpur on January 26th, 1912. He had been admitted there on January 9th, 1912. There is no mention of any skin affection at the time of his admission, but some months after I noticed pigmentation of the dorsum of his feet, front of his ankles, and the backs of his hands. Little notice was paid to it, though the pigmentation persisted.

The next entry as to the state of his skin was in December, 1913, when he was admitted to No. 1 (Infirmiry Ward) with fever. It was then noted that there were "small ulcers on his hands and legs." These corresponded to the area already noted as having been pigmented. They were superficial and clean, and rapidly healed, leaving the pigmentation rather more marked and the skin somewhat thickened and wrinkled. It now dawned upon me that this might possibly be a case of pellagra, but nothing further was noticed till the end of August, 1914, when he developed a marked erythema at the back of both hands and wrists. The skin exfoliated, and the patches then rapidly healed, leaving pigmented areas as before.

In October the same condition was again noted in backs of the hands, wrists, and extensor aspect of the forearm. A few days later the dorsum of feet and front of ankles were noticed to be in the same condition; and shortly after the same appearance was noted on the side of nose. He now developed diarrhœa, but no blood or mucus was passed. The skin exfoliated, and a red raw surface was left "like a burn of the third degree." The lips now showed much the same condition, while later the tongue became denuded of epithelium, and small superficial patches of ulceration appeared on the palate. His appetite, which had previously been voracious, now failed. But even before the failure of the appetite, when he ate quite enough for two men and craved for more, he never was anything but miserably thin. The skin affection gradually spread till it reached the elbows and knees, and now, for the first time, showed any tendency to attack the flexor aspect. Up to this the trouble had been strictly confined to the extensor aspect. From this on he gradually went down hill, and died, on November 18th, 1914, of hepatic pneumonia.

Mentally, he was a melancholic, but was all through extremely peevish. He was continually complaining of ill-treatment, which, on investigation, proved to be groundless. He complained that he was

brought here under false pretences, being told he was to be made a king on arrival; also that "they" would not let him sleep, and cut him with axes. He never gave an explanation as to who "they" were. Eventually he ceased to speak of these persecutors, and sank deeper and deeper into a condition of melancholic stupor, and was with difficulty roused. It is unfortunate that no careful notes were taken of the earlier attack, but the possibility of its being pellagra did not dawn on me until the end of what was apparently the second, or perhaps even the third attack, as the pigmentation was noted before his first attack here.

There are many points in favour of pellagra in this case. The repeated attacks leaving a dry wrinkled pigmented condition of skin behind. The distribution of the skin affection, starting as an erythema on the back of the hands and dorsum of feet, and its limitation to the extensor aspects of the limbs until near the end; the patch appearing at the side of the nose; the "bald tongue" and involvement of the palate; the voracious appetite, while the patient all the time remained thin; the attacks of diarrhoea; the peevishness and continual complaining, together with the gradually and steadily deepening melancholia. These symptoms look extremely like those of a case of pellagra, and, while I confess I have never seen one and only go on what I have read, and am open to correction, I cannot see what else it could be. I believe it to be the first case of pellagra described in the Federated Malay States.

I have to thank Mr. G. Abraham, Assistant-Surgeon, Central Asylum, for the care with which he noted the last attack.

Occasional Notes.

The College of Nursing, Ltd., and the State Registration of Nurses.

EARLY in 1916 an Association was formed, consisting largely of influential laymen and others interested in hospital nursing, for the purpose of standardising the education of nurses and securing their State registration. Foremost amongst the pioneers of the movement we may mention the names of the Hon. Arthur Stanley, M.P. (now Sir Arthur Stanley, Gr.C.B.E.), well known for his eminent services in connection with the organisation of volunteer nurses for war purposes, and Sir E. Cooper Perry, M.D., Superintendent of Guy's Hospital, with Sir Henry Burdett, K.C.B., K.C.V.O., (Editor of *The Hospital*), Miss Swift, R.R.C., Matron-in-Chief of the Volunteer Nursing Service, and a number of matrons of general hospitals to which

training schools are attached. As a result a body called *The College of Nursing* was formed, and this was incorporated as a limited company, under the Companies Acts, 1908 and 1913, on March 27th, 1916. Among its objects were set out the promotion of (A) the better education and training of nurses, and (B) of the uniformity of curriculum; (C) the recognition of approved nursing schools; (D) the adoption, if thought fit, of the results of examinations held by approved nursing schools as sufficient evidence of efficiency; (E) the granting of certificates of proficiency to those who have passed above, and to persons who may pass prescribed examinations after training; (F) the granting of certificates of proficiency in *any special branch* of either medical or surgical nursing; (G) the institution and conduct of examinations of persons desirous of obtaining certificates of proficiency, or of training and proficiency, in nursing; . . . and (I) the making and maintenance of a Register of persons to whom such certificates of proficiency, etc., have been granted. Our space does not permit of further quotation, but when we add that the statement of objects uses all the letters of the alphabet (save Z) for successive paragraphs, our readers will see that the aims of the College are fairly comprehensive.

This scheme having been brought under the notice of the Medico-Psychological Association Education Committee, the Council approved of the formation of a special committee to watch events likely to involve the position and interests of mental nurses, and deal with any questions which might affect our Association. This special committee (of which Dr. Shuttleworth has acted as Chairman, and Dr. Porter Phillips as Secretary) has held meetings from time to time as occasion has seemed to require, and, having opened communications with the College of Nursing, it was arranged in October 1916 that a small deputation of its members should be received by the Chairman and the Hon. Secretary of that body. It was pointed out by successive speakers that the Medico-Psychological Association had elaborated as long ago as 1890 a scheme for the systematic training, examination, and certification of asylum nurses (male and female), and that upwards of 12,000 mental nurses so qualified were now on the Association's Register. The examinations (which were both oral, practical, and in writing) had from the first been conducted on a uniform standard both by local and central examiners; the course of instruction had

originally extended over two years (after probation); since 1910 the period of training had been extended to three, consisting of scientific and practical courses of lectures, with clinical demonstrations, and (in addition to class examinations) a Preliminary and a Final Examination. It was suggested that as the College of Nursing provided, in the Bill which they had drafted, for the registration of *mental* nurses in a "supplementary register" attached to the general register of nurses, the Council of the College promoting such a Bill would be in a better position to deal with mental nurses were some members conversant with asylum training added to their numbers. This point seemed to appeal to Sir Arthur Stanley, but it has since been urged on behalf of the College, which is now seeking amalgamation with the Royal British Nurses' Association and a Charter conferring the title of "The Royal British College of Nursing," that it would suffice were such members to be placed on the Provisional Council formed under the Act. It seems, however, to us that the Council of a College which puts forward a claim to the supervision of all branches of the nursing profession is hardly in a position to legislate for the large and important section of *asylum-trained* nurses unless reinforced by expert members practically acquainted with the special circumstances of this class.

Space does not permit a criticism of the two competing Bills on the State Registration of Nurses which have been prepared by the College of Nursing and the Central Committee for the State Registration of Nurses respectively. When the time for action arrives the Medico-Psychological Association (in conjunction with the Asylum Workers' Association, which has been loyally co-operating in this matter) will exercise the not inconsiderable parliamentary influence they can reckon on to secure equitable treatment for mental nurses both male and female.

Conduct and Insanity.

Tantaene animis coelestibus irae?

DR. MERCIER has a grievance against the Association. Owing to obstinacy, or obtuseness, or muddle-headedness on the part of its leading members and writers, so he leaves us to

infer, they have ignored, if they have not actually opposed, his views as to the essential nature of insanity; views which have been eagerly accepted by Lawyers, Physicians, Royal Commissions, the Home Secretary, and Parliament, practically by everyone in fact "outside the membership of the Association." With this exception he has "never found one that did not tumble to them instantly."

The Association *versus* Dr. Mercier and everyone outside its ranks. *Athanasius contra mundum*.

But is it so? We venture to differ from Dr. Mercier on this point. Because other writers do not employ exactly the same phraseology as he does with respect to the true nature of insanity, it does not follow that they are in complete disagreement with him as regards the facts relating to this question, that they may not even be in substantial agreement with him on essential points. Shorn of dialectics Dr. Mercier's position seems to be this, that insanity is mainly disorder of conduct, although in part—as he rather grudgingly admits—disorder of mind, and of brain function. What probably the majority of alienists would regard as a more accurate description would be that insanity is disorder of mind, due to disorder of brain function, and revealing itself by disorder of conduct. And these three ingredients must be considered together in forming a correct conception of insanity. Dr. Mercier apparently attributes to his (supposed) opponents the view that madness is "disorder of mind alone, or an equivalent to unsoundness of mind." Does anyone really maintain this standpoint? Dr. Mercier keeps his gaze concentrated on disorder of conduct as being the real essence of insanity, and for anyone to urge that disorder of mind may be at least an equally important element arouses his ire forthwith, and he immediately proceeds to demolish such a notion with all the rhetorical ammunition at his disposal (no mean amount), and to denounce the upholders of it with bell, book, and candle.

In argument, and particularly in psychological argument, a great deal turns on the exact meaning of terms. Now, there are two terms employed by Dr. Mercier which, unless they are accurately defined, may involve an ambiguity of meaning. These are "madness" and "primary." If by madness he means certifiable insanity—and it is pretty clear that that is the meaning in which he uses this term—then probably everybody,

including even the most benighted member of the Association, will agree with him that conduct is a highly important item, we will grant him *the* all-important item of this condition for us to take into consideration. But, if his contention is—and this is apparently the case—that unsoundness of mind is a comparatively unimportant ingredient in even certifiable insanity, then, probably no one will agree with him. As regards the term “primary,” it may have a chronological meaning, *i. e.* first in order of occurrence; or it may mean first in order of importance, two totally different significations. If used in the latter sense—the sense in which Dr. Mercier apparently uses it—and *as a criterion of certifiable insanity*, but only under these conditions, then, again, few will disagree with that opinion. But if used in the sense of priority in order of sequence, and of first importance as regards causation, then it is almost inevitable that the large majority of students of insanity will be found to dissent from that view. Conduct, Dr. Mercier has himself defined as “action in pursuit of ends.” He says also, “an act is movement . . . done with a purpose” (*Conduct and its Disorders*, Introduction, pp. xix, xxi). And again, “Conduct is founded . . . upon coherent belief; upon assured conviction,” “Knowledge is of value only as a basis for action” (*Psychology, Normal and Morbid*, p. 253). Now, end, purpose, belief, knowledge, conviction, these all imply mental states; all precede and determine conduct; they are, in fact, its cause. No purposive action, no “conduct” can occur without some antecedent mental condition which prompts it. The mental condition must, therefore, be regarded as at least of equal importance with the acts, the conduct, which are the outcome of it. This is just the point where Dr. Mercier appears to join issue with those who differ from him. He seems reluctant to assign anything more than an insignificant *rôle* to the mental conditions underlying and leading to insane acts, which conditions in the eyes of most alienists are just as much an essential part of the insanity as the acts themselves. Conduct is a symptom of a certain state of mentality. Disorder of conduct is a symptom of disorder of mind, and both conjointly constitute insanity. They are inseparably linked together, and the result cannot occur without the cause.

To take a concrete instance, which is of not uncommon occurrence in human experience. A man has acquired the

delusion that another individual has sinister intentions with respect to himself. He thinks this person is trying to injure him in some way by, let us say, robbing him, drugging him, or killing him outright. He may hold this delusion for months, even years, and never disclose it by any overt act. Suddenly, without any apparent reason, he attacks the object of his suspicions and half murders him. If we accept Dr. Mercier's contention, then we must regard this man as "sane" (although no doubt of unsound mind) up to the moment when he makes the assault on his supposed enemy. There was no disorder of conduct, therefore the man was not insane. When he delivers his first blow, in that instant, but not before, he becomes insane. Surely this is not very far from a *reductio ad absurdum*. If Dr. Mercier thinks thus, we are of opinion that he will have to bring much stronger arguments than he has yet adduced to establish his position. We must agree to differ from him.

But is there really any serious difference between the view that Dr. Mercier holds and that held by alienists generally? He insists that disorder of conduct is of primary consequence in insanity, but admits that disorder of mind is usually present. Others regard disorder of mind as the primary condition, primary both in order of sequence and in importance. The difference boils down to a mere matter of degree; to which of the two things greater weight is to be attached. May we dare to suggest that the whole controversy is more or less of the nature of a "storm in a teacup"? And if the Association has appeared to ignore Dr. Mercier's views on this matter, it has not been from any want of respect for him as a writer or teacher, but simply because they failed to see that any apparent disagreement on their part from these views was of any vital consequence, nor of such magnitude or importance as that with which he has sought to invest it.

Dr. Mercier has been, and is still, a distinguished member of the Association. He has had conferred on him the highest honour which is in its power to bestow, by being elected to fill the presidential chair. His works are well known to most of us, and read with pleasure and appreciation. On his appearance, unexpected by but few, at the Annual Meeting in July, he received a warm and genuine welcome from all the members present. Under such circumstances has he nothing but hard

words to fling at it? We believe he still retains his old affection for the Association—perhaps, *hinc illae lachrymae*. We prefer to regard his upbraidings and reproaches as in the nature of a lover's quarrel, and

Amantium irae amoris integratio est.

That is a consummation for which in the present instance we devoutly wish.

Part II.—Reviews.

Manual of Psychiatry. By J. ROGUES DE FURSAC, M.D., Paris, and A. J. ROSANOFF, M.D., New York. Fourth edition. Revised and Enlarged. Pp. xi + 504. London: Chapman & Hall, 1916. Price 10s. 6d. net.

The original edition was an American translation of a French work with but a few alterations. The fourth edition is now published, and owing to the war its preparation has been placed entirely in the hands of Dr. Rosanoff. It contains a good deal of new matter, and the book is now assuming the character of an American production. The dominating influence of Kræpelin's teaching is conspicuous, but other authorities are mentioned without, however, much attention to British authors.

Part I is devoted to General Psychiatry and begins with ætiology. When considering the factor of heredity we are glad to note a succinct account of the Mendelian theory. The statistics, as regards neuropathic inheritance, alcoholism, syphilis, and other causes of insanity, are given from admissions to the New York State Hospitals. Psychological manifestations are only discussed in so far as they belong to abnormal mental states, and embrace three chapters on symptomatology. Hallucinations, co-existing with sound judgment, the author refers to as "conscious hallucinations," which surely is an ambiguous term?

Four chapters deal with the Practice of Psychiatry, in which case-taking, methods of examination, special diagnostic procedures, general therapeutic indications and prognosis receive attention. Lumbar puncture and the Wassermann reaction and other chemical tests are carefully described, as are also the Binet Simon and Association tests.

The author emphasises the need for after-care of discharged patients. But little is said of psycho-analysis, which is described as a difficult, time-robbing task. To the question whether insanity is increasing in America, Dr. Rosanoff replies in the negative. He gives prominence to the subject of the prevention of insanity. He regards alcoholism as equivalent to neuropathic taint, and prostitution as largely associated with feeble-mindedness. He arrives at the conclusion that three-quarters

of insanity is due to bad heredity, and that segregation is still the best course to pursue.

Part II is described as Special Psychiatry, under which the separate mental disorders are considered. The classification of the clinical groups is as follows: (i) Constitutional, (ii) Alcoholic, (iii) Syphilitic, (iv) Traumatic, (v) Miscellaneous.

The article on Dementia Precox is largely re-written and contains Adolf Meyer's views. In the account given Dementia Paranoides seems to be encroaching more and more on Paranoia, and Magnan's Delire Chronique is described under the former category, although still regarded by the French as a separate entity. The author gives a full description of Psychopaths. The chapter on General Paresis is quite up to date. The book contains but two illustrations, and these occur in the chapter on Cerebral Arteriosclerosis to explain the blood supply of the cortex.

We heartily commend the book to our readers, who will however, not fail to note that it is scarcely as full on the pathological side as it is in its clinical aspects. It contains a great deal of useful information regarding insanity in America, and will be read with much interest by psychiatrists in this country.

Psychological Medicine: A Manual of Mental Diseases for Practitioners and Students. Third edition. By MAURICE CRAIG, M.A., M.D. Cantab., F.R.C.P.Lond. Pp. xii + 484. London: J. & A. Churchill, 1917. Price 15s. net.

The third edition of Dr. Craig's work has recently made its appearance. It continues to be a popular book for both students and practitioners, and it is rightly regarded as one of the best modern textbooks in this country.

The author's views are well known, and he has always striven to bring Psychiatry into closer line with General Medicine, and has kept abreast of all progressive tendencies in this direction.

The chapter on normal psychology remains somewhat brief, and the writer no doubt considers that further reading on the subject should be derived from other sources. We notice, however, that there is now some reference to instincts which will be appreciated. The anatomy of the cerebral cortex is not considered and must be sought elsewhere, as well as any discussion on the mechanism of the brain in mental processes.

The chapter on symptomatology contains a good resumé of abnormal psychology, as well as a description of the bodily accompaniments of mental disease. The individual psychoses are fully described, and their classification remains as in former editions.

In the chapter on Idiocy and Imbecility there is now added the procedure of the Mental Deficiency Act, which will come into more extended operation after the war.

There is a slight reference to anxiety neurosis in the chapter on neurasthenia, but the chief addition to the book is an excellent chapter on psychoneuroses occurring in men exposed to shell-shock and strain of war. Dr. Craig here gives us the benefit of his experience of these

cases which, unhappily, have become so numerous in the present world struggle. The proper treatment of these patients has arrested the attention of the profession and laity alike, and has helped to infuse an active interest in psychological medicine, from which much practical good should ultimately result, especially in regard to the need of fresh legislation for the care of incipient insanity. The author points out that these shell-shock cases, although mainly regarded as functional, yet when seen early sometimes exhibit the physical signs of organic disease. He outlines the symptoms that arise as the consequence of prolonged fatigue, insomnia, emotional stress and concussion, and indicates how these patients are best dealt with from both the psychological and medical standpoints, as well as the special measures that have proved of value after the acute stage has subsided. Apparently psycho-analysis has not proved as useful for these cases as was at first anticipated. The author has given an instructive account of these affections, the diagnosis of which from more pronounced organic disease, and also from simulated disease is a difficulty that is often present.

The chapters on sleeplessness and on the general treatment of the insane are especially worthy of the attention of the practitioner, who will find guidance in the correct use of sedatives and other wise counsel.

The illustrations and coloured plates are beautifully reproduced. They are the same as before, and are inserted in the centre of the book with a separate letterpress. The book has been carefully revised and is more compact than before, although it contains ten additional pages.

An Epitome of Mental Disorders. By E. FRYER BALLARD, M.B., B.S. (Lond.), Capt., R.A.M.C.(T.), Medical Officer in Charge of the Observation and Mental Block, 2nd Eastern General Hospital (T.F.) Brighton. Pp. xv + 206. London: J. & A. Churchill, 1917. Price 6s. net.

The writer's intention has been to provide a concise and practical aid to the diagnosis and treatment of the more common varieties of mental disorder as met with in general practice and asylums. This he has fulfilled with some success from the point of view of the practitioner and assistant medical officer.

A classification adapted from Tanzi is set out at the commencement of the book, and then follows a short chapter on the General Causation and Treatment of Mental Disorders. The language used is somewhat colloquial, and there is no pretence to an exhaustive examination of the subject. Part I is headed Common Types of Insanity. The first chapter deals with states of excitement, and therein mania, dementia precox, acute confusional insanity, general paralysis, delirium tremens, alcoholism, epilepsy, gross brain disease, senile cases, and drug cases are discussed *seriatim* with special regard to differential diagnosis. The succeeding chapters deal in turn in a similar fashion with states of depression, delusional states, states of stupor, and states of mental enfeeblement.

We recognise that this method will appeal to the medical man who is not well versed in the clinical examination of mental cases, but it

hardly enables a student to obtain a proper grasp of the individual psychoses. An attempt to remedy this aspect is afforded by the compilation of an alphabetical list of forms of insanity with cross references to the different scattered pages on which these disorders are discussed.

For confusional insanity can we not dispense with Meynert's synonym *amentia*, as this term has come into general use for mental deficiency in this country?

Part II is concerned with borderline psychoses, shell-shock, combined and atypical psychoses. In his description of hysteria the author has adopted some of the modern current theories and makes free use of the word "censure" in place of the old-fashioned "higher control." By means of a little diagram he seeks to explain neurologically what he conceives to be the mechanism of the production of hysterical episodes. A somewhat complicated diagram is given to illustrate the results of shell-shock, described in a separate chapter, which contains records of some cases under the author's observation. There is a tendency to obliterate the line of distinction between fits of a functional nature and true epilepsy, and the expression, epileptic fits of hysterical origin, is, we think, to be deprecated. In the last chapter the author describes combinations of syndromes and anomalies. It consists largely of a consideration of the original temperament on which a psychosis is grafted and includes also mixed types.

Dr. Ballard, who was sometime Assistant Medical Officer at the Somerset County Asylum, has written a useful little book, in which also is to be found a glossary.

The volume will be specially welcomed by practitioners who have the care of mental patients in our Military Hospitals.

Wit and its Relation to the Unconscious. By Prof. SIGMUND FREUD.
Translated by A. A. BRILL, Ph.B., M.D.

Dr. Brill has stated elsewhere that no one is really qualified to use or to judge Freud's psycho-analytic method unless he has mastered the four books:—*The Interpretation of Dreams*, *Three Contributions to the Sexual Theory*, *The Psychopathology of Everyday Life*, and *Wit and its Relation to the Unconscious*. To those unacquainted with the German language this was impossible, but now, through Dr. Brill's exertion, all these are available to English readers. There has been an abundance of adverse criticism of Freud in English publications, but it must be admitted that this has come in the main from those who in their writings give evidence that they have not studied Freud at first-hand. They appear to have depended for their information on short articles written by followers of Freud. Such articles, not always wise or true, are really condensations of larger works, and even with the best will in the world it is impossible to epitomise faithfully. However, no one will have any valid excuse now, and in future critics will be expected to have at least read the works of the author they criticise.

In the book under consideration the patience and persistence of Freud in the investigation of the psychology of so elusive a subject is remarkable. The book is divided into three parts: analysis of wit,

synthesis of wit, and theories of wit. It is not easy in a short review to quote all the interesting details. This is all the more difficult in the present instance, as, unless examples are given, the description is unintelligible. The book itself is full of examples of wit, some funny, others rather feeble, so that it is somewhat surprising to note that Freud when he first met a certain joke was moved to loud laughter. This suggests the question of idiosyncrasy in regard to wit, a subject not mentioned except in relation to wit among Jews, and upon which Freud's views would be of interest.

A prominent feature of the book is the comparison instituted by the author of "wit and the dream." Freud says that he has been the sole discoverer of the relationships between the two. It follows then that unless the reader is familiar with *Interpretation of Dreams* he will have hard work to follow *Wit*. The processes in wit having a "far-reaching agreement with the processes of dream-work," are "condensation with and without substitutive formation, displacement, representation through absurdity, representation through the opposite, and indirect representation." Though there are resemblances between the dream and wit there are nevertheless certain differences. For example, wit is eminently social, always requiring two people and sometimes three or more people. The following lines may be taken as an epitome of a large part of the book: "No matter how concealed the dream is still a wish, while wit is a developed play. Despite its apparent unreality the dream retains its relation to the great interests of life; it seeks to supply what is lacking through a regressive detour of hallucinations; and it owes its existence solely to the strong need for sleep during the night. Wit, on the other hand, seeks to draw a small amount of pleasure from the free and unencumbered activities of our psychic apparatus, and later to seize this pleasure as an incidental gain. It thus *secondarily* reaches to important functions relative to the outer world. The dream serves preponderately to guard from pain while wit serves to acquire pleasure; in these two aims all our psychic activities meet."

There are interesting chapters which can only be mentioned, *e.g.*, the tendencies of wit, and the motives of wit, and wit as a social process. The question of the relationships between wit, the comic, and humour are discussed in the last chapter, and the author reaches the following conclusion: "It has seemed to us that the pleasure of wit originates from an *economy of expenditure in inhibition*, of the comic from an *economy of expenditure in thought*, and of humour from an *economy of expenditure in feeling*. All three activities of our psychic apparatus derive pleasure from economy. They all strive to bring back from the psychic activity a pleasure which has really been lost in the development of this activity. For the euphoria which we are thus striving to obtain is nothing but the state of a bygone time in which we were wont to defray our psychic work with slight expenditure. It is the state of our childhood in which we did not know the comic, were incapable of wit, and did not need humour to make us happy."

Enough has been written to indicate the nature of the book. Whatever his merits or demerits there can be no doubt that Freud is a thinker of great independence and originality. His best friends have stated that he is not always easy to understand in the original. If this be so

one need not be surprised if in a translation the same defect is apparent. Bearing this in mind Dr. Brill is to be congratulated on the satisfactory completion of a difficult task.

R. H. STEEN.

Physiology and Psychology of Sex. By S. HERBERT, M.D. London: Black, 1917. Pp. 136, 8vo. With 49 illustrations. Price 3s. 6d. net.

For some years past a stream of little books on sex, intended for popular consumption, has been poured out from the press. Yet it is rare indeed to find any that can be viewed with approval. A brief examination usually shows that they are either unscientific, or cranky, or at best, crammed with well-meant but unwise advice. It is, therefore, a great satisfaction to find in Dr. Herbert's book a manual of sex which presents the essential facts in a simple, clear, and scientific manner. The satisfaction is all the greater since here for the first time in a manual of this compass psychology is placed in the same rank with physiology. Morality, save incidentally, is excluded, as the author contemplates a separate volume on the ethics of the sexual life. In manner the book is somewhat bald, restrained, and objective; but in dealing with a subject which has often unpleasantly evoked a very different manner of writing these qualities are commendable. In substance the author presents results which are in accordance with the best recent investigation, and his opinions are temperate and sound, though in regard to a few debated points there will be a legitimate difference of opinion. The book is addressed to "beginners" rather than to a professional audience, but in this field there are still many medical "beginners" who can scarcely fail to find Dr. Herbert's manual illuminating and helpful.

There are seven chapters, of which four are devoted to psychology. After setting forth the general principles of biology, the author deals with the physiology of the germ-cells, copulation, pregnancy, parturition, etc. Turning to psychology, he discusses sex differences and mating, and, finally, the aberrations of sex (auto-erotism, erotic symbolism, sexual inversion) and the sexual norm (the problem of continence and sexual hygiene).

HAVELOCK ELLIS.

The Child and the War. By CECIL LEFSON. London: P. S. King & Son, 1917. Pp. 68. Price 1s. net.

In all the belligerent countries to-day a great increase has occurred in juvenile delinquency. In the present pamphlet the causes and remedies of this state of things, so far as England is concerned, are studied by the Secretary of the Howard Association, who is also a recognised authority on the Probation System.

As regards the facts, the total number of children and young persons (*i.e.*, under 16) charged with punishable offences has increased 34 *per cent.*, and at least 12,500 more children came before the magistrates than in time of peace. The increase was much greater in the second than in the first year of the war. By far the greater proportion

of the increase is in larcenies and felonies. (As the author remarks, "orchard raiding is 'larceny,' and the urchin who steals a penny pie from an itinerant pieman is a 'felon,' if, indeed, he is not a highway robber out and out.") Although the offences are often trivial their real increase is greater than the alleged increase, as street darkness and defective police service favour the offender's escape. More than two-thirds of the offenders worked in groups and gangs, and were, individually, fairly harmless. The offenders are nearly all boys.

In investigating the causes the first place is given to the father's absence; two out of five of the fathers of juvenile delinquents are serving in the Army or Navy. In other cases elder brothers who exerted a wholesome control are also away. It is estimated, indeed, that the great majority of the five million men withdrawn from home life exercised some sort of control over children. Moreover, the father's absence has often led to the mother being over-worked, or slack, or absent in factory employment. In normal times 50 *per cent.* of juvenile offenders are orphans, and the war has placed a vast number of children in the position of orphans, while not supplying them with the mitigating conditions which usually exist in the case of orphans. There is not only lack of discipline in the home, but also in the school. About 1,200 schools have been taken over for hospitals, and in some cases a half-time system has been adopted. The teachers are often women, unable to enforce discipline. Children can do what they like and have much more time on their hands than ever before. Even the demand for child labour has increased delinquency. From 150,000 to 200,000 children have been released from school for work between the ages of 11 and 13. It is precisely at this age-period that the chief increase in delinquency has occurred. High wages and long hours of work for children are in themselves demoralising. Some importance is attached to the war-spirit. The child catches the spirit of craft, guile, and revenge which fills the prevailing war-talk; he desires to become a hero and to emulate his elders; a van in a darkened street becomes a German convoy and the contents legitimate spoils of war. It is impossible to exaggerate the influence of the war on the minds of children. On subnormal children this influence becomes especially serious.

When we turn to the question of remedies, we find that magistrates are fining delinquents, whipping them, sending them to reformatory or industrial schools, or releasing them under the Probation Act. The author criticises the uneven and unreasonable way in which these measures have often been carried out. Thus the Probation Act provides for the restitution of thefts, but ignorant magistrates frequently fail to realise their duties in this matter, and it happens that a child steals £5, is discharged on probation, and proceeds to enjoy the results of his theft without question. The number of Probation Officers is also altogether inadequate, and the author recommends that ministers of religion and suitable women should be appointed. The reformatory schools have all been filled up, often unwisely, children who in normal time would have been well behaved being sent for a long term of years to consort with others of a much worse type, while defective offenders, who most need treatment, are not sent anywhere, not even (through

the ignorance of the Court) to the far too few institutions which are prepared to receive them. It is these offenders who present the most serious problem. Flogging is deprecated; when applied, it should be without delay, and the boy's headmaster should be authorised to administer it.

Punishment, however, by itself is, in any case, no real remedy. The author wishes to develop the suggestion of Mr. Findlay, Professor of Education at Manchester University, for providing wholesome open-air activities for children on the outskirts of cities in camps and settlements, with land, garden, farm, workshop, kitchen, and wash-house. Children's clubs with self-government (on the lines of the Little Commonwealth) are also advocated. Cinemas should have two houses a night, the first house being adapted for children; in Germany children under 17 are forbidden to go to cinemas except such as are specially licensed for them, and in Russia only by permission of school authorities.

These remedies, the author admits, are only palliations, and some are not easy to apply under present conditions. The radical remedy is too obvious to need stating.

HAVELOCK ELLIS.

War-Shock. By M. D. EDER, B.Sc.Lond., M.R.C.S., L.R.C.P.Lond.
London: William Heinemann. Pp. 154.

One of the features of the present war is the interest which has been taken in the functional disorders which by most writers are included under the term shell-shock.

Dr. Eder's book, which deals with 100 consecutive cases, will prove to be a useful contribution. The author prefers the term "war-shock" to "shell-shock," and points out that exactly the same symptoms have occurred after shrapnel wounds, falls, and without previous injury at all, as have followed those produced by high explosives. In many of the cases the description is of a sketchy nature. This has been unavoidable, and it is unfortunate that the exigencies of military-medical service prevented several of the most interesting cases from being fully worked out. Dr. Eder does not believe that hereditary predisposition is a factor of much importance, 70 *per cent.* of his cases were free from hereditary or personal psycho-neurotic antecedents. With regard to treatment he says: "The treatment *par excellence* is hypnotic suggestion," and "91.5 *per cent.* of cases of war-shock were cured by this method and 8.5 *per cent.* improved." In several cases this treatment was assisted by psychological examinations conducted in the manner known as psycho-analysis. War-shock or shell-shock appears to vary from time to time, and different hospitals seem to admit differing cases, and if Dr. Eder had the opportunity of examining a second 100 consecutive cases he might possibly find that things had altered. Still, there is no doubt that he has produced a most interesting study, and everyone whose duty it is to treat such cases should possess this book.

R. H. STEEN.

A History of Penal Methods: Criminals, Witches, Lunatics. By GEORGE IVES, M.A. London: Stanley Paul, 1915. Pp. 409, 8vo. Price 10s. 6d. net.

This interesting work evidently had its origin in a humanitarian impulse. We feel that the author is moved less by a coldly severe scientific spirit than by a warmly human and generous effort to ameliorate the lot of the suffering—a kind of bias of humanity. On this bias, however, it is clear that he has laboriously set himself to study the historical records as impartially as may be, so that the resulting work possesses a value independent of the reader's own particular bias.

As the title indicates, the author seeks to bring out the fact that in the past criminals, witches, and lunatics have been dealt with by what is substantially the same method—the method of instinctive revenge against anti-social acts and manifested by punishments. We are slowly realising that in the case of all these groups, the author argues, punishments regarded as remedial measures are merely effete survivals. He concludes, in agreement with the general modern tendency, that we must aim at the “scientific sorting out of society's failures,” according them individual treatment as demanded by their various and widely different needs; this will prove to be “the greatest measure yet undertaken to ensure the ultimate but certain elimination of crime.” The author holds that a man should not be sent to prison except to be benefited by prison, “in the sense that a patient is benefited by a necessary operation.” He is opposed to all penal retribution, and would only permit the infliction of death in the case of criminals who may be assumed to be hopelessly incurable. For the most part he advocates settlements for criminals, where they will be treated as patients or semi-lunatics. With regard to the abnormal, the author considers, we are as yet “only on the threshold of justice,” though the path of progress is clear.

Such advocacy of practical measures, however, is but lightly touched, and occupies only a small part of the book. The chief interest of the work, and the author's main task, lies in historical research. After an interesting and instructive chapter of considerable length on the penal methods of the Middle Ages, there follows a chapter on witch trials, and then the former treatment of the insane is described. The long chapter on banishment is of peculiar interest, and contains vivid and detailed pictures of the terrible conditions which prevailed in Australia during the transportation period; the realisation that these were in existence only a century ago may well serve as a wholesome corrective of undue national complacency. The next chapters deal with various phases in the evolution of the modern prison system, and are followed by a discussion of the classification of crimes. The author is satisfied with a broad division into two great groups: crimes of circumstance and crimes of impulse. There are, that is to say, the crimes due to environment, crimes into which, it is assumed, most people would fall if subjected to the same pressure, and crimes due to nervous defect or abnormality in the individual. The author believes that, though some offences appear to overlap, “the existence of these two great groups is

as exact and positive as any broad and classifying law ever laid down by science."

The copious foot-note references to the literature constitute a useful feature of the volume. The author has evidently expended care on these, though he has not escaped falling into numerous minor inaccuracies.

HAVELOCK ELLIS.

Part III.—Epitome of Current Literature.

I. Physiological Psychology.

The Laws of Relative Fatigue. (*Psychol. Rev.*, March, 1917.)
Dodge, R.

The problems of fatigue have recently, for well-known reasons, attracted unusual attention. They are, however, ancient problems around which a bewildering and contradictory mass of work and literature has accumulated. The author, who has for many years been working on the subject, here deals (in a Presidential Address to the American Psychological Association last year) with one limited aspect of these problems: the relativity of fatigue. He is more concerned with the scientific than with the practical aspects of the subject, for he considers that the extreme practical importance of fatigue has injured its proper scientific investigation. For this we must know what mental fatigue is, if it exists at all, and how it is conditioned.

If the word fatigue has any scientific propriety in connection with mental life it refers, the author believes, to the metabolic conditions of mental action, and not to any predetermined characteristic of its consequences. He regards it as improbable that any of the mental work decrements commonly treated as mental fatigue are ever simply conditioned by true fatigue processes in nervous tissue, while, conversely, real fatigue may not appear as decrement at all. He invokes the physiological fact that nervous tissue has been found quite resistant to fatigue, while, on the contrary, hyper-excitability is an almost regular phenomenon of extreme mental fatigue. The complete cessation of mental processes cannot mean a correspondingly complete fatigue of nervous tissue. Again, the traditional differentiae of fatigue fail to exclude normal psycho-physical rhythms, of which the most significant is sleep. There is no physiological justification for the belief that sleep is the daily climax of fatigue, and for some people evening is the best time for work. The conditions for sleep are not, however, simple, and include habit, the absence of stimuli, probably wide-spread inhibitions, and possibly gland-products and vasomotor changes. Restriction of activity is more potent than over-exertion. "Lecturers never go to sleep, the audience may." A third argument against the true fatigue character of so-called mental fatigue lies in the means used to induce it. To produce nerve-muscle fatigue the same tissue is successively stimulated in the same manner. In mental fatigue the greater the complexity of the task, the more pronounced the decrement. This is probably due to confusion between paths of discharge and not to fatigue of any one path. It is not

really fatigue, but merely associative rivalry. A fourth reason may be found in the operation of incidental inhibitions, which, when attention is concentrated in one field, produces a pseudo-fatigue effect in other fields.

Putting aside irrelevant conceptions of fatigue, is there in mental life a real fatigue effect? Dodge believes there is. But it differs from nerve-muscle fatigue in two respects: inconstancy of the stimuli, and interaction of competing paths. In nerve-muscle fatigue experiments the stimulus (usually the faradic current) is more or less simple, constant, and regular. In mental fatigue experiments it is necessarily unknown and variable, and, still more important, the ever changing inner factors, such as personal interest, are unknown. Perhaps true mental fatigue is really fatigue of the inner stimuli rather than of the capacity to re-act. Sometimes there are successive changes in the inner stimuli resulting from fatigue, though the work is continued. Dodge holds that the first law of relative fatigue may be formulated thus: "Within physiological limits, all fatigue decrement in the results of work is relative to the intensity of the stimulus." The adequate adjustment of stimuli is a very real problem in practical life, and in the training of both normal and abnormal children. Continuous activity under the reinforcement of emotion, or even in the educational use of play, may be a source of serious fatigue, as Kraepelin holds. Another conspicuous reinforcement is worry. It would seem to be no accident that this is so closely connected with exhaustive psychoses.

There is, further, the complication of what Sherrington calls competition. Any afferent impulse in the higher nervous system may theoretically activate any efferent path. We thus reach a second law of relative fatigue: "In any complex of competing tendencies the relatively greater fatigue of one tendency will tend to eliminate it from the competition in favour of the less fatigued tendencies."

The longest mental process ends at last. But the causes are many, and fatigue is only a single contributory factor, less important than intercurrent competing tendencies. That is why in pathogenic nervous exhaustion it is a therapeutic measure to strengthen some competing interest—to develop some fad, play, interest, or what not. But most normal lives are too full of competing interests. Any monotonous work leads to an insistent demand for change, just as when, after lying awake sometimes, we turn over, not from fatigue, but because in the complex of competing tendencies, a little relative fatigue may lead to the entirely disproportionate result of a change of the whole body mass. Social changes are caused similarly by relative fatigue, a desire to shift the pressure. All the phenomena of restlessness are similar. "They operate in work and play, in social and economic activities, in politics and in religion. Without this interference in our lives, unwelcome as it often is, we must have continued indefinitely in the direction of our first activity, with the consequent loss of that vital equilibrium on which the organism as a unit of different parts depends for its continued existence. "Relative fatigue, then," the author concludes, "is not a mere limitation of human efficiency. It is not exhaustion, but prevents it. It is a conservation of organic equilibrium, as well as a condition of organic development."

HAVELOCK ELLIS.

The Psycho-Physiological Theory of Right-handedness [*Théorie Psycho-Physiologique de la Droïterie*]. (*Revue Philosophique, June and July, 1916.*) *Mlle. Ioteyko.*

The writer commences her article by enunciating the doctrine that the normal human being is asymmetrical. "In 1903," she says, "I expressed the opinion that the normal man is asymmetrical. The principle of the bilateral symmetry of the organism, established until recently in biological sciences, is replaced to-day by the idea of asymmetry, which, far from being an abnormal or pathological phenomenon, is, on the contrary, the expression of the natural state. One of the halves of the body is more developed than the other from an anatomical and physiological point of view. In the case of the right-handed man, it is the right side which is favoured; in the case of the left-handed man, it is the left. Now, each half of the body being dependent on the hemisphere of the opposite side, one sees that in the case of the right-handed man it is the left brain which is most developed, whilst in the case of the left-handed man a greater development of the right brain is assumed." This thesis is supported by references to the works of many observers.

The author then proceeds to consider the various theories which have been put forward to explain the origin of right-handedness. They are numerous and ingenious, and some of them, particularly those advanced on anatomical grounds, deserve far more attention than has been given them in the paper. Herber's theory, which approximates most closely to the writer's, is fully discussed.

In the statement and explanation of her own hypothesis, *Mlle. Ioteyko* is very diffuse. The proposition may be epitomised as follows: Among the influences of muscular work, that which it exercises on the heart is the most important. Overwork of the heart is often determined by physical labour. Death from fatigue, which one observes in exceptional cases, is due to stopping of the heart. Fatigue of the heart is then the rock to be avoided in muscular movement. It is natural to admit that some form of auto-regulatory mechanism must exist in man, some mechanism which exercises a protective action with regard to the heart. And the writer supposes that it is this defensive action which incites man to use by preference in hard work either the right hand alone or the two hands at once, but always avoiding the use of the left hand alone, because by its situation in the neighbourhood of the heart it finds itself in closer connection with that organ than the right hand. Finally, muscular work executed by the left hand ought to react more violently on the heart than work done by the right, and to prove the truth (or otherwise) of this proposition the writer carried out certain experiments in the psycho-physiological laboratory of the University of Brussels.

The experiments were made on 32 students (22 males and 10 females), *æt.* about 20. The work imposed on each arm was as follows: The forearm being flexed on the arm, each subject was given a weight of 2.50 kgrm. to hold in the hand. The subject, in a standing position, had to raise the weight every two seconds above his head to the complete extension of the arm. The men were required to raise the weight thirty times, the women twenty. When the subject entered the labora-

tory, he remained at rest for several minutes. After this period of repose, the rapidity of the pulse was observed and noted down as the normal state. The work, mentioned above, having been executed with one hand, the pulse-rate was again observed. Half an hour later, the same experiment was performed with the other hand. And later again it was carried out by the two hands simultaneously, each hand being laden with a weight of 2.50 kgrm.

Taking the average of all the experiments, which included right- and left-handed men and women, the writer considers it was demonstrated that the fatiguing work of the left hand produced a more intense effect on the heart than the same work performed by the right. In examining the results by groups (right- and left-handed, males and females) this conclusion was not so clearly demonstrated. It is interesting to observe the enormous gain for the heart when one works with both hands simultaneously. The mechanical work is doubled, and the cardiac beats are not proportionally accelerated.

Applying her theory to the explanation of the causation of right-handedness, Mlle. Ioteyko considers that the right hand has developed greater strength than the left for the reasons enumerated above (saving the heart from overwork and consequent over-fatigue). Right-handedness is then an acquired superiority in phylogenetic development. The work of the right hand has reacted on the left hemisphere and produced its supremacy, and that not only from a motor point of view, but also from that of sensibility, address, and intelligence, because of the connections existing between the different centres. Thus the difference between the two hemispheres, at first physiological, has become psychological in the course of time.

In discussing the subjects of the education of the left-handed, ambidextrous education, etc., the writer refers at length to a system of reform of reading and writing proposed by Mlle. V. Kipiani.

In reading, this lady wishes to avoid the fatigue to the eyes in passing from the end of one line back to the beginning of the next, which requires constant change of accommodation. She thinks that this asymmetry of reading, which is performed always from left to right, and the abrupt and oblique movements imposed on the eyes at the end of each line, are the principal causes of many of the abnormalities of the eyes found among readers.

In order to remedy these inconveniences, Mlle. Kipiani proposes that books be printed in the following fashion: One line to be printed in ordinary characters and read from left to right in the ordinary way; the next line to be printed *en miroir* (each letter being reversed laterally), and read from right to left, and so on. In this way continuity of seeing will be assured, and the abrupt movements of the eyes will be avoided.

With regard to penmanship, Mlle. Kipiani advocates ambidextrous writing. Taking into consideration that the natural movements of the two hands are divergent from the middle line of the body, the right hand will write on a sheet of paper placed on the right side, and the left on one on the left side. In each case, the act of writing is to be performed as follows: The first line is to be written in the ordinary fashion; the second *en miroir*; the third in the ordinary way, and so

on. The sole difference between the two hands will be that each follows its natural slope; the right will slope from right to left, and the left from left to right.

Mlle. Kipiani also makes certain statements with regard to the orientation of children's drawings and of the figures in the pictures of ancient and modern artists. I have examined the correctness of these statements in an article on "The Orientation of Human and Animal Figures in Art," which appears in the present number of the Journal.

J. BARFIELD ADAMS.

2. Clinical Neurology and Psychiatry.

On the Mentality of those who Commit Suicide [*Sulla Mentalità dei Suicidi*]. (*Il Manicomio*, April, 1916.) Prof. Francesco Del Greco.

Sadness, or rather melancholy in the common acceptance of the word (I hardly think the word depression quite conveys the writer's idea), *tedium vitæ*, and impulse, appear to Prof. Del Greco to be the most important elements in the mentality of an individual about to commit suicide.

Impulse alone explains some unusual cases of suicide, especially those in which prisoners who have failed to prove themselves innocent kill themselves, or those in which people destroy themselves in anger, pain, or anguish.

After excluding other causes, such as imitation, suggestion, intense love, etc., the author returns to the consideration of sadness and *tedium vitæ*, which, linked together and overlapping, become a sentiment of profound weariness, loneliness, and desolation. The sufferers say themselves that life is not worth living, that life has no value. To this mental condition the author applies the term *vuoto dell'animo*, which may be translated as emptiness or loneliness of the mind. The idea, as developed in the paper, appears to be that of an intelligent being who is, or becomes, conscious of being absolutely alone in infinite space. There is something of the sublime in the idea, particularly if one accepts Ribot's theory that fear is an essential element in the notion of the sublime.

The writer points out that the part played in the causation of self-destruction by this loneliness of mind is illustrated by the rise and fall of the suicide rate as revealed in history, and as found among the various states and conditions of mankind.

Suicide, he says, is less frequent among barbarians than among the civilised, less frequent among those living in rural districts than among those dwelling in cities, less frequent among Catholics than among Protestants. Suicide is a black shadow which follows the culminating moments of civilisation.

The barbarian is altogether ruled by customs, superstitions, and moral ideas coming from without himself. With him collectiveness is at the maximum; individualism at the minimum. There is not enough autonomy in the barbarian or primitive man for him to torment himself about the value of his own being in the world. The collective aspect of the mind dominates him. It is not possible for him to experience

that agonising, terrible feeling "of solitude in the midst of his own family and in the midst of his own fellow citizens," which is seen among the insane melancholics and many other civilised men who are disposed to commit suicide.

Reflection may reintegrate or dissolve the collective aspect of the mind. The two actions are illustrated in the philosophy of Plato and in Stoicism.

The objective idealism of Plato was in many respects the elevation (and development?) of hereditary and traditional convictions by a master of thought. It continued through the times of civil decadence the "ancient interior compact," the rules which uncultivated man had drawn from customs and religion. And it is to be noted that Platonico-Aristotelian teaching formed a constructive and substantial part of mediæval thought, and of Christian and Catholic philosophy.

In Stoicism, which was the philosophy almost official of the Roman Empire, there was a diffused sense of human brotherhood, but there was also a formidable and solitary pride. The *ego*, the individual, stood alone on emptiness and nothing. The god of the Stoic was the mind of the world. It was an impersonal god. And the Stoic, with all his thorny virtues, believed himself to be greater than his god. The Stoic was a tower, superb and solitary. What wonder then that in the end, weary of his strength and wrestling, he believed himself justified in committing suicide and ending it all.

To the East we owe many cults, superstitions, and beliefs. To the East we owe the neoplatonism of Plotinus, and finally Christianity, which again linked man by an ideal thread, by a thread of love and of communion with another Individuality, divine and all powerful. The Christian idea of a God of love and goodness, ready to comfort the agonised mind, became a firm and unshakeable point in the midst of a suffering world.

With all this ancient history we find many analogues in modern times. From the free examination of Protestantism to the criticism of modern philosophy there has been a constant work of "interior dissolution," a restless, implacable search for supreme moral certitude. This certitude is never attained, but always wished for.

The author sees subjectivism triumphant in all the fields of modern science, art, and poetry. This subjectivism culminated in romantic philosophy, as developed in the writings of J. J. Rousseau, De Vigny, and Châteaubriand, in the *Werther* of Goethe, in some of the works of Victor Hugo, and those of many other authors, where man, the *ego*, raised himself above the world and everything else. It was a solitude imperial, but sad, as every solitude is. In this literature human passions are exalted to absurdity, and every bond of dependence with the past is broken.

The author appears to consider subjectivism (in which is included the idea of egoism) must in the end lead to loneliness and misery; objectivism (which includes the idea of altruism) to happiness and contentedness. "In the work of philosophy, of art, and of science, the artist and the thinker find peace. The man of the world finds it in the universality of work, in the objectivity of work, whatever the work may be, if it be only worthy and directed to the good of all men."

J. BARFIELD ADAMS.

The Crime of Porter Charlton [*Il Delitto di Porter Charlton*].
(*Il Manicomio, April, 1916.*) Valtorta, Dr. Dario.

This study in psychological and forensic medicine is a model of systematic arrangement of facts. Narrative, family history, and biography occupy their proper positions in the perspective, and although one cannot altogether agree with the writer's conclusions, one is filled with admiration for the minute and careful analysis of the physical and mental personality of the criminal.

The case, which at the time of the trial assumed almost the proportions of a *cause célèbre*, but has, no doubt, been forgotten in the awful turmoil of recent events, may be briefly outlined.

In the spring of 1910, Porter Charlton, an American bank clerk, æt. 21, married Mary Scott, a divorced woman with a shady past, and many years his senior. Charlton obtained a situation in a bank at Frankfurt-am-Main. The newly married pair left New York for Genoa on April the 16th, 1910, intending to spend some months in Italy on account of the husband's health, he being threatened with phthisis, before they went to settle in Germany. During the voyage the wife is supposed to have had a miscarriage. She was confined to her cabin, and was attended to solely by her husband. She suffered from hysteria, exhibited a good deal of jealousy, and the pair quarrelled frequently. From Genoa they went to Como, and finally settled in the lake-side village of Moltrasia, where they spent their time quarrelling and making it up, and drinking heavily. Their conjugal life went from bad to worse. On the night of June the 5th, 1910, Charlton murdered his wife. The next day he carefully packed the dead body into a trunk, and sank it in the lake. Then he left Como for Genoa, and took his passage back to New York. On his arrival at that city, whither the news of the murder had preceded him, he was arrested. He immediately confessed the crime, exonerating a Russian of the name of Ispolatoff, who appears to have been the only acquaintance made by the unfortunate pair during their residence in Italy. Charlton was detained in custody in America for three years, while the lawyers and the alienists were making up their minds about the case. In the end he was sent back to Italy, where he stood his trial on the charge of murder. The jury found that he was irresponsible for his actions at the time of committing the crime, and he was transferred from the prison at Como to the provincial asylum, where he came under the care of Dr. Dario Valtorta, the writer of the article which we are considering.

As one reads Dr. Valtorta's charmingly written paper, one cannot help thinking that it contains all the materials for a rattling good novel, full of thrills from cover to cover. It would be up-to-date with psychological studies of characters, passions, and emotions, and it has a tragic *dénouement*. The mysterious Russian is a personage full of possibilities. For local colouring we have the romantic scenery of Lake Como, moonlight trips on the water, life *à deux* in a little Italian villa. There are minor characters in abundance, *contadini* and *contadine*, tavern-keepers, milk-sellers, washerwomen, etc., etc.

At first view, we seem to be dealing with a commonplace and sordid crime. A silly young man falls madly in love with a fascinating woman, many years older than himself, a woman who, from a respectable family

point of view, was decidedly impossible. He marries in haste, and when the bloom is rubbed off the peach, love quickly takes flight. The pair quarrel and drink, and drink and quarrel, and one night, when he was probably three parts drunk, the man knocks the woman on the head and kills her.

But there are other points to be considered. Charlton's family history was rather bad. His paternal grandfather was a paranoiac who died of chronic alcoholism at the age of 35. His mother died at the age of 39, probably of phthisis. A maternal uncle was violent, lazy, and dissolute. A female maternal cousin was epileptic. One brother was said to be abnormal in character. Another was said to be epileptic.

Further, Charlton's personal history was not good. He had had at least one epileptiform attack, and he had signs of commencing tubercular mischief in one lung. For the rest, as a boy and adolescent he appears to have been affectionate, gentle, passionately fond of poetry and music, and of an intelligence above the average. He was said to have been very abstemious, and even to have shown an intolerance of alcohol.

As for the woman, Mary Scott, she must have been fascinating. Her past history in spite of, or perhaps because of, its shadiness brings that out clearly. She was just the sort of woman, if she took the trouble, to bewitch men. We are not told much about her personal appearance. She was good looking, one supposes, though that is not absolutely necessary, for Charlton's imagination would have made up for all defects, and clothed her with the beauty of an angel. But mentally she was an understudy of Cleopatra. She was hysterical, jealous, and passionate. She was said to suffer from "sexual hyperæsthesia." Possibly she suffered from uterine mischief. She also gave way to excessive drinking. Altogether she is painted in very black colours. But one must remember that in these cases the victim hardly ever gets fair play.

Coming to the crime itself, we are told that after Charlton killed the woman he threw himself on a bed, and slept a long and profound sleep. He woke up to find the body of the dead woman lying on the floor near him. Dr. Valtorta draws the ghastly picture with a strong hand. When he was first questioned on the point, and in all subsequent examinations, Charlton professed to be quite oblivious of the actual details of the crime, and of many of the events and of many of his own actions during the following day. Dr. Valtorta lays great stress on this amnesia. It is, of course, the most important plank in his platform. He cross-examined his patient again and again on that point with great patience and subtilty. But Charlton stood firm and never budged.

The conclusion arrived at was that the crime was an impulsive homicide, probably of a post-epileptic nature: the other factors in the case being alcoholism in a man intolerant of the drug, auto-intoxication from tuberculosis, and nervous exhaustion from sexual excesses.

Can we accept the above conclusion? The post-epileptic idea may be correct, but it is purely theoretical. The profound sleep after the committal of the crime, and the amnesia or semi-amnesia, were quite as likely to have been the results of drunkenness as of epilepsy, and the evidence of the man's habits during his residence at Moltrasia points to drunkenness. Forgetfulness of events and actions during the day following the crime was probably due to the state of terror in which

the man then existed. Terror is an emotion which most profoundly disorganises mentality. Further, in their many quarrels, the wife had frequently charged her husband with the loss of virility. That is a taunt that a young man bears very badly. There is no reason to suppose that the quarrelling was all on one side, and that the man responded to the woman's violence and abuse only with love and kisses. On the contrary, the woman appears to have become afraid of the man. On the very night of the murder, she had put on her hat and jacket, packed up her portmanteau, and was about to escape from the house during her husband's absence, when he returned, and forced her to go back. A *juge d'instruction* would have reconstructed the subsequent scene without the aid of psychology.

It must be remembered that we have the man's story, but not the woman's.

Dr. Valtorta's paper is painstaking, elaborate and learned. But is it not after all a clever piece of special pleading? Stripped of accidental circumstances, such as the social position of the murderer, the romantic surroundings of the tragedy, the unusual method of disposing of the dead body, and the question of extradition, the crime is, as I said before, commonplace and sordid. It is sordid. It does not possess the faintest trace of that melancholy charm which is sometimes revealed in a *crime passionnelle*. If the murder had been committed in the slums of London or New York, possibly the termination of the trial would have been different.

J. BARFIELD ADAMS.

Hystero-traumatism with so-called "Physiopathic" Syndrome Cured by Re-education [*Hystero-traumatisme avec syndrome dit "physiopathique" guéri par la rééducation*]. (*Le Progrès Médical*, March 10th, 1917.) Ferrand, Dr. Jean, Physician to St. Joseph's Hospital, Paris.

Attempts have been made to classify the numerous forms of paralysis resulting from wounds in battle. Some are due to direct lesions of peripheral nerves and their roots: others are hystero-traumatic in nature. Between these two extreme varieties there is a particular clinical type which must be isolated from others—paralysis of reflex origin.

Certain neurologists describe a form of paralysis characterised by special trophic, vaso-motor, electric, and reflex troubles in the paralysed limb, such phenomena being sufficient in their eyes to prove the organic origin of the paralysis, which explains their therapeutic failures. They infer from this the uselessness of, even heroic, psycho-therapeutic measures. This inference would seem to be somewhat premature, as observations on a case in point go to prove the contrary. It was that of an infantry soldier who, in May, 1915, was wounded in the right calf. Healing followed a normal course, and was completed in a few weeks. During convalescence he began to walk badly owing to alleged pain in the limb, which assumed the position of equinus with contracted Achilles tendon. A surgeon, believing that the lesion was really organic, severed the tendon, restoring mobility to the foot, which could

now be easily placed flat on the ground. He could, however, walk no better after the operation, and, although the equine phenomenon could no longer be produced, owing to section of the tendon, the leg assumed another vicious position, being semi-flexed on the thigh, with immobilisation of the knee-joint. He could only barely put his foot to the ground, and was extremely lame, walking with the help of a crutch. Again a surgeon, never suspecting a neuropathic affection in the case of a wounded man, did a tenotomy of the flexor tendons of the leg, putting it up in a plaster apparatus to maintain extension of the limb. The result was satisfactory only to a slight extent, but he walked without a crutch when he was sent to a neurologic centre in December, 1916.

He walked with two sticks, the right leg in a position of forced extension on the thigh, and flexion was impossible. The first care was to seek for evidence of a lesion of the terminal branches of the sciatic, and especially of the internal popliteal branch. There was no true motor paralysis, but relative weakness of all active movements. All passive ones were possible except flexion of the knee. There was no sensory trouble; and all the reflexes were normal, a little stronger perhaps on the affected side. Trophic troubles were very marked. All the distal part of the leg was œdematous, cyanosed, almost a violet tint, very cold as compared with the sound limb. The skin was thin, attenuated, and the toes crossed each other to some extent. In the whole foot and lower third of the leg there was well-marked muscular hyperexcitability. The slightest tap on the muscles brought on violent contractions, and even dissociation of movements which are not usually independent in action, such as adduction of the great toe, or abduction of the little one. In a word, the case presented all the troubles attributed to reflex contractures or to the phenomena called "physiopathic."

The mental state was peculiar. A working miner, he weeps at the least examination, manifests absolute terror at the slightest touch of his affected leg, and tremblingly implores one to cure him.

To sum up: here was a wounded patient with a paralysed limb and contraction of the knee, who presented all the signs of the paralyses called "reflex," who has been subjected to a series of tentative therapeutic measures which have failed: a characteristic type.

As to treatment the patient was brought into our re-education ward, and, after having been for a considerable time subjected to fatigue by more or less violent physical exercises, the contracture was, as it were, brutally overcome. After half an hour of passive movements of flexion and extension of the leg, and after showing him how he could bend and straighten his limb, he was induced to do this voluntarily. These active movements were aided and sometimes provoked by galvanic stimulation of painful intensity. In the end he was able to walk slowly, while he bent both knees fully, and, after a treatment lasting about two and a half hours, he was cured.

The case was a particularly bad one, for surgical immobilisation had caused intra-articular adhesions in the knee which it was necessary to rupture. A slight amount of hydrarthrosis followed next morning, but a few days later he walked like any normal person.

This, though a remarkable case, is not a solitary instance of the kind, and Dr. Ferrand has published the general result of his researches on the subject. The clinical type which has been sought to be created does not seem sufficiently differentiated. We need only cite in proof the successive denominations which have been given it. The term "reflex contracture" assumes a condition which very often does not exist, for there is flaccidity in many of these paralyses. Moreover, the term "reflex" implies a pathogenic idea, which is already abandoned by the creators of the clinical type. It has been designated a "physiopathic disorder," a term which is not very precise, and has hardly more significance than the old term "functional." In the minds of the authors this term "physiopathic" would imply the idea of an organic lesion, or at least one not functional in character. And the syndrome thus created is, in their descriptions, opposed not to an organic, but to an hysterical syndrome. In this view Dr. Ferrand cannot share.

He concludes his article with the following summary :

(1) Physiopathic symptoms exist, but they do not constitute an independent clinical syndrome. Many patients presenting these special symptoms, separate or combined, are cases of organic affections with lesions of peripheral nerves; moreover, direct and not reflex.

(2) There is but little relation between the reflex lesions described by Charcot as occurring in chronic arthritic cases and post-traumatic lesions. These latter are, moreover, described by him also amongst the hystero-traumatisms.

(3) The symptoms are not completely new.

(4) They are to be found to-day in many wounded who do not present any organic lesion, but merely ordinary hystero-traumatisms.

(5) They do not constitute any contra-indication to psycho-therapeutic treatment, even of an heroic kind, and these patients are cured as well as others. In any case, from the fact of a failure of cure it is not to be inferred that they are not the subjects of hystero-traumatism; for some succeed where others have failed, of which the patient whose case has been recorded is an example.

(6) From a medical and military point of view, such patients (when they have not been attacked with organic affections) should be considered and treated as cases of hystero-traumatism. It would be dangerous to make them out to be organically diseased or to treat them as such, for the contagion of example would make ravages in neurological centres.

(7) To cure these patients we must employ all the most energetic means which the authorities have placed at our disposal, from moral suasion to the most painful electric currents. In this way multiple successes are achieved, and the Army recuperated with vigorous subjects.

Such are the conclusions to which Dr. Ferrand and his colleagues have been led by a practice of eighteen months in one of the most important neurological centres in France.

T. DRAPES.

Premonitory Ailments indicative of Incipient Pulmonary Tuberculosis
 [*Propathies révélatrices de tuberculose pulmonaire*]. (*Le Progrès Médical*, May 5th, 1917.) Raymond, Dr. Paul.

Although not of direct psychiatric interest, having regard to the fact that phthisis is of such common occurrence in asylums, and also to the importance of early diagnosis upon which a favourable result so often depends, this paper is of considerable interest from a clinical point of view, and not without practical value.

That such affections as sciatica (neuralgic variety), herpes zoster, psoriasis, erythema nodosum, and possibly arthritic disorders, are not infrequently prodromata of tuberculosis is probably not very generally known. That the detection of pulmonary phthisis in its earliest stages is often extremely difficult is admitted by most authorities; any means, therefore, which will aid in its discovery before the disease becomes established becomes of unquestionable value. And Dr. Raymond urges the importance of a most careful examination of the lungs in any case in which the above-mentioned diseases occur. At the Larrey military hospital at Versailles he has had opportunities of observing many cases which exemplified the connection between these maladies and tuberculosis. None of the patients were sent into hospital on account of pulmonary trouble, but with a view to treatment of the more obvious affections from which they were suffering. Thus, five cases of sciatica were admitted, one of whom was also the subject of psoriasis and arthritic troubles, and the point of importance about these cases is that the minor affections in most instances manifest themselves long (in one case twenty-one months) before any pulmonary mischief reveals itself. And patients sometimes appear to be in robust health when first seen, and then, only some months later, begin to suffer from any overt signs of commencing phthisis, such as cough, loss of weight, etc. In many of them there was a tubercular family history. Dr. Raymond attributes the prodromal maladies to the action of bacillary toxins on peripheral nerves, and, through them, on the skin, starting from a latent pulmonary tubercular focus.

Dr. Raymond does not claim to be the first to note the connection between phthisis and these prior ailments which he has found to be so often the prelude to it. Peter, in the case of sciatica; Leudet, Lemonnier, and Flers, in that of zona; Gauchet, as regards psoriasis; and several writers with respect to erythema nodosum have drawn attention to the relationship between these and pulmonary disease. But he considers the profession generally does not realise the importance of such connection, and its usefulness as affording an opportunity for much earlier treatment of tuberculous patients than would otherwise be the case. The practical outcome of his researches is to emphasise the necessity in every such case, especially if persistent and obstinate to treatment, of making a minute and exhaustive examination of the lungs for signs of incipient disease, and not to be too ready to regard them as distinct autonomous morbid entities.

The facts already known as regards the development of psoriasis over the area of a nerve distribution enable us to understand how this may be similar to what occurs in zona, in so far as both may be evi-

dence of a suffering nerve reacting to a bacillary toxin. The relation of erythema nodosum to innervation is more difficult to comprehend, but the fact of its localisation always in the same areas is a proof of the intervention of the nervous system. By its susceptibility to microbic poisons, and particularly to those of tuberculosis, the nervous system becomes a veritable touchstone, and plays a highly important rôle in diagnostic procedure.

T. DRAPES.

Part IV.—Notes and News.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE SEVENTY-SIXTH ANNUAL MEETING of the Association was held in the rooms of the Medical Society of London, on Wednesday, July 25th, 1917, Lieut.-Colonel David G. Thomson, M.D., R.A.M.C., President, in the chair.

There were present: Sir George H. Savage, Drs. T. Stewart Adair, G. F. Barham, A. Helen Boyle, D. Bower, P. E. Campbell, M. Craig, J. Chambers, W. H. Coupland, J. F. Dixon, E. L. Dove, T. Drapes, J. H. Earls, R. Eager, F. H. Edwards, C. F. Fothergill, A. H. Griffith, H. E. Haynes, G. B. James, G. H. Johnston, J. C. Johnstone, J. Keay, N. T. Kerr, N. Lavers, H. Wolseley-Lewis, C. Mercier, A. Miller, G. E. Miles, H. H. Newington, H. J. Norman, E. S. Pasmore, H. Rayner, J. N. Sergeant, G. E. Shuttleworth, R. Percy Smith, J. G. Soutar, J. B. Spence, T. E. K. Stansfield, James Stewart, R. C. Stewart, H. F. Stilwell, R. J. Stilwell, J. Tattersall, J. Turner, E. W. White, and R. H. Steen (Acting Hon. General Secretary).

Visitor: Dr. J. F. Briscoe.

Present at the Council Meeting: Lieut.-Colonel D. G. Thomson, M.D., R.A.M.C. (President), in the chair, and Drs. T. S. Adair, J. Chambers, T. Drapes, R. Eager, J. Keay, N. Lavers, A. Miller, H. H. Newington, H. J. Norman, J. N. Sergeant, J. G. Soutar, T. E. K. Stansfield, H. Wolseley-Lewis, and R. H. Steen (Acting Hon. General Secretary).

The following sent communications expressing regret at their inability to be present: Drs. J. R. Gilmour, G. D. McRae, R. R. Leeper, C. C. Easterbrook, W. H. B. Stoddart, John Mills, R. B. Campbell, G. N. Bartlett, J. G. Porter Phillips, R. L. Oswald, and R. H. Cole.

MINUTES.

THE PRESIDENT said that as the minutes of the last annual meeting had already appeared in the Journal, perhaps it would be the wish of the meeting to take them as read.

This was agreed to, and the minutes were signed.

ELECTION OF OFFICERS, COUNCIL, AND STANDING COMMITTEES.

THE PRESIDENT nominated Drs. Turner, Adair, Dixon, and Norman as scrutineers for the ballot.

After the ballot had been taken,

THE PRESIDENT declared that the officers who had been nominated had been duly elected.

ELECTION OF AUDITORS.

THE PRESIDENT said Dr. Percy Smith and Dr. Maurice Craig had acted in that capacity for the past year, but Dr. Percy Smith wished to be relieved of his duties, so that it became necessary to elect another auditor to take his place. He understood that Dr. Edwards, of Camberwell House, was willing for his name to be put forward to fill the post. Drs. Maurice Craig and Edwards were accordingly elected.

ELECTION OF STANDING COMMITTEES.

The PRESIDENT proposed the re-election of the whole of the Standing Committees, *en bloc*. It would be open, however, to any member to propose an additional name, or to move for the deletion of a name.

Dr. STEEN proposed the addition of Dr. H. J. Norman to the list of members on the Education Committee.

This was agreed to.

ANNUAL REPORT OF THE COUNCIL FOR THE YEAR 1916.

Dr. STEEN read the Report of the Council for the year.

The number of members—ordinary, honorary, and corresponding—as shown in the list of names published in the *Journal of Mental Science* for January, 1917, was 685, as compared with 696 in January, 1916.

The following table shows the membership for the past past decade:

Members.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.
Ordinary . . .	645	652	673	680	690	696	695	679	644	635
Honorary . . .	30	29	32	33	34	35	34	34	34	32
Corresponding . . .	15	15	17	17	19	19	18	18	18	18
Total . . .	690	696	722	730	743	750	747	731	696	685

The number of new members elected and registered during the year 1916 was 15, a decrease of 9 on the previous year. The names of 3 members which had been removed were restored. The number of members who resigned or whose names were removed by the Council under Bye-law 17, owing to arrears of subscription, was 19.

It is with regret that 8 deaths have to be recorded. Among these were Dr. Orange, a past president, and Dr. Adam R. Turnbull, a president-elect.

The result of these changes is that there has been a decrease of 9 in the ordinary membership.

The Association may be congratulated upon the fact that in these times of stress the membership has been so well maintained. This record speaks well for the numerous members on active service whose loyalty to the Association is most gratifying to their colleagues who have remained at home.

Owing to the war the Annual and all the Quarterly Meetings have been held in London and without the usual social accompaniments. These meetings were well attended and valuable papers were read which led to interesting and useful discussions.

The Divisions have also held the usual meetings, which, considering all things have been well attended. The Divisional Secretaries are to be congratulated upon the success of their endeavours to "carry on" during the war.

Though there has been a lull in legislative measures affecting the specialty the Parliamentary Committee has met regularly and carefully watched over the interests of the Association.

The Educational Committee has also met frequently and prepared regulations for the training and examining of those who devote themselves to the care and nursing of the mentally defective. These regulations follow closely those connected with the certificate of proficiency in nursing and attending the insane and will be presented for your acceptance this day.

Special Committees have been appointed by the Council. One of these concerned with the College of Nursing and the Bill for the Registration of Nurses has been active in safeguarding the welfare of asylum nurses. A second Committee has dealt with the question of the formation of over-seas divisions of the Association. Though at the present time it is impossible to bring forward any schemes in furtherance of this aim much useful information is being collected by the Committee.

Letters have been received from members in regard to difficulties met with in carrying on their work, and communications have been made to the Government offices concerned.

The Journal has well maintained its high standard, and the Council desires to record its appreciation of the work of Dr. Drapes, on whom the main burden has fallen, in that he has so successfully overcome the many troubles which he has had to contend with.

The debt of gratitude which the Association and the Council owe the Treasurer has been increased by his continuing to nurse the finances of the Association in spite of diathetic and other disabilities.

Thanks are due to the Registrar, the Divisional and Committee Secretaries, who, though pressed by additional private work, have devoted much time and energy to their respective offices.

The chair at the Annual, Quarterly, and Council Meetings has been taken by Lieut.-Colonel D. G. Thomson, who has presided with dignity and courtesy.

He moved the adoption of the Report.

The PRESIDENT moved, as an addendum to that Report, the following: "That the Council feel bound to accord its warmest thanks to the Acting General Secretary, Dr. Steen, for his ceaseless labours in that office." Members would know that all through the year Dr. Steen's attention had been called to a multitude of affairs, which demanded foresight and ready action, in spite of all the cares of his professional office in these exacting times. The affairs of the Association had never been more clearly, accurately, and effectually brought before its members.

The Report of the Council, with this addendum, was then put and carried.

TREASURER'S REPORT.

Dr. HAYES NEWINGTON (Hon. Treasurer) submitted his Report. The Auditors might have some remarks to make of their own, and, if the meeting would allow him, he would say anything which might be necessary after those gentlemen had spoken. He would like the Association generally to know that not less than one-fourth of its registered members were acting on, or in connection with the war, namely, 161 out of 644. That fact would account, to some extent, for the difficulties about subscriptions. He could only endorse what the General Secretary read about the sense of loyalty shown by these members to the old Association.

The Report was approved.

REPORT OF THE EDITORS OF THE JOURNAL.

In presenting their Report the Editors feel that it is so far satisfactory that during these times of stress, involving, as was inevitable, a large reduction of scientific research and literary output connected therewith, sufficient material has come into their hands to enable them to keep the Journal fairly up to its normal dimensions. This desirable result, however, they feel it will be hardly possible to maintain until war conditions no longer exist. The restrictions in force as regards paper supplies have become still more stringent of late, and the printers find it difficult to obtain sufficient for their requirements. The aggregate number of pages in the Journal for 1916 was, in round numbers, 840, giving an average of 210 for each issue. The January issue of the current year contained 163 pages, the April number 150, and some little time ago we received an intimation from the printers that 128 pages will probably have to be the limit in future. The difficulty might be met—provided that material is forthcoming—by reducing the size of the print, although that would be a matter for regret. It would, however, we trust be only necessary as a temporary measure of relief. As the circulation has notably diminished since the commencement of the war, the Editors thought it advisable to reduce the number of copies printed from 1125 to 900, thereby effecting a saving in cost, and also obviating an accumulation of surplus copies. They trust that this step will meet with the approval of the members.

The total amount of expense connected with the production of the Journal for the year 1916 was, as shown in the Treasurer's Statement, £578 10s. 11d., as compared with £361 10s. 4d. for the previous year—a difference of £217 0s. 7d. This increased expenditure was, of course mainly due to the enormous increase in the

REVENUE ACCOUNT—January 1st to December 31st, 1916.

1915.		Dr.		Expenditure.		Income.		Cr.			
£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
361	10	4	To Journal—Printing, Publishing, Engraving, Advertising, and Postage	578	10	11	By Dividends	161	1	0	1915.
312	13	4	Examinations, Association Prizes, and Clerical Assistance to Registrar	203	11	5	" Sale of Journal	20	17	4	£
39	2	3	Petty Disbursements, Stationery, Postages, etc.	42	0	5	" Handbook	12	2	9	s.
67	17	3	Annual, General, and Divisional Meetings	68	0	10	" Advertisements, etc.	28	17	7	d.
103	12	0	Rent of Premises at 11, Chandos Street, care of Office, etc.	103	12	0	" Statistical Forms, etc.	232	18	8	207
8	8	0	Audit and Clerical Assistance	8	8	0	Fees, Certificates of Psychological Medicine	434	2	6	207
68	10	0	Miscellaneous Account	62	5	1	" Certificates of Proficiency in Nursing	668	6	6	490
0	1	2	Library Account	1	3	1	Subscriptions	...	...	...	6
961	14	4	Balance	1157	11	9	...	...	...	...	734
558	13	3		270	17	2	...	...	...	...	9
1520	7	7		£1428	8	11	...	...	...	...	7

BALANCE-SHEET—31st December, 1916.

1915.		Liabilities.		Assets.		
£	s.	d.	£	s.	d.	
2870	13	4	To Journal Account, balance of	100	11	3
558	13	3	Examinations Account, balance of	39	15	0
3389	6	7	Petty Disbursements Account, balance of	5	13	1
65	3	0	Meetings Account, balance of	7	10	7
82	2	1	Rent Account	25	18	0
147	5	1	Miscellaneous	12	15	11
			Library	165	13	6
			Gaskell Fund	408	17	4
			Balance:—Balance at 1st January	3242	1	6
			Add: Balance of Revenue Account	270	17	2
				3512	18	8
			Deduct:	369	14	3
			Decrease in Value of Stocks	3143	4	5
			Subscriptions written off	37	15	0
				£3552	1	9
				£3552	1	9

(Signed) H. HAYES NEWINGTON, Treasurer.
(Signed) WOODINGTON & BOLT, F.C.A.

R. PERCY SMITH } Auditors.
MAURICE CRAIG }

cost of paper, which has advanced by from 300 to 400 *per cent.* The cost of labour has also risen considerably. The difference between the two years, moreover, would not be so great but for the fact that, as members no doubt recollect, in 1915 the October number, for reasons stated at the time, was limited to a mere record of business matters, forming only a small pamphlet, which reduced the cost of production for that year by some £50 or £60. This circumstance makes the difference appear larger than it would otherwise have been. Probably about £160 would be more nearly correct.

The Editors appreciate greatly the kind support they have received from the various contributors to the Journal, and they feel they are particularly indebted to that veteran and distinguished member of the specialty, Dr. Henry Maudsley, for his valuable paper which appeared in the January number of the current year. They also gladly acknowledge the help afforded them by the Assistant Editors, Dr. McRae and Dr. Devine, especially in the matter of proof reading, which, useful and necessary as it is, entails not a little drudgery, and a very considerable expenditure of time. They are also indebted to our acting General Secretary for practical suggestions which he has been kind enough to give on different occasions.

The Editors have again to regret the delay in the appearance of the Journal, which has been almost entirely due to labour difficulties, these having been, under present circumstances, absolutely insurmountable.

JOHN R. LORD.

THOMAS DRAPES.

Dr. DRAPES read the Report, and moved its adoption. It was agreed to.

REPORT OF AUDITORS.

Dr. PERCY SMITH read the Report as follows:

We beg to report that we have examined the Treasurer's accounts for the year 1916, and seen the vouchers for payments made on behalf of the Association, and find them, as usual, in perfect order.

The outstanding feature in the Association's expenditure for the year has been the increased cost of publication of the Journal, which is inevitable owing to the advanced price of paper and labour.

The income of the Association shows a net decrease of £91 16s. 2d., which is partly due to those members who are on active service abroad and have been excused their subscriptions, and partly to diminution in receipts from fees for examinations. There is also a diminution in the total membership of the Association, as the wastage is not at present made up by the usual number of new members.

The dividends show an increase of £15 5s. 2d., which will be more in the future, as in 1916 a further £500 was invested in Exchequer Bonds, which have now been converted into War Loan Stock, of which the Association now holds £1500.

The amount written off for unpaid subscriptions was £37 15s. 0d. as compared with £65 3s. 0d. in 1915, but we regret to notice the increased volume of subscriptions remaining unpaid on December 31st, 1916, which amounts to £312 7s. 6d. This, however, may be partly explained by the number of members on service abroad who are not receiving the Journal at present. We understand from the Treasurer that a considerable proportion of this outstanding amount has been paid in the current year. We are impressed by the enormous amount of labour entailed on the Treasurer and his assistant by the delay in payment of subscriptions by members.

The value of the Stocks held by the Association has again had to be written down by no less a sum than £331 19s. 3d.; on the other hand, in spite of this, the value of Stocks at present held by the Association is £3065 15s. 6d. as against £2897 14s. 9d. at the end of 1915.

The Association is especially indebted to the Treasurer for the very able way in which he continues to conduct its finances during the present critical times. We notice that he has now acted as Treasurer for a period of twenty-three years, and his work cannot be too highly appreciated. Although in the past a note of recognition has always been accorded to his chief assistant, we feel that the time has now come when Miss Newington's name should be definitely mentioned as the one referred to, and to whom the Association owes its best thanks.

R. PERCY SMITH.

MAURICE CRAIG.

He moved its adoption, and it was agreed to.

ANNUAL REPORT OF THE EDUCATIONAL COMMITTEE, 1916-17.

Dr. STEEN read this Report, as follows :

This Committee has held four meetings during the year, and although abnormal conditions have existed with regard to travelling, the attendances of the members have been very fair.

Two candidates presented themselves for the Professional Certificate Examination and both were successful.

After a lapse of four years the Gaskell Prize has again been competed for. There were two competitors and the award has been made to Major James Cowan Woods, of The Priory, Roehampton, now serving in the R.A.M.C.

The number of entries for the Nursing Certificate Examinations has been very well maintained.

The Sub-Committee dealing with the framing of the Regulations and Syllabus for the Training and Examination of Candidates for the Certificate of Proficiency in Nursing and Attending *re* Mentally Deficient have presented their report. This has been accepted and approved by Council. The proofs of the Regulations and Syllabus have been received from the printers, and can be obtained from the Acting General Secretary.

The question as to the advisability of electing a Deputy Registrar in Cape Colony has been raised, and is now under consideration.

MAURICE CRAIG, *Chairman*.

J. G. PORTER PHILLIPS, *Hon. Secretary*.

He moved that the Report be adopted, and this was carried.

REPORT OF THE PARLIAMENTARY COMMITTEE, 1916-17.

Dr. WOLSELEY-LEWIS read this Report, as follows :

During the past year your Committee has met on four occasions.

The following are the chief subjects that have received attention :

Nurses' Registration.

The College of Nursing.

The proposed Ministry of Health in its relation to Asylums.

The Central War Committee and the calling up of Army Medical Officers.

On each of these subjects resolutions have been forwarded to your Council, and action has been taken with a view to safeguard the interests of the Asylum Service.

H. WOLSELEY-LEWIS, *Chairman*.

R. H. COLE, *Secretary*.

He wished to add to the Report the statement that it had been recognised by the Parliamentary Committee that the question of a Ministry of Health was a very important one, and the Committee had made a recommendation to the Council to-day which had resulted in the decision to form a Special Committee to watch this matter and have power to act in whatever way they might deem fit. He moved the adoption of the Report.

This was agreed to.

REPORT OF THE LIBRARY COMMITTEE.

Dr. STEEN submitted this Report, as follows :

The Committee have to record, with gratitude, that during the past year, gifts to the Library have been made by Drs. M. Craig, B. Hart, T. B. Hyslop, P. W. MacDonald, H. Maudsley, W. Rawes, R. H. Steen, and W. A. White (Washington).

The Committee are desirous of increasing the usefulness of the Library, and are willing to purchase such new books as any member may suggest to be advisable.

Certain medical periodicals have been circulated among those members who have asked to be placed on the list though owing to the difficulties of transmission several American Journals have come at intervals which are less regular than in ordinary times.

The Committee are anxious that more members should take a personal interest in the Library, and donations of books dealing with psychiatry will always be acceptable.

HENRY RAYNER, *Chairman*.

R. H. STEEN, *Secretary*.

He moved its adoption. Carried.

The PRESIDENT said there was no report from the Research Committee, nor from any Special Committees.

MOTIONS INVOLVING EXPENDITURE OF FUNDS.

Dr. STEEN asked that the approval of the meeting be given to the usual annual item of £25 for the Library. This the Association had kindly granted to the Library for many years past, and he asked now for its repetition.

Agreed.

DATES FOR THE VARIOUS MEETINGS FOR THE YEAR.

The suggested dates on the agenda were formally approved, namely: Tuesday, November 27th, 1917; Thursday, February 21st, 1918; Tuesday, May 21st, 1918; July —, 1918.

ELECTION OF HONORARY MEMBERS.

The PRESIDENT said his next duty was to bring before the meeting the names of two gentlemen as candidates for the Honorary Membership of the Association: COLLES, JOHN MAYNE, LL.D. (Univ.Dub.), K.C., J.P., Registrar in Lunacy (Supreme Court of Judicature in Ireland), Lunacy Office, Four Courts, Dublin.

Proposed by Lieut.-Colonel D. G. Thomson, M.D., R.A.M.C., and Drs. T. Stewart Adair, Thomas Drapes, James Chambers, Richard R. Leeper, and R. H. Steen.

URQUHART, ALEXANDER REID, M.D.Aber., LL.D.Aber., F.R.C.P.Edin., late Physician Superintendent, James Murray's Royal Asylum, Perth. "Tamachie," St. John's Road, Meads, Eastbourne.

Proposed by Lieut.-Colonel D. G. Thomson, M.D., R.A.M.C., and Drs. T. Stewart Adair, T. Drapes, J. Chambers, H. H. Newington, and R. H. Steen.

He asked Dr. Drapes to say a few words in support of the proposal concerning Dr. Colles.

Dr. DRAPES said he had no idea he would be called upon to say anything with respect to Dr. Colles, until a few moments ago. Dr. Colles was an eminent member of the Legal profession, and he had always taken the warmest interest in the welfare of the insane, no man more so. At the same time, he had won the confidence of all the officers of asylums in Ireland, to whom he had always shown the greatest kindness and consideration in every possible way. He did not think anyone deserved this honour more than did Dr. Colles, and he had great pleasure in supporting his candidature.

The PRESIDENT said he would ask Dr. Hayes Newington to say a few words on behalf of his very old friend, Dr. Urquhart.

Dr. HAYES NEWINGTON remarked that he did not think he need say much in support of the election of Dr. Urquhart as an Honorary Member of the Association; the amount of work he had done justified his election. It was scarcely necessary to remind the Association that for many years he was the moving spirit of the Journal, and a splendid editor he was, in all ways. He was never idle in the affairs of the Association. He was not only a good man for proposing measures, he was also active in opposing anything which did not seem to him to be quite suitable. In that way he had done much for the honour of the Association, and had prevented it proceeding too fast on many occasions. If Dr. Urquhart had not earned by his services the honour it was now proposed to confer upon him, he would have been fit to be so elected on his own merits, as a learned, educated, and experienced member of this specialty. He did not know that there was anybody who had so thoroughly replaced Dr. Hack Tuke as Dr. Urquhart had; he knew the inside of psychiatric work on the Continent as well as he knew the inside of that work in this kingdom, and in that respect he did great service to many members of this Association by pointing out what, of the best kind, was being done abroad. He, the speaker, therefore, felt no hesitation in recommending Dr. Urquhart to the Association's favour.

The PRESIDENT nominated Dr. Dixon and Dr. Norman as scrutineers.

The ballot, taken separately, revealed the unanimous election of both gentlemen.

The ballot was then taken for the following candidate for Ordinary Membership :
DUNN, EDWIN LINDSAY, M.B., B.Ch., Trin. Coll. Dub., Medical Superintendent,
Berks County Asylum, Wallingford, Berks.

Proposed by Drs. H. R. Abbott, T. S. Good, and R. H. Steen.
He was duly elected.

The meeting then passed to the following item : To consider proposed Regulations and Syllabus for the Training and Examinations of Candidates for the Certificate of Proficiency in Nursing and Attending on the Mentally Defective.⁽¹⁾ The President called upon Dr. Maurice Craig to explain.

Dr. MAURICE CRAIG said he had been asked to explain as Chairman of the Sub-Committee which was appointed to consider this matter. The question was as to whether the time had not now arrived when there should be a certificate granted for nursing mentally defective people, on the same lines as that for ordinary mental nursing. The Sub-Committee went into the question, and tried to graft the new side of it on to the old. That, however, was found to be impossible, because the whole training seemed to be different in the latter part. They then decided to take the first, the preliminary part, as it now stood for the ordinary certificate. But in regard to the second part, it was found necessary to alter it very considerably, so as to meet the conditions in regard to the case of the mentally defective, both as to training and the Law. The Sub-Committee made as few alterations as possible, and, whenever that could be done, they adhered to the same wording. The alterations made were only done in such a way as to make the scheme practicable in the various institutions for the mentally defective. If the scheme as now presented were adopted by the Association at this meeting, it would be necessary to decide which institutions would be approved by the Council as training places. That, however, had been the case all the way through; applications from various institutions which asked to be recognised under the nursing scheme had constantly been brought before the Council. Another matter which came up for consideration was, whether the Association was going to deal with the training of the nurses, or whether they were going to try and include in it the teachers too, for there were two classes in these institutions—teachers and nurses. When this matter was entered into, the Sub-Committee at once found itself faced with difficulties if the attempt were persevered in to include teachers, as there were other bodies working from that side. Therefore, the Sub-Committee, which was largely composed of medical superintendents and medical officers of institutions for the mentally defective, decided that the only way was to restrict its attention absolutely to the nursing side; that the certificate should be granted on those lines, but that teachers should be eligible for the certificate if they complied with the rules laid down. The proposed certificate for nursing mentally-defective people was practically on the same lines as the existing certificate for nursing mental patients. It was felt that it was very desirable to pass this through at this meeting, because new rules were being brought in with reference to the mental defectives, and if this Association did not accomplish something of the kind, other bodies might. Even now, it would be some months before a start could be made. The Sub-Committee was in agreement with the central Committees of these institutions for the mentally defective, and everything proposed was in accord with the views of the Board of Control. Acquiescence on the part of the Association would mean that this body would take its due position on the matter, and its function would not be usurped by others. He moved that the proposal submitted and circulated, be approved.

Dr. PERCY SMITH said some members had not seen a copy of the proposed Regulations. Either they should be read in full to the meeting, or each member should be furnished with a copy.

Dr. MAURICE CRAIG replied that the difficulty in regard to supplying each member with a copy was one of the supply of paper. He drew attention to the paragraph to the effect that a copy could be obtained.

Dr. STEEN reminded Dr. Percy Smith that there were 650 members of the Association, and it was thought a better plan to notify that any member desiring a copy could be supplied with one. A number of members did write for a copy,

(1) See Notes and News, p. 630.

and it was furnished. Also, a copy was on view at the Association's Library in the building. He thought everything reasonable had been done.

Dr. RAYNER said he supposed the new Regulations would be printed in the next issue of the Journal.

Dr. STEEN replied that this would be done if the Association wished it.

Dr. WOLSELEY-LEWIS said he would be happy to second Dr. Maurice Craig's proposal. He agreed that it was urgent that the proposals should be accepted. He had attended one or two meetings of the C.A.M.D., and as an opportunity had been given to members to become acquainted with this, he thought the proposals should be carried through at this meeting.

Dr. A. HUME GRIFFITH asked whether the case of epileptics was included in the proposed Regulations.

Dr. MAURICE CRAIG replied that only those who came under the Mental Deficiency Act would be included. In the case of the certificates for mental nursing the Act had to be carefully followed, and the corresponding Act must be followed in the Regulations for mentally-defective patients.

Major ERNEST WHITE said he took it that there was no finality about this proposed Certificate; that it could come up for revision in twelve months' time, and any regulation changed which had not been found to have worked satisfactorily. In introducing regulations for a new certificate it was almost impossible to produce perfection at first, a fair period of trial was needed, and if after due trial revision was found to be needed, that would be a simple matter.

Dr. W. H. COUPLAND said he was a member of the Sub-Committee, and this matter was gone into with very great care. He agreed with Dr. Maurice Craig that the matter was urgent; it was necessary for this Association to get into train some kind of certificate dealing with the mentally defective. They in the sphere of treatment of mental defectives had felt very much the need of something of the kind, and there was great need for uniformity. The C.A.M.D. was in negotiation with the Board of Education to take a certain course, and it was necessary for this matter to be dealt with at once, so as to have a clear ground of action. It was not known when the Government might decide to alter the Mental Deficiency Act—certainly it sadly needed alteration—and it was thought there should be a certificate for attendants until such time as action might be taken.

Dr. DIXON said he would like to point out the danger of confusion between this certificate and that for nursing the insane—the present Certificate. He thought the Certificate for Nursing Mental Defectives should bear a title less confusing.

Dr. MAURICE CRAIG replied that the Sub-Committee had kept closely to the Law the whole way through, and the terms of the Act had been used, not the Committee's own.

The PRESIDENT said he clearly saw the point which Dr. Dixon had in his mind; it was that people possessing this certificate might pose as able to nurse the certified insane, whereas they might not be so qualified, and did not profess such capacity. He asked whether that point was considered in committee, and thought if Dr. Dixon had any alternative to suggest, the meeting should hear it.

Dr. MAURICE CRAIG said that it was decided that the Certificate and badge should be quite different ones, nevertheless he thought Dr. Dixon's point should be borne in mind.

Dr. DIXON said he had only just seen this, so he was scarcely prepared to give an alternative.

Dr. MAURICE CRAIG replied that the objection to the term "Feeble-minded" in this place was that it was a definite term under the Act, and it would only apply to a certain proportion of the people. That was the difficulty which was felt in getting a term at all.

The proposed Regulations were then unanimously agreed to.

PRESENTATION OF THE GASKELL PRIZE.

The PRESIDENT said it now became his duty to present the Gaskell Prize for this year. No Divisional Prizes were being awarded, most of the Association's younger members being absent on National Service. The winner of the Gaskell

Prize, consisting of a sum of Fifty guineas and a Gold Medal, had been awarded to Dr. James Cowan Woods, Major, R.A.M.C., of the Priory, Roehampton.

He then presented the Prize to Dr. Woods.

In connection with this Prize, he had to announce that the runner-up sent in a contribution of such exceeding merit that the Council had decided to award a Second Prize to him, also from the Gaskell Foundation. The winner of this was Dr. Monrad-Krohn, and it would consist of Fifteen guineas, and a silver replica of the Medal.

THANKS TO THE PRESIDENT.

Sir GEORGE SAVAGE said that as Senior Past-President of the Association and one of the oldest members, he once more had the great pleasure to propose a vote of thanks to the President. It was a record presidency of a record President. It was unusual for a president to hold office for so many years, but he had served the Association so well during the period of the war; and he (the speaker), was more than ever impressed with his self-sacrifice when recently travelling from Liverpool Street Station, with its crowds of people, for the President had come not once or occasionally, but at every meeting he was present.

Major ERNEST WHITE said he had been invited to second this proposal, and he regarded it as peculiarly felicitous, because, of the public asylum superintendents who were elected in the Jubilee year, Lieut.-Colonel Thomson and himself were the only survivors in England. And when he harked back and thought of the Institution with which the President had been so long associated, he remembered that, from boyhood, he spent many happy days there with Dr. Thomson's predecessor, Dr. Hills. The charms of the old River Yare and the surroundings of that happy spot had for him a very great attraction, and that had ever remained true. He had again visited the spot in more recent years, and seen the marked improvements which had been effected under his master hand, structurally and in other ways. There, during the past three years, Lieut.-Colonel Thomson had filled one of the most important positions in the hospital world and for the State. So that, apart from the work which the President had done for this Association, he had done a great work for the State, and, therefore, his fellow members had all the more reason to be proud of him. They would wish to congratulate him on his three years of strenuous work for the Association, and hoped that the fourth year, on which he had now entered, would bring peace to this land, and with it the promise of all the good which we had enjoyed in the days gone by. All would wish him "God speed!" in his work.

The vote was carried by acclamation.

The PRESIDENT said it was not his intention to make a speech, but he desired to thank the members very much for their toleration of him for a third year, and to express the blessed hope that when peace time came, the Society would elect a new President.

He would now call upon Dr. Mercier, whom all were especially delighted to see among them in person. The Council feared they were only going to have his spirit, but here he was in body and mind.

Dr. C. A. MERCIER: Mr. President and Gentlemen, I have to apologise to you for depriving you of a treat. This paper of mine was to have been read by Sir Bryan Donkin, who very kindly, in the event of my unavoidable absence, undertook to read it for me. My absence was unavoidable, but, like unavoidable things, it has been avoided. I had to come up to town on urgent business to-morrow, and I anteponed my visit by one day. The only drawback to these, otherwise, pleasant meetings is that, by a kind of convention—I do not know that it is a rule—one is not allowed to smoke in this room. But there is no prohibition against going to sleep; it is a privilege of which I have often availed myself on these occasions, and if any of you desire to do likewise on this hot afternoon, pray do not consider my feelings. (See p. 488 for Dr. MERCIER'S paper on "Madness and Unsoundness of Mind.")

Sir GEORGE SAVAGE said he would like, first, to introduce to Dr. Mercier, and to show the President an engraving in which he, the speaker, was represented as a lecturer at Guy's Hospital saying "There is no such thing as insanity."

There was a great deal that was interesting in what Dr. Mercier had said in his paper. The Association expected an intellectual treat, and it had had it. Of course, it was felt that Dr. Mercier wielded a very sharp sword when it came

to a question of logic. He feared most of the members did not agree with the author, because their's was the practical view, whereas Dr. Mercier's was rather the theoretical. Dr. Mercier was not insane, but undoubtedly he had one or two obsessions. The author had quoted himself, and he, Sir George, was now going to quote himself. In an article in Clifford Allbutt's *System of Medicine*, the first paragraph the speaker wrote was "The following division of this work is devoted to the consideration of unsoundness of mind and insanity. As I shall point out, these are not the same thing, for there is much unsoundness of mind which does not seriously affect the relationship of the individual to his circumstances, and which, therefore, cannot be considered insanity." Maudsley, years before, said, "The main business of a man's life is to adjust his relationships to his mind. Such relationships, with human advance, become more and more complex, and when specially out of sympathy and out of harmony one becomes alien. No necessary brain lesion, however, may be present." Then came the question of the advantage or the disadvantage of a definition. His old teacher, Sir William Gull, once said, "Definition? Definition is of the devil; the devil himself is only a definition, and the sooner he is done with, the better." Moxon, on the other hand, when asked for his definition of insanity, said, "How can you define a negation? Define sanity if you can, but define a negation, insanity, you cannot."

It would be agreed that the most interesting point was that we were to be judged by conduct, and by nothing else. When one thought of what their old friend, Hughlings Jackson, wrote on the "Factors of Mind," one could realise that any one of the factors of mind might be disordered and yet such disorder might not produce a corresponding disorder of conduct; and as long as there was mere disorder of a function which did not interfere with conduct, it must be admitted that there was no insanity present. He supposed that a symposium on this question would be most satisfactory. For instance, he had recently been reading a biography of Swinburne. No one would say Swinburne was insane, but who, on the other hand, would say he was of sound mind? He was an epileptic, his conduct was very irregular, and yet he was of brilliant intellect. He (the speaker) remembered suffering a severe snub from Lord Coleridge. He, Sir George, gave evidence about a certain boy who had committed a murder, and the characteristic of that boy was that he was asocial, and he was always reading books which he did not think much of. And the Judge said, "Like Shelley." And Sir George said, "Well, my Lord." When the Judge summed up, he said, "Gentlemen of the jury, what can you think of the evidence of an expert who even suggests there might be something wrong mentally with Shelley?" One felt that there was an enormous amount of disorder in the most brilliant people, and he thought Dr. Mercier must often have had the "policeman" idea coming before his mind: "Is this person one who ought to be restrained?" It almost came to this, for one was so constantly asked "Is this person certifiable?" and the answer often was "Why? he is neither suicidal nor dangerous." That gave the idea that unless a man was suicidal or dangerous he was not insane. He did not think that even Dr. Mercier would go as far as that.

Then there were the other cases, always of extreme interest, in which there was a double life or personality. Such cases were not very common, but recently he had seen a case in which, twenty-three hours out of the twenty-four, the woman led a perfectly normal life. The other life was a post-epileptic condition, epilepsy ? larvæ, in which she performed the most extraordinarily destructive acts. One of the causes of the existence of the domestic "ghost" was that all sorts of extraordinary things were happening in the house, which no one could explain until it was discovered that this woman passed, at about 2.30 in the morning, into an unconscious state from which she could not be roused to the normal, and in which she did remarkable acts. He warned the friends that in one of these states she might attempt to set fire to the house. She did try to do so, and then it was considered necessary to treat her as insane.

He had said enough. They felt, he trusted, that they would not be insane, but perfect sanity would be a heaven he would not desire to live in. Loss of higher thought and of self-control was bad, but a healthy "Damn!" on the golf-links was not altogether out of place.

Dr. HAYES NEWINGTON said he had been interested in Dr. Mercier's paper, and

he had pledged his sanity to accept the invitation and tread on it a bit. The author had classed him, the speaker, with two eminent gentlemen, Dr. Craig and Dr. Stoddart, but he wished to separate himself from them, as he did not feel that he was worthy of such association. The two gentlemen named were proposers of definite propositions, whereas he only acted from a negative point of view. He did his sane best at first to contradict Dr. Mercier's definitions, but he was not in a position to give a definition of insanity, or even to say what insanity was. His position was still a negative one, and he had found a good deal that one might question to-day. At the beginning Dr. Mercier stated, as an incontrovertible fact, that two and two make four. But was that always the case? Not always: two whiskeys and two sodas could not be turned into four whiskeys; it must be two likes added to two likes to produce four, otherwise they might counteract each other. That carried a useful point in connection with this argument of Dr. Mercier's; they were never agreed about their definitions or principles. Dr. Mercier founded argument upon the statement that in the certificate insanity or unsoundness of mind were regarded as convertible terms; but he would have thought that the word "or" between two things meant that a choice was given between them, and this wording on the certificate certainly meant that insanity and unsoundness of mind need not be the same thing. And that was how those in the specialty regarded it: they did not talk of insanity if they used the milder term "unsound in mind." They did not believe certified people were necessarily insane, but people were certified because they were, in their view, *plus* Dr. Mercier's view, needing detention. It was not fair to say people were certified on the question of their insanity. He did not understand how Dr. Mercier could still stick to his proposition that insanity was diseased conduct. The author asked his view, and he had stated it in the *British Medical Journal*. He preferred the older phraseology, that insanity was a disorder of mind. He thought that if Sir Clifford Allbutt had been editing a new *System of Medicine*, and asked an authority to write on zymotic diseases, and that authority commenced by saying measles was not a zymotic disease but a disease of spots, the surprise would not have been greater than that produced by Dr. Mercier's contention. But he still thanked Dr. Mercier for his paper, which had done a lot of good, and the author always brought forward something humorous as well as scientific.

Dr. JAMES STEWART thought the summary of this discussion might be expressed in one or two words. For a number of years those in the specialty had been using a negation, namely, the word "insanity," a word which, after all, it was impossible to define; and, if the word were continued, practitioners would have to give up the idea of stating an absolute definition of the term. It was sufficiently clear to those who had been acquainted with people whose condition was such as to require that they should have special treatment for a special disease that there were so many varieties of mental disorder that no definition could be advanced which would include a hundredth part of them. Hence he thought it almost a pity that there should be apparently such a difference of opinion between such eminent men as Dr. Mercier and those he had mentioned upon a matter upon which all alienists were, after all, agreed. Alienists were agreed upon the point which Dr. Mercier had emphasised so distinctly, that a person declared insane was one who had disorder of conduct; but the term was not confined to disorder of conduct, it was intended to imply more. When one said that a person was insane, all that one wanted to imply was that the mental condition of that person was that he had not soundness of mind. Where the line was to be drawn neither he nor anyone else could define. But he thought it was wise to adhere to the term "insanity," for it did not compromise the mental practitioner, nor compel him to give a definition within narrow limits as to the extent of the unsoundness.

Sir BRYAN DONKIN said he had but few words to offer on this discussion. As he had already said to the Secretary, in case he had read the paper to the meeting, he agreed with the whole of it, and since Dr. Mercier had finished reading very little had passed which he felt called upon to comment on. It occurred to him that neither Sir George Savage nor Dr. Hayes Newington quite understood what Dr. Mercier meant by "conduct." For instance, he thought Sir George rather implied that Dr. Mercier believed that disorder of conduct and insanity were convertible terms. Dr. Mercier did not say that, and he (the speaker) did not think any words written or spoken by Dr. Mercier bore the implication that every

person displaying disorder of conduct was insane: yet that seemed to be implied in what Sir George Savage said. A similar criticism could be applied to what was said by Dr. Newington and Dr. Stewart. Dr. Mercier never said that disorder of conduct was insanity; what his contention was, was that disorder of conduct was a necessary element in the conception of insanity, and that without disorder of conduct a person could not be pronounced insane. He had read in every text-book except Dr. Mercier's that insanity had not been defined. It was not defining a condition to make an exhaustive description of every type of insanity, but it was surely possible for any person who had thought about insanity to say what he meant when he used the term "insanity," and that was what Dr. Mercier had in mind when he spoke of a definition. It seemed an astonishing thing—unless people had been trying to make a joke, as Dr. Maurice Craig was said to have attempted—how they could refuse to accept at once what Dr. Mercier had been preaching, though not in vain, except to members of this Association. Large numbers believed that Dr. Mercier was correct, and that he had brought a definition of insanity which was extremely useful in practice. He could quote a considerable number of those, particularly those who had been practising in prison service; these medical men got to know a good deal about insanity, and he personally regarded Dr. Mercier's work, not only as theoretical, but also as very practical.

Dr. NEWINGTON rejoined that he did not think Sir Bryan Donkin understood his (the speaker's) remarks. What he quarrelled with in Dr. Mercier's statement was that insanity was declared to be, not a disease of mind, but a disease of conduct; it was the double statement, of which he was unable to accept the first part. Members of the Association believed that insanity was a disease of mind, whatever the person's conduct was.

Dr. E. S. PASMORE regarded this paper of Dr. Mercier's as a most important one. He thought the best definition of insanity was that given by Shakespeare: "Madness, what is it? To be nothing else than mad." Where many had made a mistake, he believed, was in forgetting that the first sign of insanity was an alteration of conduct; that had been a guiding principle in his practice as an alienist. The first sign of mental aberration was not disease of the conduct, but an alteration of the conduct. The line of demarcation had been passed when a man was brought of whom it could be said, "This man is insane, and he was not insane before." That had been shown in several cases of which he could quote the particulars. There was such a thing as disorder of mind which could not be termed insanity, such as those mentioned by Dr. Mercier, in which there was an hallucination of hearing. When Dr. Steen read his recent paper on "Hallucinations in the Sane" he was very glad to have been present to hear it. On that occasion he (Dr. Pasmore) pointed out that a person might have an hallucination of hearing, or of sight, or anything else, and yet might lead a perfectly normal life, but when that hallucination had to do with the person's life, then an alteration of conduct set in, and the person might be adjudged insane. He reminded the meeting of the case he quoted at that last meeting of a man who, with his hallucinations of hearing, was courted and made much of by aristocratic London, and who made a large fortune out of his hallucinations. He went on very well until he heard, or fancied he heard, people saying things which affected his character, calling him a thief and a cheat. When that stage arrived he became insane, and the speaker had him under care at the present time. The line of demarcation justifying certification was not when a man became suicidal or dangerous, because many persons who were neither of those were still very insane and quite unable to adapt themselves to their surroundings. He therefore insisted on the point that the first indication of insanity was an *alteration* in conduct.

Dr. J. F. BRISCOE said the present contribution dealt with a very practical point. He had been in a police court twice a week and been asked by the Judge, "What is the condition of the mind?" A man was alleged to be drunk, and the decision to be arrived at was whether to send him to the workhouse for fourteen days because his conduct had been altered. He was known to have been all right the day before, and he was given a dose of Epsom salts, and next day he was all right. Recently he was called to say whether a man was certifiable, and his reply was that, if he were certifiable, then half the people of Southampton were certifiable. The man was running in front of a tram-car and trying to knock the driver off it. As he had done the same before, he certified him, and was written to the next day

to know why he had done so. It would be of advantage if this Association would set out some definition, not quibble about terms. His teacher used to say everybody was insane, but some were more so than others. He saw Dr. Mercier's arguments, which were those of an able mind, and he realised Dr. Craig's attitude too, yet conduct was a very important criterion.

Dr. NOËL SERGEANT said he had not listened to Dr. Mercier for the twenty-seven years which he mentioned in the paper; the present was the first time he had heard the view expounded, and he begged to subscribe to it. He considered that Dr. Mercier had made out a convincing case. The conduct must be studied, for it was upon that that the differentiation between the sane and the insane rested mainly. Another means was to differentiate between the insane person and the criminal. The attempt to differentiate between the sane and the insane brought in its train the corresponding difficulty of defining the difference between the insane person and the criminal.

Dr. J. G. SOUTAR said this was a very old discussion; it had been going on ever since insanity was written about, and practitioners of the specialty could go on quibbling with all their ingenuity in regard to the exact meaning of terms. All were agreed when dealing with a person of unsound mind, but they were not able to frame in words, in the form of a definition, what they were quite agreed about in practice. That had been a difficulty ever since the question of insanity had been raised. Sir Bryan Donkin, interpreting—properly, he thought—Dr. Mercier's attitude, said that conduct was the criterion by which the sanity or the insanity of a person was to be decided. His (the speaker's) own view did not agree with that. Still, he was not concerned with a definition; it was a question of being called in to certify certain persons. A person's conduct had been of a certain type, and one had to say whether this anti-social conduct was the result of mental disorder or whether it was not. In other words, one went beyond the mere consideration of his conduct. It was common to find in histories that patients adopted, or fell into, certain mental attitudes which tended to certain types of conduct; and when the history of these patients was better known it revealed the fact that for a long time they had been fighting against that tendency, which was the logical outcome of the mental condition. He held that long before a patient would even admit in words, and certainly before he committed any anti-social act, he was subject to a definite mental attitude; and it was the physician's duty to ascertain, by little things, the tendency and anticipate its development, so as to save the person from the impending evil. Often he was prepared to certify a man before he had committed any anti-social act, even before he was prepared to admit in words what his mental state was. The alienist viewed the general question and considered it as a whole; he did not fix his attention on the person having said one wrong word or done one little wrong thing. Given a person of unsound mind, it was the alienist's business, not necessarily to certify him, but to take such steps as would prevent such person from falling into the committal of an action which would be a disaster to himself. The criterion which the meeting had been discussing to-day was not the whole matter, it was one of the criteria by which a man was adjudged to be of unsound mind. One had only to go to the derivation of the word "madness" to see that it meant rage and nothing else, and unsoundness of mind was the state out of which mad acts sprang, and it was the work of the alienist to anticipate and treat that state before the mad act was committed.

Dr. MERCIER, in reply, said they were getting on, for on the last occasion he brought the subject before the Association it was laughed out of the room, and nobody seemed to have a word to say about it except one of derision and contempt. To-day, however, it had been seriously discussed; therefore he had hopes that in another twenty-five years the Association might find itself on a level with the general state of medical opinion outside this body. Inside the Association, however, the opinion on the matter, as far as he could make out, was still very nebulous. Unfortunately, his infirmity would not allow him to reply to the speakers in detail, but he would read their criticisms in the Journal, and he hoped to reply—perhaps more satisfactorily—in print.

Dr. MAURICE CRAIG, who was unable to be present at the reading of Dr. Mercier's paper, writes as follows:

In the first place I wish to express my regret that Dr. Mercier is not satisfied with my reference to his work in the chapter on the meaning of the term "In-

sanity" in my book on *Psychological Medicine*. Had I appreciated the importance he attached to the doctrine, I should most certainly have stated it; the omission was not by intent, and, if the book reaches another edition, this oversight shall be corrected. Nevertheless, when I come to discuss this doctrine, I scarcely know where to begin. I have never said, neither have I ever held, that madness and unsoundness of mind are the same thing. I do not know what an obsolete term like the former means, but Dr. Mercier tells me that it is "disorder of conduct." On the other hand, he declares that all disorder of conduct is not madness. Therefore it must be a disorder of conduct which is associated with some other condition, the quality of which renders the so-called state of madness diagnosable by Dr. Mercier. He is careful to claim as his interpreters both speech and gesture, and what else is left whereby one mind may understand another? Nevertheless, he says that it is not all disorder of speech and gesture which connotes so-called madness. The fact is that behind this disorder of conduct stands Dr. Mercier's insight into mind, his wide knowledge and his learning, and although in his modesty he relegates these to a secondary position, in reality it is these qualities which make him recognise certain disorders of conduct, and certain disorders only, as true insanity.

IRISH DIVISION.

THE SUMMER MEETING of the Division was held on Thursday, July 5th, 1917, at Ballinasloe Asylum by the kind invitation of Dr. John Mills (Medical Superintendent). On arrival of the early train from Dublin Dr. Mills met attending members and motored them to the Asylum. After inspecting the farms and wards of the Asylum the visitors were driven to see various places of interest in the neighbourhood, including the battlefield of Aughrim, returning to the Asylum for luncheon.

After luncheon the meeting was held. Members present: Dr. Mills; Dr. Greene, Carlow; Dr. English, Dr. Gavin, Mullingar; Dr. Leeper, Hon. Sec. Dr. Mills having been moved to the chair, it was decided that owing to the small attendance of members routine business alone should be proceeded with.

Letters of apology for unavoidable absence were read from the following: Dr. Hetherington, Londonderry; Lieut.-Colonel Dawson, Dr. Considine, Dr. William Graham (Belfast), Dr. M. J. Nolan, Dr. L. Graham, Dr. Revington, Dr. Harvey, Dr. Lawless, Dr. Martin, Dr. F. C. Ellison, Dr. Drapes, Dr. O'Mara, Dr. Rutherford, Dr. W. Eustace, Dr. E. J. McKenna, Dr. H. M. Eustace.

It was decided that the reading of a paper by Dr. Mills on an interesting subject which was on the agenda should be postponed until the Autumn Meeting owing to the small attendance of members.

Dr. I. ADRIAN GREENE, in a short speech, expressed the regret of those present that so few of the members had been able to attend the meeting owing to war conditions, and cordially thanked Dr. Mills for his hospitality. He said they had all seen that day the many improvements recently made in the Asylum, and especially the increased food production by the cultivation of the extensive farms they had visited. Dr. Gavin having also spoken, and thanked Dr. Mills for his kindness and hospitality and for the pleasant and instructive day he had given to his visitors, the proceedings terminated.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Regulations for the Training and Examinations of Candidates for the Certificate of Proficiency in Nursing and Attending on the Mentally Defective, with respect to which some discussion took place at the Annual Meeting (see p. 613).

These Regulations are practically identical with those in force as regards candidates engaged in nursing the insane, with the exception of a few necessary verbal alterations. The same is the case with respect to the Syllabus for the Preliminary Examination, but in the case of the Final there are some alterations and additions. The first three sections on "Diseases and Disorders," "The Nervous System," and "The Mind," are practically the same. For the paragraphs under the heading in the old Syllabus of "Conduct and its Disorders" the following are substituted:

Types of mental disorder :

(a) Melancholia; Mania; Delirium; Stupor; Dementia; Delusional Insanity; Juvenile general paralysis; Insanity with epilepsy; Mental disorders arising in childhood and adolescence.

(b) Mental deficiency: Its nature and forms; Difference between insanity and mental deficiency; Development of the normal mind in childhood; Deviations therefrom in mental deficiency.

(The mentally deficient graded as (a) Idiots; (b) Imbeciles; (c) Feeble-minded; (d) Moral imbeciles.)

(c) Mentally unbalanced children.

Mental defects; Congenital and acquired.

Varieties of mental defects: (1) Genetous; (2) Mongolian; (3) Microcephalic; (4) Hydrocephalic; (5) Hypertrophic; (6) Eclampsic; (7) Epileptic; (8) Paralytic; (9) Traumatic; (10) Inflammatory or post-febrile; (11) Syphilitic; (12) Cretinoid; (13) Idiocy from deprivation of senses.

Physical abnormalities and sensory defects associated with mental deficiency.

Abnormalities of conduct.

And the last two paragraphs in the old Syllabus are replaced by the following :
Management and Training of the Mentally Deficient.

Observation of rules: Routine; Bearing of nurses towards patients; Promises to patients; Threats; Discipline and correction; Feeding; Cleanliness; Personal habits; Drivelling; Incontinence; Sexual irregularities, etc.

Training of senses and power of attention.

Training of muscles: Exercises; Massage and remedial movements; Inculcation of self-helpfulness in undressing, dressing, etc.; Cultivation of manual and industrial activities.

Cultivation of speech.

General principles of education: Simple educational exercises (*e.g.* building blocks, form and size boards, simple picture puzzles and alphabet blocks; stringing beads and exercises in colour discrimination and in counting, description of pictures, drawing and elements of writing; String work, wool work, knitting and sewing; Inculcation of good temper and consideration for others, truthfulness, etc.).

Vicious and mischievous habits: Impulsiveness; Destructiveness; Struggles and the use of force; Safeguards against physical injury; Homicidal tendencies; Liberty; Escape; Exercise, occupation, and amusement; Reporting mental changes; Interviewing patients' friends.

Care and treatment of the mentally deficient in private houses: Increased difficulties; Guardianship.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

EXAMINATION FOR THE GASKELL PRIZE, JULY 5th AND 6th, 1917.

Examiners: R. H. COLE, M.D., F.R.C.P.

J. G. PORTER PHILLIPS, M.D., M.R.C.P.

July 5th, 1917.

At 10 a.m.

PSYCHOLOGY.

(Four hours allowed.)

Questions.

1. What do you understand by the terms "projection," "meaning," "interest," and "conflict" as used in modern psychology?
2. Give an account of the current theories of the production of dreams.
3. Trace the evolution of the social instinct in its relation to mankind.
4. Describe the James-Lange theory of emotion and any modifications of this theory that you know of.
5. What is a complex? and state its *rôle* in regard to the doctrine of the association of ideas.

6. Contrast the various affections of memory from both the psychological and neurological aspects.

At 3 p.m.

CASE WITH COMMENTARY.

(Two hours allowed.)

Examine the case allotted to you (30 minutes' allowed), then return to the Examination Room and write an account of the Case, giving also Diagnosis, Prognosis, and Treatment in full (90 minutes allowed).

July 6th, 1917.

At 10 a.m.

MENTAL DISEASES.

Questions.

1. Discuss the nature and treatment of Chronic Alcoholic Inebriety.
2. Give an account of the "Tics" with special regard to their ætiology and treatment.
3. Describe the disease known as Katatonia. State your views on the significance of its symptomatology.
4. Define the recognised grades of Mental Deficiency. Give a brief description of its various types from the pathological standpoint.
5. Describe a case of Acute Delirious Mania and its treatment. What is the pathology of this disease?
6. What are the symptoms and signs in an early case of General Paralysis of the Insane? and give the differential diagnosis.

At 3 p.m. *Viva*, $\frac{1}{2}$ hour each.

EXAMINATION FOR THE CERTIFICATE IN PSYCHOLOGICAL MEDICINE.

TUESDAY, JULY 3rd, 1917.

Examiners: R. H. COLE, M.D., F.R.C.P.
 J. G. PORTER PHILLIPS, M.D., M.R.C.P.
 R. DODS BROWN, M.D., F.R.C.P.
 J. H. MACDONALD, M.B., Ch.B.
 T. ADRIAN GREENE, L.R.C.S., L.R.C.P.
 F. E. RAINSFORD, M.D., B.A.

10 a.m. to 1 p.m.

Questions.

1. Describe a case of Systematised Delusional insanity. Trace the evolution of this disease in its psychological aspect.
2. Give a clinical account of the recognised varieties of Mental Disease associated with pathological conditions of the Thyroid Gland.
3. Describe some laboratory tests used in the diagnosis of General Paralysis.
4. In what mental affections do Convulsions occur? Describe their characteristics and differentiate between them.
5. Describe briefly some methods for detecting Feigned Insanity.
6. Discuss the medico-legal and clinical bearings of a case of so-called "Moral Insanity."

At 2 p.m.

Half-hour is allowed for the examination of Case in Ward. Candidates must afterwards return to the Examination Room for *Viva Voce*.

HONOURS FOR DR. PERCY SMITH.

We regret that by an oversight our congratulations have not been offered before now to Dr. Percy Smith on his having been elected President of the Psychiatry Section of the Royal Society of Medicine for last year, which office, by the suffrages of his colleagues, he still retains for a second year. And, in addition, he has been made President for the current year of the Neurological

Section of the same body. It is gratifying to see such proofs of the esteem in which such a well known and valued member of the Association is held by a sister society. And if our congratulations to Dr. Smith are rather late in point of time, they are none the less cordial and sincere.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

At a Special Meeting of the Council held on September 20th at 11, Chandos Street, Cavendish Square, London, W., Dr. James Chambers, The Priory, Roehampton, S.W., was elected Treasurer of the Association.

WAR SERVICE HONOURS.

THE names of the following officers of the R.A.M.C. have been brought to the notice of the Secretary of State for War for valuable medical services rendered in connection with the war :

Temporary Lieut.-Colonels: E. Goodall, J. Keay, H. A. Kidd, J. R. Lord, A. Simpson, D. G. Thomson, W. J. M. Vincent.

Temporary Majors: W. R. Dawson, H. C. Marr, F. W. Mott, N. H. Oliver, N. Roberts, F. M. Rodgers, R. G. Rows, J. C. Woods, R. Worth.

Temporary honorary Major E. W. White, M.B., to be temporary honorary Lieut.-Colonel.

EGYPTIAN NEWS.

DR. COLLINS encloses two cuttings from the *Egyptian Mail*, which are translations from the native papers, and will, no doubt, be read with interest.

A TRIBUTE TO DR. WARNOCK.

"Al Ahram" says:

"The refusal of Dr. Warnock of the post of Director-General of the Public Health Department, and his desire to remain in the post he has been occupying for the quarter of a century, is a lesson to all officials.

"Mental diseases are the most obscure of all maladies, and many of them are still not understood; in fact, modern science has been able to define only some of them. All these diseases were unknown in Egypt thirty or forty years ago, when the patients were constantly tortured either by striking them with the key of a saint or by burning their faces to drive the *djinn* out of the body.

"Dr. Warnock has organised the lunatic asylum on the modern European system, and treated the patients in accordance with the latest discoveries; in fact, he treats them as a kind father treats his sons, and those who read his annual reports realise his great labours in the service of humanity.

"It has been said with much truth that insanity has increased in Egypt, but those who say so are not aware that the progress of civilisation leads to the increase of these diseases in all countries, while the enlightenment of the public makes them produce their patients instead of concealing them, with the object of having their malady attended to.

"The Department of Mental Diseases has two hospitals—one in Khanka for men, placed under Dr. Dudgeon; and the other for men and women at Abbassia, under Dr. Warnock himself. Three years ago a hospital for British soldiers was opened and placed under Dr. Warnock also.

"The Department of Mental Diseases was at first under the Department of Public Health, but six or seven years ago it was detached from that Department, and Dr. Warnock has thus become independent of it and placed directly under the Ministry of the Interior. All those who have had to do with Dr. Warnock are aware that he performs his difficult duties with the greatest conscientiousness.

"The latest demonstration of Dr. Warnock's serious services is this expression of his preference to remain in his post. Every official is anxious to be promoted and to have his pay increased, and although the public thinks that the post of Director-General of Public Health is senior to that of the Director of the Mental Diseases Department, these words of Dr. Warnock have given his post special importance. He means to say that the post which he has occupied for twenty-five

years, the patients whom he attends to and whose sufferings he alleviates, and the researches his department makes are more to him than an increase of pay or a higher-sounding title. The Egyptian nation which honours the memory of Clot Bey and Dr. Ruffer will also honour that of its faithful servant, Dr. John Warnock."

A CERTIFICATE OF INSANITY.

Al-Mahrussa says:

"I always supposed that licences were given to coachmen, shoeblacks, bar proprietors, etc., only, who are allowed to exercise their trade after passing a medical examination which at least certified them sane persons. But I have lately seen a certificate of madness which allows its holder to do as he likes.

"The other day I came across Hassan Marei who has to go once a week to the lunatic asylum to be examined. The man escaped from the asylum years ago wearing a native woman's 'izâr,' and went to the authorities to whom he said that he was not insane, and he was therefore allowed to go about as he pleases. But it seems that he still likes to call himself insane, particularly when this pretension saves him from his adversaries. He is, therefore, sane with the sane, but mad when he considers it in his interest to call himself mad.

"I asked him how he came to have a licence for madness, and was told that he obtained it from the Court; and produced a judgment rendered by the Muski Court in a case of libel of which he was accused, in which the Court said that as the defendant, Hassan Marie, was kept in a lunatic asylum for some time and still goes there once a week for medical examination, it is likely that he committed the act complained of in a moment of madness, and is therefore acquitted.

"When I saw the judgment I said to myself: how excellent is this madness which is so powerful a protection in moments of danger!"

EXAMINATION FOR NURSING CERTIFICATE.

List of Successful Candidates.

FINAL EXAMINATION, MAY, 1917.

Berks County.—Lillian E. Gray, Alfred Stickley, Ruth L. Plumb.

Carlisle.—Isabella Main.

Glamorgan.—May E. Thomas, Urania Morris, Margaret J. Davies.

City of London.—Mabel John, Marion Johnston, May L. Webb.

Hanwell.—Evelyn E. Plumridge, Esther E. Hankin, Amy M. Brocksopp, Ethel E. Gascoyne, Mildred Rust, Mary Russell, Edith Rowell, Mary V. Bennett, Maggie Wright, Winifred M. Toms, Irene M. Earp.

Bexley.—Mary A. Stocker, Katherine Gander, Florence E. Saunders, Edith Jones, Mima Robbins.

Cane Hill.—Sarah M. Sheppard, Eleanor Shepherd, Mary E. Dunn, Helen Stearman.

Colney Hatch.—Elise S. Bell, Annie L. Cooper, Beatrice L. Dawe, Yvonne R. Colin.

Notts County.—Nancy Bush, Kitty Nolan, Violet Wright.

Bicton, Shrops.—Violet M. Brookes, Hilda Jane Davies.

Cheddleton.—Winnie D. Butler, Hylda M. Thomas, Katie Farrell, Sarah Champion, Laura Johnson.

Burntwood.—Grace D. Perry, Moses Roberts.

Netherne.—Ellen M. Tye, Beatrice E. Jury, Violet E. Hall, Elsie K. Kilgower.

Haywards Heath.—Ada M. L. Brooshoft, Ellen M. Haysey, Amy E. Cox, Alice E. Harbord.

Napsbury.—Sarah R. Chandler, Muriel Edith Western, Annie B. Urquhart, Brigid M. O'Sullivan, Olive Turney, Dorothy Bailey.

Notts City.—Florence Swinbourne, Martha Robinson.

West Sussex.—Dorothy M. Hewer, Eliza M. A. Probert, Herbert Long, William H. Berry.

Barnsley Hall.—Nellie Smith, Hilda W. Lucas.

Winson Green.—Clara R. Newbold.

Hull City.—Catherine E. Tait, Edward McCormick.

Sunderland.—Phylisa M. Forster.

- Bailbrook House*.—Florence L. Morris, Emily Trevis.
Bootham Park.—Lilian Robinson, Maria M. Williams, Seth L. Smith.
Brislington House.—Alice M. Summerhill.
Camberwell House.—Elsie L. Palmer, Ellen M. Ashbury, Georgina Creak.
Coton Hill.—Winifred Keeling, Florence L. Wilson, Florence Cox.
Fenstanton.—Annie McMahon.
Holloway Sanatorium.—Ida Richards, Mabel C. Kerr, Olive M. Martin, Marjorie N. Ellis, Catherina Tjebbes.
Middleton Hall.—Mary H. Bonson, Ellen G. Butters, Priscilla Farley.
Retreat, Yorks.—Violet S. Huggard, Elizabeth H. Thomson, Amy Skelding.
St. Andrew's.—Annie Lee.
Aberdeen Royal.—Jean Young, Elsie H. Cowie, Annie Hay, Dorothy McHardy, Helen Forbes.
Aberdeen District.—Jeannie A. Rennie, Maggie M. Duff, Catherine M. McPetrie.
Argyle and Bute.—Nellie Creegan, Rebecca F. McGowan.
Ayr.—Annie R. Dickie, Christina S. Smith, Annie Young, Margaret Y. Chalmers, Agnes Wilson, Thomasina Gibson.
Crichton.—Lewis Falconer, James Kerr, Margaret Wilson, Isabel H. Williamson, Janet J. Gilmour, Janet R. Murray, Annie Nelson, Margaret Brown, Jeannie Stewart, Beatrice A. White, Sara L. Murray, Annie W. Smith, Sarah McMillar, Elizabeth Edgar, Annabella M. Groat, Margaret J. Player, Marion D. Turner, Margaret S. Riddell, Catherine McRury.
Dundee.—Jeanie Carr, Christina Low, Lizzie Lovie, Patrick Donnelly.
East Lothian, Haddington.—Marguerite M. L. Cleugh, Helen J. Mackenzie.
Edinburgh Royal.—Barbara Robertson, Jean Dickson, Jane A. Currie, Ethel Waller, Maggie M. McGillivray, Helen McArdle, Edith Bateman.
Gartnavel.—Mary Daly, Mattie Murdoch, Annie Martin, Rachel W. Stein.
Gartloch.—Annie Campbell, Elizabeth Bruce, Agnes Rankin, Jane C. Bryan, John McDonald, Elizabeth Garrow.
Woodilee.—Jessie B. Findlay, Violet R. Phillips, Patrick McGlynn.
Lanark.—Thomas Prentice, Barbara Anderson, Margaret Begley, Dorothy Cooper, Mary Singer.
Melrose.—Donald Campbell, Helen Simpson, Alexander Bruce, Catherine McKay.
Montrose.—Margaret Duncan.
Renfrew.—Flora McDonald.
Riccartsbar.—Isabella Duff, Mary C. Douglas.
Larbert.—Irene K. Lowes, Christina M. Cloonan, Margaret J. Blair, Annie Macrae, Annie R. Macdonald, Annie Townshend, Jean Sloan, Janet M. Donnan.
Monaghan.—Annie Cully, Maggie McCaffrey, Annie Daly, Michael McManus, Charles Coleman, John McEntee.
Portrane.—John Kinsella, Thomas McDonnell, William Brady, Bridget Murtagh, Rose Cartwright, Mary B. Soughley, Mary Croarkin.
Richmond.—Patrick Coogan, Rose Kiernan, Elizabeth Gore, Elizabeth Doyle, Christina Fegan, Elizabeth J. Gavin, Kate Cass, Thomas Conroy, Nicholas Higgins.
Hellingly.—Elizabeth H. Willey, Mary Roberts, Isabelle E. Ormonds, Edith A. Langley, Ethel E. Duley, Lilian Nugent, Ethel L. Steer, Blanche Beebee, Emma L. Stevens, Edith M. Coates.
Long Grove.—Edith Clarke, Rosa E. Dealey, Annie J. Gould, Louisa M. Pharaoh, Agnes Darke.
Banstead.—Marion E. M. Taylor, Daisy M. Barrack, Evelyn R. Horton, Emily R. Hempstead, Rose A. Quinn, Edith Wilkinson, Kate Mills, Dulcibel Jeffery.
Chester County, Upton.—Edith Diggory, Constance Eleanor Wharan, Ruth Williams, George E. Partin.
Macclesfield.—Nellie O. Watts, Elizabeth Cameron.
Denbigh.—Ellis Jones.
Hawkhead.—Isabella Smith.
Inverness.—Elizabeth B. Bothwell, Mary H. Mackay, J. Maclachlan, Margaret A. MacCulloch.
Mullingar.—Teresa M. Diffley, A. Scanlon, Lizzie Christie, Mary Anne King, Daniel Brennan.

Barming Heath.—Daisy Wooley.
Severalls.—Mary Gerrie, Winifred V. Taylor, V. Large.
Scalebor Park.—Florence Helliwell, Caroline Barley.
Gateshead Borough.—Agnes Walmsley.
Warwick County.—May Flaherty, Amelia F. Marshall, Hilda Harris, Clara Genders.

South African Asylums.

Valkenberg.—E. F. Ings.
Bloemfontein.—Lawrance Hartig.
Pietermaritzburg.—Thomas H. Ellender, Virginia J. Danniell.
Pretoria.—Irene Ryan, J. Johanssen, E. Shrimpton, A. Parkinson, E. M. Saunders, M. Lynn, J. C. Truter, M. Grant.
Grahamstown.—William Henry Hall, Stephanus Johannes Bosch, Ivy Muriel Boardmann.

PRELIMINARY EXAMINATION, MAY, 1917.

Berks County.—Jane Gilhenny, Kate Roles, Rose E. Hurle, Henrietta F. Neely, Lillian Mercer, Ethel Price.

Chester County.—Edith E. Williams, Nellie Griffiths, Margaret Morris, Lucy Arrowsmith, Lily E. Robinson, Annie C. Manley, Margaret J. Griffiths, Annie Eyton, Minnie Lloyd, Margaret Williams, Sarah J. Partin, Rosaline E. Nowell, Ivy Jeffries, Alice Crook.

Macclesfield.—Maie Edwards, Nellie Ashcroft, Annie Peden, Sarah J. Leigh, Jeanie Killough, Ethel Howells, Alice E. Belbin, Minnie Pearson, M. Leigh, Mary A. Frost, Emily M. Williams, Edith Beach, Matilda Callaghan, Ruth Dunkerley.

Cumberland and Westmorland.—Marion M. S. Lightbody, Ethel M. Howe, Alice Holdsworth, Margaret Macdonald, Flora Gray.

Denbigh.—Annie Lewis.

Brentwood, Essex.—Nellie M. Gardner, Mabel S. Brittain, Eva M. Barker, Miriam Miller.

Glamorgan.—Gladys M. Phillips, Dorothy Thomas, Gladys A. Lewis, Bridget A. Neville, Gwendoline M. Evans, Catherine A. Thomas, Gertrude Jones, Beatrice Vile, Elizabeth J. Jones, Gertrude Wilkes, Margaret Davies, Sarah J. Tarr, Sarah A. Jones, Muriel Owen, Elsie May Griffiths.

Barming Heath.—Agnes M. Williams, Alice M. E. Escott, Laura V. Killian, Margaret M. Wimsey, Annie Kennedy, Ellen E. Shepherd, M. Temple, Phyllis M. Evans, Gladys M. Bishop, Alyce Warren.

Chartham.—Winifred K. Brazier, Alicia Cullen, Mary Hatton, Amy A. Wellard, Mary Angus.

Kesteven.—Florence M. Wright, Lucy E. Todd, Violet M. Jackson, Violet M. Spikings, Sarah K. Reast.

Notts County.—Lucy E. Jackson.

City of London.—Elaine Quail, Janie Hosken, Edith M. Allibone.

Banstead.—Florence M. Marley, Florence E. Smith, Phyllis Stribbling, Winifred C. Bright, Jeanie A. F. Fisher, Elizabeth R. Neighbour, Frances C. Ollett, Emily Trevorror, Susan E. Howard, Ida Hill, Florence Ada Davey.

Cane Hill.—Olive M. Clavey, Lillian M. Corby, Ellen L. Davies, Rose E. Martin, Dilys M. Jones, Caroline Evans, Esther A. Howard, Caroline Sapsford, Olive Jibb, Ellen Edwards, Nellie L. M. Perrey, Mary Connell, Elsie M. Payne, Georgina G. Butler, Daisy E. Martin, Fleanor Farrelly.

Claybury.—Edith E. Woodford, Maud E. Wiese, Elizabeth V. Warner, Dorothy E. Slater, Edith M. Simons, Florence D. Shead, Josephine M. Ripley, Annie E. Reeve, Olive M. Reade, Maud J. Pateman, Mary L. Pateman, Ada E. Parrish, Hannah E. Owen, Lillian E. Mann, Alice McGillicuddy, Nellie R. Love, Hilda H. Love, Janet E. Jones, Gretta Hyland, Mary Fennelly, Emily Dilley, Elsie Cook, Grace A. Clement, Maud Car, Elsie Blake, Margery C. Barker, Frances P. Allton, Edith Anty.

Colney Hatch.—Margaret K. M. Westcott, Eva M. Childs, Mary E. Magee

May Good, Minnie Young, Charlotte E. Rufus, Jessie M. Bingham, Dorothy C. Headon, Mary Ducker.

Hanwell.—Annie E. Newman, Isabella Davies, Louise Scott, Edith S. Newell, Dorothy Price, Daisy A. Partridge, S. Cooper, Catherine Hart, Mabel Simpkins, Ellen S. Clements, Rose M. Brown, Minnie E. Lelean, Elsie Stebbings.

Long Grove.—Ruby M. V. Wilson, Maria E. Vant, Alice M. Olley, Rose A. E. Message, Grace Banwell, Adolphus W. Sadgrove.

Shrewsbury.—Ada Howells, Emma Cooper, Clara Jones, Elsie Chilton, Catherine A. Hogan.

Burntwood, Staffs.—Ethel G. Bates.

Cheddleton.—Mary Connolly, Beatrice M. Farmer, Gladys E. Chaplin, Charity E. Rooney, Phoebe Thomas, Mary F. Coyle, Catherine McEllarney, Amy Bierlein, Mary E. Watters, Esther O'Connor.

Netherne, Surrey.—Florence Vickery, Alice E. Sparkes.

Hellingly.—Annie Thomas, Rose Seeley, Winifred M. Williams, Ellen M. Vincent, Constance C. Dorey, Ethel J. Gurney, Rose Brett, Margaret Clarkson, Rachel Evans, Florence B. E. Christian, Winifred Johnson, Bertha Miles, Elizabeth J. E. Drew, Mary Withey, Edith Francis.

Haywards Heath.—Ellen H. Smith, Maud E. E. Ashe, Edith Iron, Grace A. Lane.

Worcestershire, Barnsley Hall.—Thomas M. Wincott, Jonas J. Wakeman, Frank Walton, Emily K. Newman, Alice E. Blick, Lottie Baker, Annie Bingham, Alice Hill, Edith King, Esther A. Taylor, Ellen L. Tomkys.

Scalebor Park.—Lillian M. Mavin, Agnes A. Binks, Doreen Illingworth, Irene Edwards, Annie Sygrove, Edith Barker, Phyllis Lister, Charlotte Priestley.

Beverley, Yorks.—Minnie E. Proctor, Eva Welburn, Mary E. Ramshaw, Evelyn B. Parish.

Winson Green, Birmingham.—Emma Benton, Edith A. A. Eads.

Derby Borough.—Marjorie P. Cox, Elizabeth Mason, Florence Pritchett, Doris A. Wright.

Hull City.—Walter Robinson, David Stynes, Jenny Bate, Eveline Brown, Emmeline Grayson, Kate Marr, Lily Neal, Agnes Senior, Alice Stables.

Notts City.—Daisy Branton, Blodwen Davies, Ethel Davies, Mary Halford, Edith A. Pearce, Hilda Pearce, Jane Riley, Ethel L. Steele.

Portsmouth.—Bridie Butler, Beatrice M. Swan, Alice M. Trotman, Kathleen Dyer, Dorothy Jolly, Hilda Larkman, Florence M. Webley, Elsie A. Parker, Nellie L. Hill, Grace E. Norris, Myrtle Phillips.

Sunderland.—Mary Grainger, Christina Glassford, Lizzie A. Forde, Christina Laws.

Bailbrook House.—Mary Peddle.

Bootham Park.—Henry Locke, Margaret Black, Mary Black, May Boyes.

Brislington House.—Florence A. L. Iles, Fanny Joyce, Margaret E. Carr, Florence L. Baker.

Camberwell House.—Dorothy L. Phelps, Dulcie Sybil Steer, Gertrude Hopkins, Annie E. Mecham, Amy E. Glisbey, Kathleen N. Sloan, Ida M. Claburn, Myfanwy Roberts, Jessie Webster, Dorothy G. H. Jenkins, Jane E. Prall, Ethel E. M. Pepler, Mildred A. M. Palliser, Dorothy W. Phillips, Mary E. Welton.

Holloway Sanatorium.—Edith M. Telfer, Amy E. K. Davies, Celia J. Orme, Muriel Perkins, Winifred M. E. Healey.

New Saughton Hall.—Elizabeth Mitchell, Alexandra V. Hall, Mary Gerrard, Donald Henry.

York Retreat.—Ada Hutchinson, Ethel B. Davison, Margaret E. Wilmot, Minnie M. Swanson, May Brydon, Lizzie Alexander.

St. Andrew's, Northampton.—Edith A. Moss, Sarah S. J. Buck, May Burt.

Aberdeen Royal.—Emily W. Glennie, Margaret J. Logie, Agnes Murray, Eliza M. Jamieson, Jean R. Matheson, Annie I. E. Gordon, Elizabeth B. Anderson, A. G. Cameron.

Aberdeen District.—Elsie Campbell, Lily J. Reid, Catherine Crichton, Margaret Sutherland, Helen M. McLean.

Argyle and Bute.—Catherine McLeod, Mary Sinclair, Mary McA. Haggart, Mary A. McK. Fletcher, Margaret Watt, Lily Mackay.

Ayr.—Agnes B. Cowan, Jessie Millar, Jane J. McCulloch, Dorothy Dawe, Jessie

L. M. Yates, Janet S. Mackenzie, Agnes S. Mallock, Margaret Mathieson, Elspeth G. Kirkwood, Jane F. White, Jane B. McKellar, Agnes B. Haig, Elizabeth Summers.

Banff.—Jeanie M. Burnett, Maggie A. Stewart, Frances M. Sutherland.

Crichton.—Ellen McCaw, Margaret McCloy, Sarah J. Maclean, May Travers, Annie M. Weir, Mary Campbell, Christina MacAskill, Mary B. Munro, Mary Fraser, Mary Tait, Charlotte Henderson, Margaret McK. Nicholson, Adelaide McAdam, Catherine Macdonald, Elsie D. Potter, Mary MacFadijen, Elizabeth Cairns, Margaret H. Smith, Marion Morrison, Janet McCartney, Margaret E. Kennedy, Lena E. Weston, Grizel Ellen Brand, Molly Graham, Mary A. W. Starkey, Lizzie A. Reid, Jean Quinn, Catherine McCloy, Jean J. Ross, Annie McCullen, Isabel Campbell, Jessie K. Cameron, Elizabeth Hendry, William F. Farrington, Robert Purvis, William B. Henderson, James M. McLaren, John L. Campbell, William Scott.

Dundee.—Margaret H. Ladd, Jean Corbett, Norah Knowles, Laura J. Low.

Elgin.—Ann B. Strathdee, Lily L. Taylor, James Mackintosh, B. Philip, Isabella Hadden.

East Lothian and District.—Annie Thomason, Elizabeth R. M. Walker, Mary Cumming, Marion Farquhar.

Edinburgh Royal.—Eva H. Dodd, M. Macrae, Margaret Brady, Elizabeth Leadbetter, Mary B. Sinclair, Mary Finnigan, Annie D. Macvean, Elizabeth Robertson.

Gartnavel.—William Inglis, James Cameron, Annie B. Lorimer, Ethel E. Fergusson, Catherine Cameron, Catherine T. Robertson, Annie Stewart, Agnes McD. Hastie, Molly McCann.

Gartloch.—Charlotte Rarity, Flora Robertson, Margaret F. Levack, Isabella McC. Parker, Mary A. O'Reilly, Margaret Summers, Susan B. Proctor, Morag Kennedy, Jessie Macrae Douglas, Christina McLeod, Margaret Dobbie, Janet McK. Shennan, Davina D. Robertson.

Woodilee.—John Welsh, Agnes C. Hamilton, Ellen D. Mann, Georgina H. Wilson, Elizabeth A. Reat, Catherine Morgan, Mary F. McIntyre, Mary Macdonald, Dorothy Dale, Elizabeth Lithgow, Ann J. McLaughlin, Elizabeth McC. McPhail, Mary S. Stewart, Jessie A. Cook, Anne Macdonald, Helen H. Brown, Janet Crombie.

Hawkhead.—Beatrice Andrews, Isabella E. Leslie, Marie Hood, Charlotte Fletcher, Julia Mullany, Stewartina C. G. Adams, Elizabeth Ross, Louisa Brady.

Inverness.—Isabella Macdonald, Kate McGuinity.

Lanark.—Helen W. Baillie, Sarah Elliot, Annie Knowles, Jean McHardy, Mary McHattie, Jessie Macintosh, Annie M. McLaughlin, Mary McLellan, Margaret G. Millar, Elizabeth Newall, Catherine O'Connell, Mary Purvis, Elizabeth Singer, Catherine Smith, Elizabeth S. Watson.

Melrose.—Margaret Webster, Elizabeth J. Coulon, William Wilson, Harriet Mackenzie.

Midlothian.—Helen K. C. Tennant, Margaret Macrae, Agnes G. Lemmon, Mary Keith, Hughina Findlay.

Perth.—Johan M. MacDonald, Helen H. Watson.

Montrose.—Nellie Callaghin, Georgina Fairweather, Margaret Tierney, Williamina D. Allan, Robina C. McKay, Rachel Smith, Alice Smith, Norah Armstrong, Robina Stewart.

Murray.—Elsie D. Muir, Helen S. Brown, Jessie J. Burnett.

Riccartsbar.—Robert J. Mitchell, James McBain, Jeanie McConachie, Jane Alexander.

Smithston.—Thomas Goldie, Isabella J. Murray, Margaret J. Macleod, William Cameron, William B. Cameron, Margaret L. Hamilton, Christy A. McLeod.

Enniscorthy.—James Byrne.

Londonderry.—Cassie Stranie.

Monaghan.—John Gray, Joseph Wilson, Owen Sheridan, George Jordan, Robert Williamson, Thomas A. Maxwell, Teresa M. Ward, Tillie McClelland, Maggie Corr, Lillie Duffy.

Mullingar.—Thomas Commons, Michael Scally, Thomas Murray, John Creamer, James Martin, William Flanagan, Lizzie Glennon, Marcella Killian, Margaret Prunty, Rose A. Mullen, Nellie Christie.

Portrane.—Mary E. Carolan, Catherine Tighe, Annie E. Rochford, Bina Fahy, William Kavanagh, Patrick Healy, John Cartwright.

Richmond.—Patrick Seery, John Flanagan, Michael Purfield, Elizabeth Doyle.

St. Patrick's.—Thomas Bohan, Thomas Mullarney, Michael O'Neill, Marguerite Finlay, Margaret Hogg, Ida Jordeson, Jane O'Toole, Henrietta Patterson, Rose Trout.

Severalls, Essex.—Ellen A. Davies, Frances M. Bishop, Florence M. Holmes, Mary J. Davies.

Bethlem Royal.—Millicent M. Bennett, Rose A. Huss, Bertha Horwood, Ernest A. Virgo.

Warwick County.—Gertrude Walters, Kate Haines, Elsie Faulkner, Molly Kellaghan, Della Everall.

South African Asylums.

Valkenberg.—N. J. Smith, Johanna von Mollendorf, C. A. Griffiths, Jacob Blomkamp, M. J. Kroezen.

Bloemfontein.—R. Robinson, G. M. Wadsworth, A. J. Jacobs, S. Schoeman, H. M. M. Luttig, A. H. K. Smit, J. E. Laidler, M. D. Maree, C. P. Kok.

Pretoria.—H. Heffman, H. Greef, A. Clausen, J. Page.

Grahamstown.—Ellen Maud Jones, Alma Magnet Webber, Rachel Maria Johanna Joubert, May Reilly.

OBITUARY.

ALEXANDER REID URQUHART, LL.D., M.D.Aberd., F.R.C.P.Edin.,

Formerly Physician-Superintendent of James Murray's Royal Asylum, Perth.

DURING the last two years the Scottish Division of the Association has suffered the loss of two of its honoured members in Sir Thomas Clouston and Dr. Turnbull. We have now to deplore the passing of Dr. Urquhart, of the Murray Royal Asylum, Perth. This occurred at Eastbourne on July 31st—the same date as that on which there also died his life-long friend, Dr. Hayes Newington, of Ticehurst. It is not too much to say that the Medico-Psychological Association was deprived on that day of two of its most representative and esteemed surviving members in England and in Scotland.

Dr. Urquhart was a regular and prominent attender of the meetings of the Association, he played an impressive and effective part in its deliberations, and he engaged actively in many phases of its practical work. He was known personally to, and much liked by, very many members of the Association, and the value of the services he rendered was recognised by all. In recognition of these facts the last distinction conferred upon him was most appropriately his election as an honorary member of the Association. We feel it now to be a duty to record, as a tribute to his memory, some impressions of him and his work in the pages of this Journal, in the welfare of which he took so affectionate an interest while he was its Joint Editor.

As is so often the case with those who make a deep impression on their fellows, Dr. Urquhart's strong personality was his outstanding feature. He was a big man—big in mind and heart, as well as in body. He was also a highly cultured one. The range of his interests was exceptionally wide, his industry was great, and he had cultivated, apparently with ease, his many mental gifts. He had in the first place a very strong love of art in all its aspects; he understood it in no ordinary way, and he was proficient in the technique of several branches of it. In the special sphere connected with his professional work he applied these artistic talents to the architecture and decoration of buildings connected with the care of the insane. The utilitarian details of asylum construction, such as door-handles and water-taps, were, however, also at his finger-tips. We believe that no one in our profession was his superior in knowledge of these matters, and he contributed articles on asylum construction to Hack Tuke's *Dictionary of Psychological Medicine*. During his period of office as Superintendent, among other structural improvements introduced by him, a recreation hall and two new villas were added to the asylum, in the designing of which he helped largely. A beautiful little chapel with an organ was also designed by him, and built by contributions from

friends of patients and of the asylum and from his own personal friends. Having been born in Elgin, he early took an interest in its cathedral, and later on in ecclesiastical architecture in general. Architecture and music were two powerful lodestones to him all his life, and drew him to most of the old chateaux and cathedrals in France and to the Wagner Festival at Baireuth. He encouraged musical and theatrical performances among his patients and staff, and no amateur ever made a more acceptable stage-manager.

Apart from work, books were, however, his greatest interest. He was keenly interested in literature, both medical and general, but he was also a lover of books themselves. He formed an interesting library, which was housed in most artistic surroundings, the designing of which by himself was a labour of love and a perpetual joy to him when completed. One of his hobbies was to collect books printed in the city of Perth, and his collection of books dealing with insanity was specially complete in volumes now out of print. He prepared the article on "Medical Literature" for the *Dictionary*.

These qualities and interests which have been described were the means of bringing Dr. Urquhart into contact with many people, and as he was eminently sociable and loved his fellow man he formed a wide circle of friends, both within and without the medical profession. Being of a genial disposition, and gifted with a strong sense of humour and the ability to tell a story well, he was always good company, whether he was in the privacy of his library with only one or two friends or at a public function. His post-prandial oration when President of the Association in Edinburgh was listened to with delight by all who were present. He was also prepared to put himself to an extraordinary amount of trouble to help friends who came to him for advice and information on subjects in which he was interested. He would, for example, provide designs to one for an artistic object of some kind, to another supply reasons for and against the belief that Napoleon suffered from epilepsy, while a third would receive an outline itinerary for a visit abroad, a list of hotels to go to, and numerous introductions to friends on the Continent. He had not only hosts of friends in this country, but since the death of Dr. Hack Tuke no member of our Association was so well known abroad or had so many personal friends among alienists in Europe and America.

When Dr. Urquhart was a young man he enjoyed the opportunity of travelling round the world, and he never lost his interest afterwards in travel or in foreign peoples and countries. Almost every year he devoted his holiday to visiting some country, where he studied architecture, pictures, books, and music, inspected the asylums, and added to his circle of friends. In this way he spent a holiday in Vienna, Leipzig, or Paris, or saw what was to be seen in Greece, Spain, or Sweden. He had travelled in almost every country in Europe, and in 1897 he made a long-desired journey to America, where he made many friends (among whom may be specially mentioned Dr. Alder Blumer), and from which he brought home many new ideas. He was an honorary member of Belgian, French, Italian, Canadian, and American associations connected with the care of the insane.

Kindness of heart was a prominent trait of his character, and he managed the Murray Asylum and the affairs of its patients and its officials with a fatherly and benevolent interest. He believed in bringing patients and officials together socially as much as possible, and his ideal was to convert the institution into a home and its inmates into a happy family, and he probably attained a higher measure of success in this than any other superintendent in Scotland. His benevolent instincts and activities were, however, not limited to the interests of the inmates of the institution of which he was head. He was an active member of charitable institutions in Perth itself, as well as of local antiquarian and literary societies. He took a great interest and a leading part in the British Medical Association. Whatever he took up, too, he took up keenly, and was never content to play a passive part. He loved to be in the heart of all movements, and he was consequently never happier than when he was in London. He was essentially a town and not a country man, and neither shooting, fishing, nor golfing interested him at all. It was characteristic of him and indicative of his native gentleness that he gave up shooting when a young man because of the painful impression made upon him by the sufferings of a wounded animal.

Such were the qualities of the man who succeeded Dr. Murray Lindsay as Superintendent of the Royal Asylum at Perth in the year 1880 at the early age of

twenty-eight. Important and varied as the qualifications for a post charged with such responsibilities must be, Dr. Urquhart possessed these in a measure seldom met with. In Dr. Mercier's words, "He was the very model and exemplar of the highest class of physician." He was a master of his profession, and he showed his interest in his medical work by returning to a London hospital for the purpose of refreshing his knowledge several years after graduation. He was particularly interested in the problems connected with heredity, and this was the subject of the course of lectures he delivered as Morison Lecturer of the Royal College of Physicians of Edinburgh in the year 1907. It had also been the subject of his Presidential Address to the Association in 1898. He was recognised as an authority on the Lunacy Laws of Scotland, on which subject he contributed articles and was frequently consulted by his medical brethren. It is understood that he had laboriously compiled a complete manuscript index of these laws, which it is hoped will be carefully preserved. Finally, with regard to administration, he introduced many reforms on coming to Perth, and it need only be said of him, to indicate his interest in this subject, that he was one of that enterprising quartette of Scottish superintendents who compiled the first edition of the *Handbook for Attendants on the Insane* for the Scottish Division, which was afterwards adopted by the Medico-Psychological Association. Dr. Urquhart was the last survivor of these four collaborators, the others who pre-deceased him being Dr. Campbell Clark, Dr. McIvor Campbell, and Dr. Turnbull. Now that they have all passed away it is to be hoped that the Association may soon decide to perpetuate their memory in some fitting manner, and record a sense of the obligation it owes them for their useful pioneer work. Dr. Urquhart was among the first to recognise the desirability of the matron of a medical institution like a modern mental hospital being fully trained as a hospital nurse, although he had been anticipated by Dr. Campbell Clark at Bothwell and Dr. Maclaren at Larbert in appointments they had made. His insistence on this point has met with success, and the principle he advocated has been universally accepted in Scotland. In conclusion, it is scarcely too much to say of Dr. Urquhart's knowledge of asylum affairs, medical, legal, and administrative, that it was encyclopædic in character.

Dr. Urquhart's industry, keenness, and multifarious activities, including that of an Editor of this Journal, imposed a severe strain on his constitution. Everything he put his hand to he did well, but to effect this he required to labour from 9 a.m. till the small hours of the morning in order to overtake his work—much of it a self-imposed task. Little wonder, then, that at a comparatively early age this continuous overwork told upon him.

On account of ill-health he retired in 1913 from the post he had held with honour for thirty-four years. He was then appointed Consulting Physician, and was presented by his many friends with his portrait in oils by Mr. Fiddes Watt, A.R.S.A. His *Alma Mater* conferred upon him the degree of LL.D. He was succeeded by Dr. Dods Brown, Senior Assistant Physician of the Royal Edinburgh Asylum at Morningside.

As already recorded he died on July 31st, 1917, at the age of sixty-five years, and he is survived by his widow, two sons, and three daughters. Both of the sons are in the Army, the elder being a captain in the R.A.M.C.

GEORGE M. ROBERTSON.

DR. ARTHUR EDWARD PATTERSON.

DR. ARTHUR EDWARD PATTERSON, Senior Assistant Medical Officer, City of London Mental Hospital, passed away after a short illness on August 26th. He was the son of the late Major D. A. Patterson, and received his early education in Aberdeen, subsequently proceeding to Aberdeen University, where he qualified M.B., C.M. in 1885. He obtained the M.D. in 1896. After a short period of general practice, he entered upon what was to become his life work as Assistant Medical Officer to the Derby Borough Asylum. He was appointed Senior Assistant Medical Officer of the City of London Mental Hospital on January 1st, 1892. A conscientious, painstaking officer he proved himself to be, and his cheery manner and true kindness of heart ensured his popularity with the staff and endeared him to his patients, who were devoted to him.

He was a member of the British Medical and Medico-Psychological Associations, and published several articles in the medical papers, one of which, "An Analysis of 1,000 Admissions into the City of London Asylum," appeared in the *Journal of Mental Science*.

At one time he took a keen interest in Masonry, and was Past Master of the Adelphi Lodge No. 1,670.

The first part of the funeral service took place in the Asylum Chapel on August 30th. The Visiting Committee was represented by Sir George Wyatt Truscott, Bart. (Chairman) and several other members.

ROLL OF HONOUR.

We greatly regret to hear of the death of Lieut. A. N. Oakshott, only son of Dr. James Oakshott, Medical Superintendent of the Waterford Asylum, at the Front in France. Lieut. Oakshott's career in the Army was but short, but short as it was he had endeared himself by his winning ways to every man in his company and to his brother officers, from many of whom his father has received touching letters of regret and sympathy. His Major wrote: "He died very gallantly on the early morning of September 17th while leading his platoon in an attack on the German lines. Death must have been instantaneous, but before he met it he had shown an example of courage and determination which was most inspiring to his men. He was exceedingly popular in the battalion both among officers and men, and his death has been a great loss to us all."

We offer Dr. and Mrs. Oakshott our sincerest sympathy in their sore bereavement.

THE LIBRARY.

THE Committee have to thank Dr. E. F. Ballard for presenting to the Library his book *Epitome of Mental Disorders*.

The following books have been purchased: *Spiritualism and Sir Oliver Lodge*, by Dr. Mercier; *Shell Shock and its Lessons*, by G. Elliot Smith, M.D. and T. H. Pear, B.Sc.

R. H. STEEN,
Hon. Sec., Library Committee.

NOTICE.

OLD NUMBERS OF THE JOURNAL OF MENTAL SCIENCE.

THE Association has in its possession a number of old copies of the *Journal of Mental Science*. It has been decided to offer these to Asylum authorities for Asylum Libraries. Application is to be made to Mr. Bethell, 11, Chandos Street, Cavendish Square, London, W.1, and applications will be dealt with in the order of receipt. All expenses of carriage must be prepaid.

R. H. STEEN,
Acting Hon. General Secretary

APPOINTMENTS.

Marman, John, B.A., M.B., B.Ch., N.U.I., Medical Superintendent, Count Asylum, Gloucester.

McDowall, Colin F. F., M.D., B.S.Durh., Medical Superintendent of Ticehurst House.

Costello, Christopher, M.B., B.Ch., N.U.I., Assistant Medical Officer, Richmond District Asylum, Dublin.

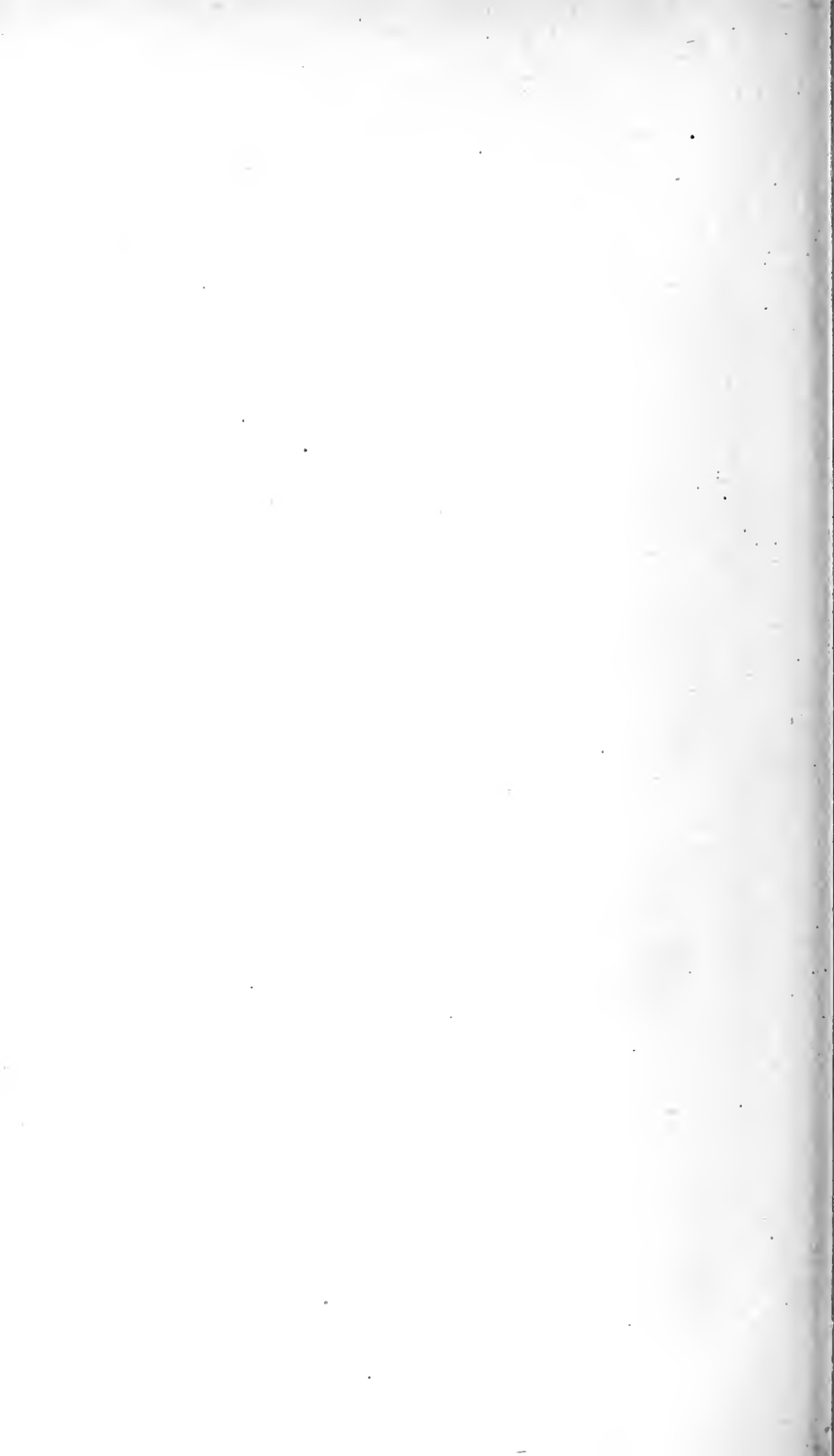
Ellis, V. C., M.B., B.Ch., N.U.I., Assistant Medical Officer, Richmond District Asylum, Dublin.

NOTICE TO CONTRIBUTORS.

N.B.—The Editors will be glad to receive contributions of interest, clinical records, etc., from any members who can find time to write (whether these have been read at meetings or not) for publication in the Journal. They will also feel obliged if contributors will send in their papers at as early a date in each quarter as possible.

Writers are requested kindly to bear in mind that, according to LIX(a) of the Articles of Association, "all papers read at the Annual, General, or Divisional Meetings of the Association shall be the property of the Association, unless the author shall have previously obtained the written consent of the Editors to the contrary."

Papers read at Association Meetings should, therefore, not be published in other Journals without such sanction having been previously granted.



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 W. J. TULLOCH.

Lectures at:—(1) University of Leeds; (2) Guy's Hospital; (3) St. Bartholomew's Hospital; (4) University of Durham; (5) University of Glasgow; (6) University of Edinburgh and Medical College for Women, Edinburgh; (7) King's College Hospital; (8) St. Thomas's Hospital; (9) St. George's Hospital; (10) University of Dublin and National University of Ireland; (11) Queen's University of Belfast; (12) Lecturer at School of Medicine, Royal Colleges and Medical College for Women, Edinburgh; (13) St. Mungo's College, Glasgow; (14) Aberdeen University; (15) St. Andrew's University and Dundee University; (16) Birmingham University; (17) University College, London; (18) St. Mary's Hospital, London; (19) University of Sheffield; (20) Victoria University, Manchester; (21) Charing Cross Hospital; (22) Middlesex Hospital; (23) Royal Free Hospital; (24) London Hospital.

LIST OF CHAIRMEN.

1841. Dr. Blake, Nottingham.
 1842. Dr. de Vitre, Lancaster.
 1843. Dr. Conolly, Hanwell.
 1844. Dr. Thurnam, York Retreat.
 1847. Dr. Wintle, Warneford House, Oxford.
 1851. Dr. Conolly, Hanwell.
 1852. Dr. Wintle, Warneford House.

LIST OF PRESIDENTS.

1854. A. J. Sutherland, M.D., St. Luke's Hospital, London.
 1855. J. Thurnam, M.D., Wilts County Asylum.
 1856. J. Hitchman, M.D., Derby County Asylum.
 1857. Forbes Winslow, M.D., Sussex House, Hammersmith.
 1858. John Conolly, M.D., County Asylum, Hanwell.
 1859. Sir Charles Hastings, D.C.L.
 1860. J. C. Bucknill, M.D., Devon County Asylum.
 1861. Joseph Lalor, M.D., Richmond Asylum, Dublin.
 1862. John Kirkman, M.D., Suffolk County Asylum.
 1863. David Skae, M.D., Royal Edinburgh Asylum.
 1864. Henry Munro, M.D., Brook House, Clapton.
 1865. Wm. Wood, M.D., Kensington House.
 1866. W. A. F. Browne, M.D., Commissioner in Lunacy for Scotland.
 1867. C. A. Lockhart Robertson, M.D., Haywards Heath Asylum.
 1868. W. H. O. Sankey, M.D., Sandywell Park, Cheltenham.
 1869. T. Laycock, M.D., Edinburgh.
 1870. Robert Boyd, M.D., County Asylum, Wells.
 1871. Henry Maudsley, M.D., The Lawn, Hanwell.
 1872. Sir James Cox, M.D., Commissioner in Lunacy for Scotland.
 1873. Harrington Tuke, M.D., Manor House, Chiswick.
 1874. T. L. Rogers, M.D., County Asylum, Rainhill.
 1875. J. F. Duncan, M.D., Dublin.
 1876. W. H. Parsey, M.D., Warwick County Asylum.
 1877. G. Fielding Blandford, M.D., London.
 1878. Sir J. Crichton-Browne, M.D., Lord Chancellor's Visitor.
 1879. J. A. Lush, M.D., Fisherton House, Salisbury.
 1880. G. W. Mould, M.R.C.S., Royal Asylum, Cheadle.
 1881. D. Hack Tuke, M.D., London.
 1882. Sir W. T. Gairdner, M.D., Glasgow.
 1883. W. Orange, M.D., State Criminal Lunatic Asylum, Broadmoor.

1884. Henry Rayner, M.D., County Asylum, Hanwell.
 1885. J. A. Eames, M.D., District Asylum, Cork.
 1886. Sir Geo. H. Savage, M.D., Bethlem Royal Hospital.
 1887. Sir Fred. Needham, M.D., Barnwood House, Gloucester.
 1888. Sir T. S. Clouston, M.D., Royal Edinburgh Asylum.
 1889. H. Hayes Newington, F.R.C.P., Ticehurst, Sussex.
 1890. David Yellowlees, M.D., Gartnavel Asylum, Glasgow.
 1891. E. B. Whitcombe, M.R.C.S., City Asylum, Birmingham.
 1892. Robert Baker, M.D., The Retreat, York.
 1893. J. Murray Lindsay, M.D., County Asylum, Derby.
 1894. Conolly Norman, F.R.C.P.I., Richmond Asylum, Dublin.
 1895. David Nicolson, C.B., M.D., State Criminal Lunatic Asylum, Broadmoor.
 1896. William Julius Mickle, M.D., Grove Hall Asylum, Bow.
 1897. Thomas W. McDowall, M.D., Morpeth, Northumberland.
 1898. A. R. Urquhart, M.D., James Murray's Royal Asylum, Perth.
 1899. J. B. Spence, M.D., Burntwood Asylum, nr. Lichfield, Staffordshire.
 1900. Fletcher Beach, M.B., 79, Wimpole Street, W.
 1901. Oscar T. Woods, M.D., District Asylum, Cork, Ireland.
 1902. J. Wigglesworth, M.D., F.R.C.P., Rainhill Asylum, near Liverpool.
 1903. Ernest W. White, M.B., M.R.C.P., City of London Asylum, Dartford, Kent.
 1904. R. Percy Smith, M.D., F.R.C.P., 36, Queen Anne Street, Cavendish Square, London, W.
 1905. T. Outterson Wood, M.D., F.R.C.P., 40, Margaret Street, Cavendish Square, London, W.
 1906. Robert Armstrong-Jones, M.D.Lond., B.S., F.R.C.P., F.R.C.S.Eng., Claybury Asylum, Woodford Bridge, Essex.
 1907. P. W. MacDonald, M.D., County Asylum, Dorchester.
 1908. Chas. A. Mercier, M.D., F.R.C.P., F.R.C.S., 34, Wimpole Street, London, W.
 1909. W. Bevan-Lewis, M.Sc., L.R.C.P., late Medical Director, West Riding Asylum, Wakefield; Elsinore, Dyke Road Avenue, Brighton.
 1910. John Macpherson, M.D., F.R.C.P.Edin., Commissioner in Lunacy, 8, Darnaway Street, Edinburgh.
 1911. Wm. R. Dawson, B.A., M.D., F.R.C.P.I., D.P.H., Inspector of Lunatic Asylums, Dublin Castle, Dublin.
 1912. J. Greig Soutar, M.B., Barnwood House, Gloucester.
 1913. James Chambers, M.D., M.Ch., The Priory, Roehampton, S.W.
 1914-1916. David G. Thomson, M.D., C.M.Edin., County Asylum, Thorpe, Norfolk.

HONORARY MEMBERS.

1896. Allbutt, Sir T. Clifford, K.C.B., M.D., D.Sc., LL.D., F.R.C.P., F.R.S., Regius Professor of Physic, Univ. Camb., St. Radegund's, Cambridge.
 1881. Benedikt, Prof. M., Franciskaner Platz 5, Vienna.
 1907. Bianchi, Prof. Leonardo, Manicomio Provinciale di Napoli. Musee N. 3, Naples, Italy. (*Corr. Mem.*, 1896.)
 1900. Blumer, G. Alder, M.D., L.R.C.P.Edin., Butler Hospital, Providence, U.S.A. (*Ord. Mem.*, 1890.)
 1900. Bresler, Johannes, M.D., Oberarzt, Lüben in Schlesien, Germany. (*Corr. Mem.* 1896.)
 1881. Brosius, Dr.,
 1902. Brush, Edward N., M.D., Sheppard and Enoch Pratt Hospital, Towson, Maryland, U.S.A.
 1887. Chapin, John B., M.D., Canandaigua, N.Y., U.S.A.
 1909. Collins, Sir William J., D.L., M.D., M.S., B.Sc.Lond., F.R.C.S.Eng., 1, Albert Terrace, Regent's Park, N.W.
 1912. Considine, Thomas Ivory, F.R.C.S.I., L.R.C.P.I., Inspector of Lunatic Asylums, Ireland, Office of Lunatic Asylums, Dublin Castle, Dublin.
 1902. Coupland, Sidney, M.D., F.E.C.P.Lond., Commissioner of the Board of Control, 16, Queen Anne Street, Cavendish Square, London, W.
 1876. Crichton-Browne, Sir J., M.D.Edin., LL.D., D.Sc., F.R.S., Lord Chancellor's Visitor, Royal Courts of Justice, Strand, W.C., and 46, Huns Place, S.W. (PRESIDENT, 1878.)

1911. Donkin, Sir Horatio Bryan, M.A., M.D.Oxon., F.R.C.P.Lond. (Medical Adviser to Prison Commissioners and Director of Convict Prisons), 28, Hyde Park Street, W.
1879. Echeverria, M. G., M.D.
1895. Ferrier, Sir David, M.A., M.D., LL.D., F.R.C.P., F.R.S., 34, Cavendish Square, London.
1872. Fraser, John, M.B., C.M., F.R.C.P.E., Formerly Commissioner in Lunacy, 54, Great King Street, Edinburgh.
1909. Kraepelin, Dr. Emil, Professor of Psychiatry, The University, Munich.
1887. Lentz, Dr., Asile d'Aliénés, Tournai, Belgique.
1910. Macpherson, John, M.D., F.R.C.P.Edin., Commissioner in Lunacy, 8, Darnaway Street, Edinburgh. (PRESIDENT, 1910-11.) (Ordinary Member from 1886.)
1898. Magnan, V., M.D., Asile de Ste. Anne, Paris.
1912. Maudsley, Henry, LL.D.Edin., (Hon.), M.D.Lond., F.R.C.P.Lond., Heathbourne, Bushey Heath, Herts. (PRESIDENT, 1871.) (Formerly Editor, *Journal of Mental Science*.)
1911. Moeli, Prof. Dr. Karl, Director, Herzberge Asylum, Berlin.
1897. Morel, M. Jules, M.D., 56, Boulevard Leopold, Ghent, Belgium.
1889. Needham, Sir Frederick, M.D.St. And., M.R.C.P.Edin., M.R.C.S.Eng., Commissioner of the Board of Control, 19, Campden Hill Square, Kensington, W. (PRESIDENT, 1887.)
1909. Obersteiner, Dr. Heinrich, Professor of Neurology, The University, Vienna.
1881. Peeters, M., M.D., Gheel, Belgium.
1900. Ritti, Aut., 68, Boulevard Exelmans, Paris. (*Corr. Mem.*, 1890.)
1887. Schüle, Heinrich, M.D., Illenau, Baden, Germany.
1911. Semelaigne, René, M.D.Paris, Secrétaire des Séances de la Société Médico-Psychologique de Paris, 16, Avenue de Madrid, Neuilly, Seine, France. (*Corresponding Member from 1893*.)
1881. Tamburini, A., M.D., Reggio-Emilia, Italy.
1901. Toulouse, Dr. Edouard, Directeur du Laboratoire de Psychologie expérimental à l'École des Hautes Etudes Paris et Médecin en chef de l'Asile de Villejuif, Seine, France.
1910. Trevor, Arthur Hill, B.A.Oxon., of the Inner Temple, Barrister at Law, Commissioner of the Board of Control, 4, Albemarle Street, London, W.

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1904. Bierão, Caetano, 48, Rua Formosa, Lisbonne, Portugal.
1911. Boedecker, Prof. Dr. Justus Karl Edmund, Privat Docent and Director, Fichthenhof Asylum, Schlactensee, Berlin.
1897. Buschan, Dr. G., Stettin, Germany.
1904. Caroleñ, Wilfrid, Manicomia de Sta. Crur, St. Andreo de Palamar, Barcelona, Spain.
1896. Cowan, F. M., M.D., 107, Perponcher Straat, The Hague, Holland.
1902. Estense, Benedetto Giovanni Selvatico, M.D., 116, Piazza Porta Pia, Rome.
1911. Falkenberg, Dr. Wilhelm, Oberarzt, Irrenanstalt, Herzberge, Berlin.
1907. Ferrari, Giulio Cesare, M.D., Director of the Manicomio Provinciale, Imola, Bologna, Italy.
1911. Friedlander, Prof. Dr. Adolf Albrecht, Director of the Hohe Mark Klinik, nr. Frankfurt.
1904. Koenig, William Julius, Deputy Superintendent, Dalldorf Asylum, Berlin
1880. Kornfeld, Dr. Hermann, Fr. Schlesien, Hauptpostluyenstr., Breslau.
1889. Kowalowsky, Professor Paul, Kharkoff, Russia.
1895. Lindell, Emil Wilhelm, M.D., Sweden.
1901. Manheimer-Gommès, Dr., 32, Rue de l'Arcade, Paris.
1909. Moreira, Dr. Julien, M.D.Bahia, Professor and Director of the National Manicomium of Rio de Janeiro (*Editor of the Brazilian Archives of Psychiatry, etc.*).
1886. Parant, M. Victor, M.D., Toulouse.
1909. Pilcz, Dr. Alexander (Professor of Psychiatry in the University of Vienna), Superintendent Landessanatorium fur Nerven und Geistes- kranke Steinhof, Vienna.
1890. Régis, Dr. E., 54, Rue Huguerie, Bordeaux.

MEMBERS OF THE ASSOCIATION.

Alphabetical List of Members of the Association on December 31st, 1915, with the year in which they joined. The Asterisk means Members who joined between 1841 and 1855.

1900. Abbott, Henry Kingsmill, B.A., M.D.Durb., D.P.H.Irel., Medical Superintendent, Hants County Asylum, Fareham.
1891. Adair, Thomas Stewart, M.D., C.M.Edin., F.R.M.S., Medical Superintendent, Storthes Hall Asylum, Kirkburton, near Huddersfield. (*Hon. Sec. N. and M. Division since 1908.*)
1910. Adam, George Henry, M.B.C.S., L.R.C.P.Lond., Manager and Medical Superintendent, West Malling Place, Kent.
1913. Adams, John Barfield, L.R.C.P.&S.Edin., M.P.C., 119, Redland Road, Bristol.
1868. Adams, Josiah O., M.D.Durh., F.R.C.S.Eng., J.P., 117, Cazenove Road, Stamford Hill, N.
1886. Agar, S. Hollingsworth, jun., B.A.Cantab., M.R.C.S.Eng., L.S.A., Hurst House, Henley-in-Arden.
1869. Aldridge, Chas., M.D., C.M.Aber., L.R.C.P.Lond., Bellevue House, Plympton, Devon.
1905. Alexander, Edward Henry, M.B., C.M.Edin., M.R.C.S., L.R.C.P.Lond., M.P.C., Physician Superintendent, Ashbourne Hall Asylum, Dunedin, New Zealand.
1899. Alexander, Hugh de Maine, M.D., C.M.Edin., Medical Superintendent, Aberdeen City District Asylum, Kingsseat, Newmachar, Aberdeen.
1899. Allman, Dorah Elizabeth, M.B., B.Ch.R.U.I., Assistant Medical Officer, District Asylum, Armagh.
1908. Anderson, James Richard Sumner, M.B., Ch.B.Glas., Senior Assistant Medical Officer, Cumberland and Westmorland Asylum, Garlands, Carlisle.
1898. Anderson, John Sewell, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Hull City Asylum, Willerby, near Hull.
1912. †Anandale, James Scott, M.B., Ch.B.Edin., Second Assistant Physician, District Asylum, Murtle, Perth; *R.A.M.C.*
1912. Aphorp, Frederick William, M.R.C.S.Eng., L.R.C.P.Edin., M.P.C., Senior Medical Officer, St. George's Retreat, Ravensworth, Burgess Hill.
1904. †Archdale, Mervyn Alex., M.B., B.S.Durh., (Medical Superintendent, East Riding Asylum, Beverley, Yorks); Capt. *R.A.M.C., T.F.*, No. 16, General Hospital, British Expeditionary Force.
1905. Archdall, Mervyn Thomas, L.R.C.P.&S.Edin., L.S.A.Lond., Brynny-Nenadd Hall, Llanfairfechan, N. Wales.
1882. †Armstrong-Jones, Robert, M.D.Lond., B.S., F.R.C.P., F.R.C.S.Eng., 9, Bramham Gardens, S.W. (and Plas Dinas, Carnarvon, North Wales; Hon. Major *R.A.M.C. (Gen. Secretary from 1897 to 1906.)* (PRESIDENT 1906-7.)
1910. †Auden, G. A., M.A., M.D., B.C., D.P.H.Cantab., M.R.C.P.Lond., F.S.A. (Medical Superintendent, Educational Offices, Edmund Street, Birmingham); Captain *R.A.M.C. (T.) on active service.*
1891. Aveline, Henry T. S., M.D.Durh., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, County Asylum, Cotford, near Taunton, Somerset. (*Hon. Sec. for S.W. Division, 1905-11.*)
1903. Bailey, William Henry, M.D.Lond., M.R.C.S.Eng., L.S.A., D.P.H.Lond., Featherstone Hall, Southall, Midd.
1894. Baily, Percy J., M.B., C.M.Edin., Medical Superintendent, London County Asylum, Hanwell, W.
1909. †Bain, John, M.A., M.B., B.Ch.Glasg.; Lt. *R.A.M.C.* (address uncommunicated).
1913. †Bainbridge, Charles Frederick, M.B., Ch.B.Edin., Surg. *R.N.R.* Assistant Medical Officer, Devon County Asylum, Exeter.

1906. Baird, Harvey, M.D., Ch.B.Edin., Periteau, Winchelsea, Sussex.
1878. Baker, H. Morton, M.B., C.M.Edin., 7, Belsize Square, London, N.W.
1888. Baker, John, M.D., C.M.Aberd., Medical Superintendent, State Asylum, Broadmoor, Berks.
1916. †Ballard, E. T. (13, Lyndhurst Road, Hove, Sussex); Capt. *R.A.M.C. (T.)*
1904. Barham, Guy Foster, M.A., M.D., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, London County Asylum, Long-Grove, Epsom, and Visiting Surgeon, County of London War Hospital, Epsom.
1913. †Barkley, James Morgan, M.B., Ch.B.Edin. (Senior Medical Officer, Bracebridge Asylum, Lincolnshire); Lieut. *R.A.M.C.*
1910. Bartlett, George Norton, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, City Asylum, Exeter.
1901. †Baskin, J. Longheed, M.D.Brux., L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., Capt. *R.A.M.C.* (address uncommunicated).
1902. Baugh, Leonard D. H., M.B., Ch.B.Edin., The Pleasaunce, York.
1874. Beach, Fletcher, M.B., F.R.C.P.Lond., formerly *Medical Superintendent, Darenth Asylum, Dartford*; Cane Hill, Coulsdon, Surrey. (*Secretary Parliamentary Committee, 1896-1906. General Secretary, 1889-1896. PRESIDENT, 1900.*)
1892. Beadles, Cecil F., M.R.C.S., L.R.C.P.Lond., The Clergy House, Englefield Green, Surrey.
1902. Beale-Browne, Thomas Richard, M.R.C.S.Eng., L.R.C.P.Lond., c/o P.M.O. Lagos, Nigeria, West Africa.
1913. Bedford, Percy William Page, M.B., Ch.B.Edin., County Asylum, Lancaster.
1909. †Beeley, Arthur, M.Sc.Leeds, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., D.P.H.Camb. (*Assistant Medical Officer, E. Sussex Educational Committee*), Windybank, Kingston Road, Lewes; *R.A.M.C.*
1914. †Bennett, James Widderspoon, M.R.C.S., L.R.C.P.Lond. (Marsden, Ilkley, Yorks); Capt. *R.A.M.C.*, 10th Batt., Duke of Wellington W.R.R.
1912. Benson, Henry Porter D'Arcy, M.D., C.M.Edin., M.R.C.P., F.R.C.S. Edin., Medical Superintendent, Farnham House, Finglas, Dublin.
1914. †Benson, John Robinson, F.R.C.S.Eng., L.R.C.P.Lond., Resident Physician and Proprietor, Fiddington House, Market Lavington, Wilts.
1899. Beresford, Edwyn H., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Tooting Bee Asylum, Tooting, S.W.
1912. Berncastle, Herbert M., M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Croydon Mental Hospital, Warlingham, Surrey.
1879. Bevan-Lewis, William, M.Sc.Leeds, M.R.C.S., L.R.C.P.Lond., Elsinore, Dyke Road Avenue, Brighton. (*PRESIDENT, 1909-10.*)
1894. †Blachford, James Vincent, M.D., B.S.Dnrh., M.R.C.S., L.R.C.P.Lond., M.P.C. (City Asylum, Fishponds, Bristol); Lt.-Col. *R.A.M.C.*, Beaufort War Hospital, Bristol.
1913. Black, Robert Sinclair, M.A.Edin., M.D., C.M.Aberd., D.P.H., M.P.C., Medical Supt., Pietermaritzburg Mental Hospital, Natal, South Africa.
1898. Blair, David, M.A., M.D., C.M.Glasg., County Asylum, Lancaster.
1897. Blandford, Joseph John Guthrie, B.A., D.P.H.Camb., M.R.C.S., L.R.C.P.Lond.; Rainhill Asylum, Lancashire.
1908. †Blandy, Gurth Swinnerton, M.D., Ch.B.Edin. (*Assistant Medical Officer, Middlesex County Asylum, Napsbury, Herts*); Capt. *R.A.M.C. (T.)*
1904. Bodvel-Roberts, Hugh Frank, M.A.Cantab., M.R.C.S., L.R.C.P.Lond., L.S.A., Middlesex County Asylum, Napsbury, near St. Albans, Herts.
1900. Bolton, Joseph Shaw, M.D., B.S., D.Sc., F.R.C.P.Lond., Medical Superintendent, West Riding Asylum, Wakefield.
1892. Bond, Charles Hubert, D.Sc., M.D., C.M.Edin., M.R.C.P.Lond., M.P.C., Commissioner of the Board of Control, 66, Victoria Street, S.W. (*Hon. General Secretary, 1906-12.*)
1877. Bower, David, M.D., C.M.Aber., Springfield House, Bedford. (*Chairman Parliamentary Committee, 1907-1910.*)
1877. Bowes, John Ireland, M.R.C.S.Eng., L.S.A. (address uncommunicated).

1900. Bowles, Alfred, M.R.C.S., L.R.C.P.Lond., 10, South Cliff, Eastbourne.
1896. Boycott, Arthur N., M.D.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Herts County Asylum, Hill End, St. Albans, Herts. (*Hon. Sec. for S.-E. Division, 1900-05.*)
1898. Boyle, A. Helen A., M.D.Bru.x., L.R.C.P.&S.Edin., 9, The Drive, Hove, Brighton.
1883. Boys, A. H., L.R.C.P.Edin., M.R.C.S.Eng., L.S.A.Lond., The White House, St. Albans.
1891. Braine-Hartnell, George M. P., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, County and City Asylum, Powick, Worcester.
1911. Brander, John, M.B., C.B.Edin., Assistant Medical Officer, London County Asylum, Bexley, Kent.
1905. †Brown, Harry Egerton, M.D., Ch.B.Glasg., M.P.C. (Mental Hospital, Fort Beaufort, Cape Province, S. Africa) Major, *S. A. Medical Corps.*
1908. †Brown, Robert Cunyngham, M.D., B.S.Durb. (General Board of Lunacy, 25, Palmerston Place, Edinburgh); Major, *R.A.M.C.*, Administrator, Springburn and Woodside Central Hospital, Glasgow.
1908. Brown, R. Dods, M.D., Ch.B., F.R.C.P., Dipl. Psych., D.P.H.Edin., Physician Superintendent, James Murray's Royal Asylum, Perth.
1912. †Brown, William, M.D., C.M.Glas., M.P.C., District Medical Officer Adviser in Lunacy to Bristol Magistrates (1, Manor Road, Fishponds, Bristol); Capt. *R.A.M.C., T.*, 2nd Southern General Hospital, Southmead, Bristol.
1910. Brown, William, M.A., M.B., B.Ch.Oxon., D.Sc.Lond., Reader in Psychology in the University of London (King's College), (King's College, Strand, W.C.). Capt. *R.A.M.C.*, Alexandria (17th General Hospital), Maghull, and the Maudsley Hospital, Denmark Hill, S.E.
1893. †Bruce, Lewis C., M.D., F.R.C.P.Edin., M.P.C. (Medical Superintendent, District Asylum, Druid Park, Murthly, N.B.); Scottish Horse Brigade, Mediterranean Expeditionary Force. (*Co-Editor of Journal 1911-1916; Hon. Sec. for Scottish Division, 1901-1907.*)
1913. †Brunton, George Llewellyn, M.D., Ch.B.Edin. (North Riding Asylum, Clifton, York); temp. Lt., *R.A.M.C.*, 2nd Cavalry Field Ambulance, British Expeditionary Force, France.
1912. †Buchanan, William Murdoch, M.B., Ch.B.Glas., Kirklands Asylum, Bothwell, Lanarkshire. Temp. Lieut. *R.A.M.C.*
1892. Bullen, Frederick St. John, M.R.C.S.Eng., L.S.A.Lond., 3, Richmond Park Road, Clifton, Bristol.
1908. Bullmore, Charles Cecil, J.P., L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., Medical Superintendent, Flower House, Catford.
1911. Buss, Howard Decimus, B.A., B.Sc. France, M.D.Bru.x.&Cape, M.R.C.S., L.R.C.P., L.M.S.S.A.Lond., Assistant Medical Officer, Fort Beaufort Asylum, Cape Colony.
1910. †Calir, John P., M.B., B.Ch.L.U.I., 198, Camberwell New Road, Camberwell, S.E.; Lieut. *R.A.M.C.*
1891. Caldecott, Charles, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Earlwood Asylum, Redhill, Surrey.
1889. Callcott, James T., M.D., B.S.Durb., M.R.C.S.Eng., Medical Superintendent, Borough Asylum, Newcastle-on-Tyne.
1913. †Cameron, John Allan Munro, M.B., Ch.B.Glas. (Pathologist, Scalebor Park Asylum, Burley-in-Wharfedale, Yorks); *R.A.M.C.*, British Expeditionary Force.
1894. Campbell, Alfred Walter, M.D., C.M.Edin., M.P.C., Macquarie Chambers, 183, Macquarie Street, Sydney, New South Wales.
1909. †Campbell, Donald Graham, M.B., C.M.Edin., Major *R.A.M.C. (T.) on active service.*
1914. †Campbell, Finlay Stewart, M.D., C.M.Glas., Capt. *R.A.M.C.*, c/o Messrs Thomson and Campbell, 113, West Regent Street, Glasgow.
1880. Campbell, Patrick E., M.B., C.M.Edin., Medical Superintendent, Metropolitan Asylum, Caterham, Surrey.

1897. Campbell, Robert Brown, M.D., C.M., F.R.C.P.E., Medical Superintendent, Stirling District Asylum, Larbert. (*Secretary for Scottish Division from 1910.*)
1905. Carre, Henry, L.R.C.P.&S.Irel., Woodilee Asylum, Lenzie, Glasgow.
1891. Carswell, John, L.R.C.P.Edin., L.R.F.P.&S.Glasg., 43, Moray Place, Edinburgh; Commissioner-General, Board of Control, Scotland.
1874. Cassidy, D. M., M.D., C.M.McGill Coll., Montreal, D.Sc. (Public Health) F.R.C.S.Edin., Medical Superintendent, County Asylum, Lancaster; *R.A.M.C.*
1888. Chambers, James, M.A., M.D.R.U.I., M.P.C., The Priory, Roehampton. (*Co-Editor of Journal 1905-1914, Assistant Editor 1900-05.*) (PRESIDENT, 1913-14.)
1911. †Chambers, Walter Duncannon, M.A., M.D., Ch.B.Edin., M.P.C., Capt. *R.A.M.C.*, Inniskillings (address uncommunicated).
1865. Chapman, Thomas Algernon, M.D.Glas., L.R.C.S.Edin., F.Z.S., Betula, Reigate.
1915. Cheyne, Alfred William Harper, M.B., Ch.B.Aber., Assistant Medical Officer, Royal Asylum, Aberdeen.
1917. Chisholm, Percy, L.R.C.P. & S.Edin., Assistant Medical Officer, Stirling District Asylum, Larbert.
1907. Chislett, Charles G. A., M.B., Ch.B.Glasg., Medical Superintendent, Stoneyetts, Chryston, Lanark.
1880. Christie, J. W. Stirling, L.R.C.P.&S.Edin., Medical Superintendent, County Asylum, Stafford.
1878. Clapham, Win. Crochley S., M.D., F.R.C.P.Ed., M.R.C.S.Eng., F.S.S., The Five Gables, Mayfield, Sussex. (*Hon. Sec. N. and M. Division, 1897-1901.*)
1907. †Clarke, Geoffrey, M.D.Lond. (Senior Assistant Medical Officer, London County Asylum, Banstead, Sutton, Surrey); Lieut. *R.A.M.C.*, No. 24 General Hospital, British Expeditionary Force.
1910. †Clarke, James Kilian P., M.B., B.Ch.R.U.I., D.P.H., High Street, Oakham; *R.A.M.C.*
1907. Clarkson, Robert Durward, B.Sc., M.D., C.M.Edin., F.R.C.P.Edin. (Medical Officer, Scottish National Institute for the Education of Imbecile Children), The Park, Larbert, Stirling.
1892. Cole, Robert Henry, M.D.Lond., M.R.C.P.Lond., 25, Upper Berkeley Street, W. (*Secretary of Parliamentary Committee since 1912.*)
1900. Cole, Sydney John, M.A., M.D., B.Ch.Oxon., Medical Superintendent, Wilts County Asylum, Devizes.
1906. Collier, Walter Edgar, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Kent County Asylum, Maidstone.
1903. †Collins, Michael Abdy, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond. (Medical Superintendent, Ewell Colony, Epsom, Surrey) (*Hon. General Secretary since 1912.*); Capt. *R.A.M.C.*, British Expeditionary Force.
1910. Conlon, Thomas Peter, L.R.C.P.&S.Irel., Resident Medical Superintendent, District Asylum, Monaghan.
1914. †Conolly, Victor Lindley, M.B., B.Ch.Belfast (Assistant Medical Officer Colney Hatch Asylum, N.); Lieut. *R.A.M.C.*
1878. Cooke, Edward Marriott, M.D.Lond., M.R.C.S.Eng., Commissioner in Lunacy; Acting Chairman Board of Control, 69, Onslow Square, S.W.
1910. Coombes, Percival Charles, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Surrey County Asylum, Netherne.
1905. Cooper, K. D., L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., c/o Leopold & Co. Apollo, Bunder, Bombay.
1903. Cormac, Harry Dove, M.B., B.S.Madras, Medical Superintendent, Cheshire County Asylum, Macclefield.
1891. Corner, Harry, M.D.Lond., M.R.C.S., L.R.C.P.Lond., M.P.C., 37, Harley Street, W.
1905. Cotter, James, L.R.C.P.&S.E., L.R.F.P.&S.Glas., Down District Asylum, Downpatrick.

Members of the Association.

1897. Cotton, William, M.A., M.D.Edin., D.P.H.Cantab., M.P.C. (c/o D. N. Cotton, Esq., 9, St. David Street, Edinburgh); Capt. *R.A.M.C.*, 20, General Hospital, B.E.F., France.
1910. Coupland, William Henry, L.R.C.S.&P.Edin., Senior Assistant Medical Officer, 1, Sea View, South Road, Lancaster.
1913. Court, E. Percy, M.R.C.S., L.R.C.P.Lond., Severalls Asylum, Colchester.
1893. Cowen, Thomas Philip, M.D., B.S. M.R.C.S., L.R.C.P.Lond., Medical Superintendent, County Asylum, Rainhill, Lancashire.
1911. Cox, Donald Maxwell, M.R.C.S., L.R.C.P.Lond., The Hall, Headcorn, Kent.
1893. Craig, Maurice, M.A., M.D., B.C.Cantab., F.R.C.P.Lond., M.P.C., 87, Harley Street, W. (*Hon. Secretary of Educational Committee, 1905-8; Chairman of Educational Committee since 1912.*)
1897. Cribb, Harry Gifford, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Winterton Asylum, Ferryhill, Durham.
1911. Crichlow, Charles Adolphus, M.B., Ch.B.Glas. Roxburgh District Asylum, Melrose.
1914. †Crookshank, Francis Graham, M.D., M.R.C.P.Lond. (c/o 25, Duke Street, Piccadilly, W.); Capt. *R.A.M.C.*
1904. Cross, Harold Robert, L.S.A.Lond., F.R.G.S., Storthes Hall Asylum Kirkburton, near Huddersfield.
1915. Crosthwaite, Frederick Douglas, M.B., Ch.B.Edin., D.P.H.Cantab., Assistant Physician, Pretoria Mental Hospital, South Africa.
1914. Cruickshank, J., M.D., Ch.B.Glas., Pathologist, Crichton Royal Hospital, Dumfries.
1907. Daniel, Alfred Wilson, B.A., M.D., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, London County Asylum, Hanwell, W.
1896. Davidson, Andrew, M.D., C.M.Aber., M.P.C., Wyoming, Macquarie Street, Sydney, N.S.W.
1914. Davies, Laura Katherine, M.B., Ch.B.Edin., Pathologist and Assistant Medical Officer, Edinburgh City Asylum, Bangour, Dechmont, Linlithgowshire.
1891. †Davis, Arthur N., L.R.C.P.&S.Edin. (Medical Superintendent, County Asylum, Exminster, Devon); Lieut. *R.A.M.C.*, *T.F.*
1894. †Dawson, William R., B.A., M.D., B.Ch.Dubl., F.R.C.P.I., D.P.H., Inspector of Lunatics in Ireland, Claremont, Burlington Road, Dublin. (*Hon. Sec. to Irish Division, 1902-11; PRESIDENT, 1911-12.*) Major *R.A.M.C.*
1901. De Steiger, Adèle, M.D.Lond., County Asylum, Brentwood, Essex.
1905. Devine, Henry, M.D., B.S., M.R.C.P.Lond., M.R.C.S.Eng., M.P.C., Medical Superintendent, The Asylum, Milton, Portsmouth.
1904. Devon, James, L.R.C.P. & S.Edin., 1, North Park Terrace, Hillhead, Glasgow.
1903. Dickson, Thomas Graeme, L.R.C.P. & S.Edin., Medical Superintendent, Wye House Asylum, Buxton, Derbyshire.
1915. Dillon, Frederick, M.B., Ch.B.Edin., (Clinical Assistant, West End Hospital for Nervous Diseases, Assistant Medical Officer, Northumberland House, Green Lanes, Finsbury Park, N.); Lieut. *R.A.M.C.* on active service, Craighall, Falkirk, N.B.
1909. †Dillon, Kathleen, L.R.C.P.&S.I., Assistant Medical Officer, District Asylum, Mullingar.
1905. †Dixon, J. Francis, M.A., M.D., B.Ch.Dubl., M.P.C. (Medical Superintendent, Borough Mental Hospital, Humberstone, Leicester); Major *R.A.M.C.*, British Expeditionary Force.
1879. Dodds, William J., M.D., C.M., D.Sc.Edin., Glencoila, Bellahouston, Glasgow.
1908. Donald, Robert, M.D., Ch.B.Glas., 3, Gilmour Street, Paisley.
1889. †Donaldson, William Ireland, B.A., M.D., B.Ch.Dubl., Medical Superintendent (County of London Manor Asylum, Epsom, Surrey). Lt.-Col. *R.A.M.C.* O.C. Manor County of London War Hospital, Epsom.

1892. Donelan, John O'Connor, L.R.C.P.&S.I., M.P.C., St. Dymphna's, North Circular Road, Dublin (Med. Supt., Richmond Asylum, Dublin).
1890. Douglas, William, M.D.R.U.I., M.R.C.S.Eng., F.R.G.S., Brandfold, Goudhurst, Kent.
1905. Dove, Augustus Charles, M.D., B.S.Durh., M.R.C.S.Eng., "Brightside," Crouch End Hill, N.
1897. Dove, Emily Louisa, M.B.Lond., 11, Jenner House, Hunter Street, Brunswick Square, W.C.
1903. Dow, William Alex., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., D.P.H., H.M. Prison, Lewes.
1910. Downey, Michael Henry, M.B., Ch.B.Melb., L.R.C.P. & S.Edin., L.R.F.P.&S. Glasg., Assistant Medical Officer, Parkside Asylum, Adelaide, South Australia.
1884. Drapes, Thomas, M.B.Dubl., L.R.C.S.I., Medical Superintendent, District Asylum, Enniscorthy, Ireland. (PRESIDENT-ELECT, 1910-11; *Co-Editor of Journal since 1912.*)
1916. Drummond, William Blackley, M.B., C.M.Edin., F.R.C.P., Medical Superintendent, Baldovan Institution, Dundee.
1907. Dryden, A. Mitchell, M.B., Ch.B.Edin., Senior A.M.O., Woodilee Mental Hospital, Lenzie.
1902. Dudgeon, Herbert Wm., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Khauka Government Asylum, Egypt.
1899. Dudley, Francis, L.R.C.P.&S.I., Senior Assistant Medical Officer, County Asylum, Bodmin, Cornwall.
1915. Duff, Thomas, L.R.C.P., L.R.C.S.Edin., L.R.F.P.&S.Glasg., Collington Rise, Bexhill-on-Sea.
1903. Dunston, John Thomas, M.D., B.S.Lond., Medical Superintendent, West Koppies Asylum, Pretoria, South Africa.
1911. Dykes, Percy Armstrong, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Fulbourne Asylum, Cambridge.
1899. Eades, Albert I., L.R.C.P. & S.I., Medical Superintendent, North Riding Asylum, Clifton, Yorks.
1906. †Eager, Richard, M.D., Ch.B.Aber., M.P.C. (Assistant Medical Officer, Devon County Asylum, Exminster); Major *R.A.M.C., T.F.*, 2/1 Wessex Field Ambulance, 55th Division, British Expeditionary Force.
1873. Eager, Wilson, M.R.C.S., L.R.C.P., L.S.A.Lond., St. Aubyn's, Woodbridge, Suffolk.
1881. Earle, Leslie M., M.D., C.M.Edin., 108, Gloucester Terrace, Hyde Park W.
1891. Earls, James Henry, M.D., M.Ch.R.U.I., D.P.H., L.S.A.Lond., M.P.C., Barrister-at-Law, Fenstanton, Christchurch Road, Streatham Hill, S.W.
1907. East, Wm. Norwood, M.D.Lond., M.R.C.S., L.R.C.P.Lond., M.P.C., H.M. Prison, Manchester; also 171, Cheetham Hill Road, Manchester.
1895. Easterbrook, Charles C., M.A., M.D., F.R.C.P.Ed., M.P.C., J.P., Physician Superintendent, Crichton Royal Institution, Dumfries.
1914. †Eder, M.D., B.Sc.Lond., M.R.C.S., L.R.C.P.Lond. (Medical Officer, Deptford School Clinic), 7, Welbeck Street, W.; Lieut. *R.A.M.C.*
1895. Edgerley, Samuel, M.A., M.D., C.M.Edin., M.P.C., Medical Superintendent, West Riding Asylum, Menston, nr. Leeds.
1897. Edwards, Francis Henry, M.D.Bru.x., M.R.C.P.Lond., M.R.C.S.Eng., Medical Superintendent, Camberwell House, S.E.
1901. †Elgee, Samuel Charles, L.R.C.P.&S.I. (Colney Hatch Asylum, New Southgate). The Manor (County of Loudon) War Hospital, Epsom; Major *R.A.M.C.*
1889. Elkins, Frank Ashby, M.D., C.M.Edin., M.P.C., Medical Superintendent, Metropolitan Asylum, Leavesden, Herts.
1912. Ellerton, John Frederick Heise, M.D.Bru.x., M.R.C.S.Eng., L.R.C.P. Edin., Rotherwood, Leamington Spa.
1890. Ellis, William Gilmore, M.D.Bru.x., M.R.C.S.Eng., L.S.A.Lond., J.P., Principal Civil Medical Officer, Singapore, Straits Settlements.

1908. Ellison, Arthur, M.R.C.S., L.R.C.P.Eng., Deputy Medical Officer, H.M. Prison, Leeds, 120, Domestic Street, Holbeck, Leeds.
1899. Ellison, F. C., B.A., M.D., B.Ch.Dub., Resident Medical Superintendent, District Asylum, Castlebar.
1911. †Emslie, Isabella Galloway, M.D., Ch.B.Edin., West House, Royal Asylum, Morningside, Edinburgh.
1911. English, Ada, M.B., B.Ch.R.U.I., Assistant Medical Officer, District Asylum, Ballinasloe.
1901. Erskine, Wm. J. A.; M.D., C.M.Edin., Medical Superintendent, County Asylum, Whitecroft, Newcroft, I. of W.
1895. Eurich, Frederick Wilhelm, M.D., C.M.Edin., 8, Mornington Villas, Maningham Lane, Bradford.
1894. Eustace, Henry Marcus, B.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, Hampstead and Highfield Private Asylum, Glasnevin, Dublin.
1909. Eustace, William Neilson, L.R.C.S.&P.Irel., Lisronagh, Glasnevin, co. Dublin.
1909. Evans, George, M.B.Lond., Senior Assistant Medical Officer, Severalls Asylum, Colchester.
1891. Ewan, John Alfred, M.A. St. And., M.D., C.M.Edin., M.P.C., Greyness, Sleaford, Lincs.
1884. Ewart, C. T., M.D., C.M.Aberd., Senior Assistant Medical Officer, Claybury Asylum, Woodford Bridge, Essex.
1914. Ewing, Cecil Wilmot, L.R.C.P.I. & L.R.C.S.I., Second Assistant Medical Officer, Chartam Asylum, near Canterbury.
1907. Exley, John, L.R.C.P.I., M.R.C.S.Eng., Medical Officer, H.M. Prison; Grove House, New Wortley, Leeds.
1894. Farquharson, William F., M.D., C.M.Edin., M.P.C., Medical Superintendent, Counties Asylum, Garlands, Carlisle.
1907. †Farries, John Stothart, L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., *R.N.R.*, communications to Yrthington, Carlisle.
1903. †Fennell, Charles Henry, M.A., M.D.Oxon, M.R.C.P.Lond., Reform Club, Pall Mall, S.W.; Lieut. *R.A.M.C.*
1908. Fenton, Henry Felix, M.B., Ch.B.Edin., Assistant Medical Officer, County and City Asylum, Powick, Worcester.
1907. Ferguson, J. J. Harrower, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Fife and Kinross Asylum, Cupar, Fife.
1897. Fielding, James, M.D., Vict. Univ., Canada, M.R.C.S.Eng., L.R.C.P. Edin., 18, The Crescent, Norwich.
1906. Fielding, Saville James, M.B., B.S.Durh., Medical Superintendent, Bethel Hospital, Norwich.
1873. Finch, John E. M., M.A., M.D.Cantab., M.R.C.S.Eng., L.S.A.Lond., Holmdale, Stoneysgate, Leicester.
1889. Finlay, David, M.D., C.M.Glasg., Medical Superintendent, County Asylum, Bridgend, Glamorgan.
1906. Firth, Arthur Marcus, M.A., M.D., B.Ch.Edin., Deputy Medical Superintendent, Barnsley Hall, Bromsgrove, Worcestershire.
1903. Fitzgerald, Alexis, L.R.C.P. & S.I., District Asylum, Waterford.
1888. Fitz-Gerald, Gerald C., B.A., M.D., B.C.Cantab., M.P.C., Medical Superintendent, Kent County Asylum, Chartham, nr. Canterbury.
1908. Fitzgerald, James Francis, L.R.C.P.&S.Irel., Assistant Medical Officer, District Asylum, Clonmel, co. Tipperary, Ireland.
1904. Flening, Wilfrid Louis Remi, M.R.C.S., L.R.C.P.Lond., Suffolk House, Pirbright, Surrey.
1894. Fleury, Eleonora Lillian, M.D., B.Ch.R.U.I., Assistant Medical Officer, Richmond Asylum, Dublin.
1908. †Flynn, Thos. Aloysius, L.R.C.P.&S.I., (County Asylum, Thorpe, Norwich); *R.A.M.C.*
1902. Forde, Michael J., M.D., B.Ch.R.U.I., Assistant Medical Officer, Richmond Asylum, Dublin.

1911. Forrester, Archibald Thomas William, M.D., B.S., M.R.C.S., L.R.C.P. Lond., Senior Assistant Medical Officer, Leicester and Rutland Counties Asylum, Narborough.
1916. †Forsyth, Charles Wesley, M.B.Lond., M.R.C.S., L.R.C.P. (Assistant Medical Officer, Kesteven County Asylum, Sleaford, Lincs.); Temp. Lieut. *R.A.M.C.*
1913. †Forward, Ernest Lionel, M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer, The Coppice, Nottingham); Capt. *R.A.M.C.*, 2/2 East Lancs. Field Ambulance.
1913. Fothergill, Claude Francis, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P. Lond.; Hensol, Chorley Wood, Herts.
1912. Fox, Charles J., M.R.C.S., L.R.C.P.Lond., The Moat House, Alnechurch Birmingham.
1881. Fraser, Donald, M.D., C.M.Glasg., F.R.F.P.S., 13, Royal Terrace West, Glasgow.
1901. †French, Louis Alexander, M.R.C.S., L.R.C.P.Lond., "Locksley," Willingdon, Eastbourne; Major *R.A.M.C.*
1902. Fuller, Lawrence Otway, M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, Three Counties' Asylum, Arlesey, Beds.
1914. †Gage, John Munro, L.R.C.P.&S.I., M.P.C. (Earlswood, Redhill, Surrey); Temp. Capt. *R.A.M.C.*
1906. Gane, Edward Palmer Steward, M.D.Durh., M.R.C.S., L.R.C.P.Lond., City Asylum, Willerby, Hull.
1912. Garry, John William, M.B., B.Ch., N.U.I., Assistant Medical Officer Eunis District Asylum, Ireland.
1912. Gavin, Lawrence, M.B., Ch.B.Edin., L.R.C.P.&S.Edin., L.R.F.P.&S. Glasg., Superintendent, Mullingar District Asylum, Ireland.
1896. Geddes, John W., M.B., C.M.Edin., Medical Superintendent, Mental Hospital, Middlesbrough, Yorks.
1892. Gemmel, James Francis, M.B.Glasg., Medical Superintendent, County Asylum, Whittingham, Preston.
1914. Gettings, Harold Salter, L.R.C.P. & S.Edin., L.R.F.P.&S.G., D.P.H.Birm., Chasetown, nr. Walsall.
1899. Gilfillan, Samuel James, M.A., M.B., C.M.Edin., Medical Superintendent, London County Asylum, Colney Hatch.
1912. Gill, Eustace Stanley Hayes, M.B., Ch.B.Liverp., Shaftesbury House; Formby, Liverpool.
1889. Gill, Stanley A., B.A.Dubl., M.D.Durh., M.R.C.P.Lond., M.R.C.S.Eng., Shaftesbury House, Formby, Liverpool.
1904. †Gillespie, Daniel, M.D. B.Ch.R.U.I., Dipl. Psych. (Wadsley Asylum, near Sheffield); Maj. *R.A.M.C.*, Wharnccliffe War Hospital, Middlewood Road, Sheffield.
1897. Gilmour, John Rutherford, M.B., C.M., F.R.C.P.Edin., M.P.C., Medical Superintendent, West Riding Asylum, Scalebor Park, Burley-in-Wharfedale, Yorks.
1906. Gilmour, Richard Withers, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Homewood House, West Meon, Hants.
1878. Glendinning, James, M.D.Glasg., L.R.C.S.Edin. Hill Crest, Lansdown Road, Abergavenny.
1897. Good, Thomas Saxty, M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, County Asylum, Littlemore, Oxford.
1889. †Goodall, Edwin, M.D., B.S., F.R.C.P.Lond., M.P.C. (Medical Superintendent, City Asylum, Cardiff); Lt.-Col. *R.A.M.C.*, The Welsh Metropolitan War Hospital, Whitchurch, nr. Cardiff.
1899. †Gordon, James Leslie, M.D., C.M.Aberd. (Medical Superintendent, Fountain Temporary Asylum, Tooting Grove, Tooting Graveney, S.W.); Temp. Lieut. *E.A.M.C.*
1905. Gordon-Munn, John Gordon, M.D.Edin., F.R.S.E., Heigham Hall, Norwich.

1901. †Gostwyck, C. H. G., M.B., Ch.B., F.R.C.P.Edin., M.P.C., Dipl. Psych., (Stirling District Asylum, Larbert); Lt., *R.A.M.C. on active service.*
1912. †Graham, Gilbert Malise, M.B., Ch.B.Edin., R.N., H.M.S. "Emperor of India."
1914. †Graham, Norman Bell, B.A., R.U.I., M.B., B.Ch.Belfast, (Assistant Medical Officer, District Asylum, Belfast); Capt. *R.A.M.C.*, 24, Ocean Buildings, Belfast.
1894. Graham, Samuel, L.R.C.P.Lond., Resident Medical Superintendent District Asylum, Antrim.
1887. Graham, William, M.D.R.U.I., L.R.C.S.Edin., Medical Superintendent, District Lunatic Asylum, Belfast.
1908. Graham, William S., M.B., B.Ch.R.U.I., Assistant Medical Officer, Somerset and Bath Asylum, near Taunton.
1915. Graves, T. Chivers, M.B., B.S., B.Sc.Lond., F.R.C.S.Eng., Medical Superintendent, City and County Asylum, Burghill, Hereford.
1916. Gray, Cyril, L.R.C.P.&S.Edin., Gateshead Borough Asylum, Stannington, Newcastle-on-Tyne.
1909. Greene, Thomas Adrian, L.R.C.S.&P.Irel., J.P., Medical Superintendent, District Asylum, Carlow.
1886. Greenlees, T. Duncan, M.D., C.M.Edin., F.R.S.E., Rostrevor, Kirtleton Avenue, Weymouth.
1912. †Greson, Clarence Edward, M.D., Ch.B.Aberd., Surgeon, *R.N.*, c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.
1915. Griffith, Alfred Hume, M.D.Edin., D.P.H.Camb., Medical Superintendent, Lingfield Epileptic School Colony, The Homestead, Lingfield, Surrey.
1915. Grigsby, Hamilton Marie, L.R.C.P.&S.Edin., 79, Victoria Road North, Southsea.
1901. Grills, Galbraith Hamilton, M.D., B.Ch.R.U.I., Dipl. Psych., Medical Superintendent, County Asylum, Chester.
1916. Grimby, Alan F., B.A., M.B.Univ.Dubl. (Assistant Medical Officer, St. Edmondsbury, Lucan, Ireland); Lient. *R.A.M.C. (T.R.)*.
1900. Grove, Ernest George, M.R.C.S., L.R.C.P.Lond., Bootham Park, York.
1894. Gwynn, Charles Henry, M.D., C.M.Edin., M.R.C.S.Eng., co-Licentee, St. Mary's House, Whitchurch, Salop.
1894. Halsted, Harold Cecil, M.D.Durh., M.R.C.S., L.R.C.P.Lond., Manor Road, Selsey, Sussex.
1901. Harding, William, M.D.Edin., M.R.C.P.Lond., Medical Superintendent, Northampton County Asylum, Berry Wood, Northampton.
1899. Harmer, W. A., L.S.A., Resident Superintendent and Licensee, Redlands Private Asylum, Tonbridge, Kent.
1904. †Harper-Smith, George Hastie, B.A.Cantab., M.R.C.S., L.R.C.P.Lond., (Senior Assistant Medical Officer, Brighton County Borough Asylum, Haywards Heath), May Cottage, Loughton, Essex; Capt. *R.A.M.C. (T.)*.
1898. Harris-Liston, L., M.D.Bruce, M.R.C.S., L.R.C.P.Lond., L.S.A., Middleton Hall, Middleton St. George, Co. Durham.
1905. Hart, Bernard, M.D.Lond., M.R.C.S.Eng., 29B, Wimpole Street, and Northumberland House, Finsbury Park, N.
1886. †Harvey, Bagenal Crosbie, L.R.C.P.&S.Edin., L.A.H.Dubl., Resident Medical Superintendent, District Asylum, Clonmel, Ireland.
1892. Haslett, William John H., M.R.C.S., L.R.C.P.Lond., M.P.C., Resident Medical Superintendent, Halliford House, Upper Halliford, Sheperton.
1891. Havelock, John G., M.D., C.M.Edin., Little Stodham, Liss, Hants.
1890. Hay, J. F. S., M.B., C.M.Aberd., Inspector-General of Asylums for New Zealand, Government Buildings, Wellington, New Zealand.

1900. Haynes, Horace E., M.R.C.S.Eng., L.S.A., J.P., Littleton Hall, Brentwood, Essex.
1895. Hearder, Frederic P., M.D., C.M.Edin., Medical Superintendent, Yorkshire Inebriate Reformatory, Whitley, near York.
1911. †Heffernan, Capt. P., I.M.S., B.A., M.B., B.Ch.C.U.I., Locock's Gardens, Kilpauh, Madras.
1916. †Henderson, David Kennedy, M.D.Edin., (Senior Assistant Physician, Royal Asylum, Gartnavel, Glasgow); Temp. Lieut. R.A.M.C., c/o John Henderson and Sons, Solicitors, Dumfries, Scotland.
1905. Henderson, George, M.A., M.B., Ch.B.Edin., 25, Commercial Road, Peckham, S.E.
1906. Herbert, Thomas, M.R.C.S., L.R.C.P.Lond., York City Asylum, Fulford, York.
1877. Hetherington, Charles E., B.A., M.B., M.Ch.Dubl., Medical Superintendent, District Asylum, Londonderry, Ireland.
1877. Hewson, R. W., L.R.C.P.&S.Edin., Medical Superintendent, Coton Hill, Stafford.
1914. Hewson, R. W. Dale, L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., Coton Hill Hospital, Stafford.
1912. Higson, William Davis, M.B., Ch.B.Liverp., D.P.H., Deputy Medical Officer, H.M. Prison, Brixton; 7, Clovelly Gardens, Upper Tulse Hill, S.W.
1882. Hill, H. Gardiner, M.R.C.S.Eng., L.S.A., Pentillie, Leopold Road, Wimbledon Park, S.W.
1914. †Hills, Harold William, B.S., M.B., B.Sc.Lond., M.R.C.S., L.R.C.P.Lond.; Capt. R.A.M.C., Lord Derby War Hospital, Warrington.
1907. †Hine, T. Guy Macaulay, M.A., M.D., B.C.Cantab., 37, Hertford Street, Mayfair, W.; Temp. Capt. R.A.M.C.
1909. Hodgson, Harold West, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Severalls Asylum, Colchester.
1908. Hogg, Archibald, M.B., Ch.B.Glas., 54, High Street, Paisley, N.B.
1900. Holländer, Bernard, M.D.Freib., M.R.C.S., L.R.C.P.Lond., 57, Wimpole Street, W.
1912. Holyoak, Walter L., M.D., B.S.Lond., 45, Welbeck Street, W.
1903. Hopkins, Charles Leighton, B.A., M.B., B.C.Cantab., Medical Superintendent, York City Asylum, Fulford, York.
1894. Hotchkis, Robert D., M.A.Glasg., M.D., B.S.Durb., M.R.C.S., L.R.C.P.Lond., M.P.C., Renfrew District Asylum, Dykebar, Paisley N.B.
1912. Hughes, Frank Percival, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., The Grove, Pinner, Middlesex.
1900. Hughes, Percy T., M.B., C.M.Edin., D.P.H., Medical Superintendent, Worcestershire County Asylum, Barnesley Hall, Bromsgrove.
1904. Hughes, William Stanley, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Shropshire County Asylum, Bicton Heath Shrewsbury.
1897. Hunter, David, M.A., M.B., B.C.Cantab., L.S.A., Medical Superintendent, The Coppice, Nottingham. (*Secretary for S.E. Division, 1910-1913.*)
1909. †Hunter, Douglas William, M.B., Ch.B.Glasg., Assistant Medical Officer 10, Hallfield Road, Bradford; Capt. R.A.M.C.
1912. †Hunter, George Yeates Cobb, Colonel, I.M.S., M.R.C.S., L.R.C.P.Lond., M.P.C., c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.
1904. Hunter, Percy Douglas, M.R.C.S., L.R.C.P.Lond., Three Counties Asylum, Arlesey, Beds.
1882. †Hyslop, James, Col. D.S.O., M.B., C.M.Edin., Medical Superintendent The Huts, Pietermaritzburg, Natal.
1888. Hyslop, Theo. B., M.D., C.M.Edin., M.R.C.P.E., L.R.C.S.E., F.R.S.E., M.P.C., 5, Portland Place, London, W.
1915. Ingall, Frank Ernest, F.R.C.S.Eng., L.R.C.P.Lond., D.P.H., Tue Brook Villa, Liverpool.

1908. Inglis, J. P. Park., M.B., Ch.B.Edin., Assistant Medical Officer, Caterham Asylum, Caterham, Surrey.
1906. Irwin, Peter Joseph. L.R.C.P.&S.I., Assistant Medical Officer, District Asylum, Limerick.
1914. †James, George William Blomfield, M.B., B.S.Lond., 2, Charnwood Street, Derby; *R.A.M.C.*
1908. Jeffrey, Geo. Rutherford, M.D., Ch.B.Glas., F.R.C.P.E., M.P.C., Medical Superintendent, Bootham Park, York.
1910. †Johnson, Cecil Webb, D.S.O., M.B., Ch.B.Vict. ("Cricklewood," East Sheen, S.W.); Capt. (Temp. Major) *R.A.M.C.*; 10th Middlesex Regiment, Fort William, Calcutta, India.
1893. Johnston, Gerald Herbert, L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., Brooke House, Upper Clapton, N.
1905. Joimston, Thomas Leonard, L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., Medical Superintendent, Bracebridge Asylum, Lincoln.
1912. Johnstone, Emma May, L.R.C.P. & S.Edin., L.R.F.P.&S.Glas., M.P.C. Dipl. Psych., Holloway Sanatorium, Virginia Water, Surrey.
1878. Johnstone, J. Carlyle, M.D., C.M.Glas., Medical Superintendent, Roxburgh District Asylum, Melrose.
1903. Johnstone, Thomas, M.D., C.M.Edin., M.R.C.P.Lond., Annandale Harrogate.
1880. †Jones, D. Johnston, M.D., C.M.Edin.; Temp. Major *R.A.M.C.*
1879. Kay, Walter S., M.D., C.M.Edin., M.R.C.S.Eng., The Grove, Starbech, Harrogate.
1886. †Keay, John, M.D., C.M.Glasg., F.R.C.P.Edin. (Medical Superintendent, Bangour Village, Uphall, Linlithgowshire); Lt.-Col., *R.A.M.C.* Edinburgh War Hospital, Bangour.
1909. †Keith, William Brooks, M.B., Ch.B.Aberd., M.P.C., Capt., *R.A.M.C.*, T., 81st Field Ambulance, 27th Division.
1908. Kelly, Richard, M.D., B.Ch.Dub., Assistant Medical Officer, Storthes Hall Asylum, Kirkburton, near Huddersfield.
1907. Keene, George Henry, M.D., The Asylum, Goodmayes, Ilford, Essex.
1899. Kennedy, Hugh T. J., L.R.C.P.&S.I., Assistant Medical Officer, District Asylum, Enniscorthy, Co. Wexford.
1897. Kerr, Hugh, M.A., M.D.Glasg., Medical Superintendent, Bucks County Asylum, Stone, Aylesbury, Bucks.
1902. Kerr, Neil Thomson, M.B., C.M.Ed., Medical Superintendent, Lanark District Asylum, Hartwood, Shotts, N.B.
1893. Kershaw, Herbert Warren, M.R.C.S.Eng., L.R.C.P.Lond., Dinsdale Park near Darlington.
1897. †Kidd, Harold Andrew, M.R.C.S.Eng., L.R.C.P.Lond. (Medical Superintendent, West Sussex Asylum, Chichester); Lt.-Col. *R.A.M.C.*, Graylingwell War Hospital, Chichester.
1916. Kilgarriff, Joseph O'Loughlin, A.B., M.B., B.Ch., B.A.O.Univ., Dublin Assistant Medical Officer, County Asylum, Prestwich, Lanes.
1903. King, Frank Raymond, B.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, Peckham House, Peckham, S.E.
1902. King-Turner, A. C., M.B., C.M.Edin., The Retreat, Fairford, Gloucestershire.
1915. Kirwan, Richard R., M.B., B.Ch. R.U.I., Assistant Medical Officer, West Riding Asylum, Menston, Leeds.
1915. Kitson, Frederick Hubert, M.B., Ch.B.Leeds. Assistant Medical Officer, West Riding Asylum, Wakefield.
1903. Kough, Edward Fitzadam, B.A., M.B., B.Ch.Dubl., Senior Assistant Medical Officer, County Asylum, Gloucester.

1898. Labey, Julius, M.R.C.S., L.R.C.P., L.S.A.Lond., Medical Superintendent, Public Asylum, Jersey.
1902. Langdon-Down, Percival L., M.A., M.B., B.C.Cantab., Dixland, Hampton Wick, Middlesex.
1896. Langdon-Down, Reginald L., M.A., M.B., B.C.Cantab., M.R.C.P.Lond., Normansfield, Hampton Wick.
1914. †Ladell, R. G. Macdonald, M.B., Ch.B.Vict. (Shafton House, Holbeck, Leeds); Lieut. *R.A.M.C.*, 1/5th Norfolk Regiment.
1909. †Laurie, James, M.B., Ch.M.Glasg. (*Medical Officer, Smithston Asylum*) (Red House, Ardgowan Street, Greenock); Capt. *R.A.M.C.*, *T.F.*, 3rd Scottish Hospital.
1902. Laval, Evariste, M.B., C.M.Edin., The Guildhall, Westminster, S.W.
1898. Lavers, Norman, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Bailbrook House, Bath.
1892. Lawless, George Robert, F.R.C.S.I., L.R.C.P.I., Medical Superintendent, District Asylum, Armagh.
1870. Lawrence, Alexander, M.A., M.D., C.M.Aberd., 26, Hough Green, Chester.
1883. Layton, Henry A., M.R.C.S.Eng., L.R.C.P.Edin., 26, Kimbolton Road, Bedford.
1915. Lœch, H. Brougham, M.D., B.Ch.Dublin, Assistant Medical Officer, County Asylum, Hatton, Warwick.
1909. Leech, John Frederick Wolseley, M.D., B.Ch.Dubl., County Asylum, Devizes, Wilts.
1899. Leeper, Richard R., F.R.C.S.I., L.R.C.P.I., M.P.C., Medical Superintendent, St. Patrick's Hospital, Dublin. (*Hon. Sec. to the Irish Division from 1911.*)
1883. Legge, Richard J., M.D., R.U.I., L.R.C.S.Edin., "Comeragh," Leckhampton Road, Cheltenham.
1906. †Leggett, William, B.A., M.D., B.Ch.Dubl. (Assistant Medical Officer, Royal Asylum, Sunnyside, Montrose); Temp. Lieut. *R.A.M.C.*
1916. Lewis, Edward, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., Cwirlai, Ty-Cross, Anglesey.
1914. Lindsay, David George, L.R.C.P.&S.Edin., Senior Assistant Medical Officer, Dundee District Asylum, West Green, Dundee.
1908. Littlejohn, Edward Salteine, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, London County Asylum, Cane Hill, Surrey.
1916. Lloyd, Brindley Richard, M.B., B.S.Lond., D.P.H.Lond., Assistant Medical Officer, Peckham House, S.E.
1903. Logan, Thomas Stratford, L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., D.P.H., Stone Asylum, Aylesbury, Bucks.
1898. †Lord, John R., M.B., C.M.Edin. (Medical Superintendent, Horton Asylum, Epsom); Lieut.-Colonel *R.A.M.C.*, Horton County of London War Hospital, Epsom, Surrey. (*Co-Editor of Journal since 1911; Assistant Editor of Journal, 1900-11.*)
1906. †Lowry, James Arthur, M.D., B.Ch., R.U.I., *R.A.M.C.*, Medical Superintendent, Surrey County Asylum, Brookwood.
1904. Lyall, C. H. Gibson, L.R.C.P.&S.Edin., Leicester Borough Asylum, Leicester.
1872. Lyle, Thomas, M.D., C.M.Glasg., 34, Jesmond Road, Newcastle-on-Tyne.
1906. †Macarthur, John, M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer, Colney Hatch Asylum, London, N.); *R.A.M.C.*, Mediterranean Expeditionary Force.
1880. MacBryan, Henry C., L.R.C.P. & S. Edin., Kingsdown House, Box, Wilts.
1900. McClintock, John, L.R.C.P.&S.Edin., Resident Medical Superintendent, Grove House, All Stretton, Church Stretton, Salop.
1901. MacDonald, James H., M.B., Ch.B., F.R.F.P.&S.Glasg., Govan District Asylum, Hawkhead, Paisley, N.B.
1884. MacDonald, P. W., M.D., C.M.Aberd. (late Medical Superintendent, now retired), Grasmere, Spa Road, Weymouth. (*First Hon. Sec. S.W. Division 1894 to 1905.*) (PRESIDENT, 1907-8.)

1911. †MacDonald, Ranald, M.D., Ch.B.Edin. (London County Asylum, Bexley, Kent); Lieut. *R.A.M.C.*
1905. MacDonald, William Fraser, M.B., Ch.B.Edin., M.P.C., 96, Polworth Terrace, Edinburgh.
1905. McDougall, Alan, M.D., Ch.B.Vict., M.R.C.S., L.R.C.P.Lond., Medical Director, The David Lewis Colony, Sandle Bridge, near Alderley Edge, Cheshire.
1911. McDougall, William, M.A., M.B., B.C.Cantab., M.Sc.Vict., Foxcombe Hill, Oxford.
1906. †McDowall, Colin Francis Frederick, M.D., B.S.Durh. (Ticehurst House Ticehurst); Capt. *R.A.M.C.*, Military Hospital, Maghull, Liverpool.
1870. McDowall, Thomas W., M.D.Edin., L.R.C.S.E., Medical Superintendent, Northumberland County Asylum, Morpeth. (PRESIDENT, 1897-8.)
1893. Macevoy, Henry John, B.A.(Donai), M.D., B.Sc.Lond., M.R.C.S.Eng., L.R.C.P.Lond., M.P.C., 19, Mowbray Road, Brondesbury, London, N.W.
1895. Macfarlane, Neil M., M.D., C.M.Aber., Medical Superintendent, Government Hospital, Thlotse Heights, Leribe, Basutoland, South Africa.
1902. McGregor, John, M.B., Ch.B.Edin., Senior Assistant Medical Officer, County Asylum, Bridgend, Glam.
1914. †Mackay, Magnus Ross, M.D., Ch.B.Edin., Capt. *R.A.M.C., T.F.*, British Expeditionary Force, France.
1915. McKenna, Edward Joseph, M.B., B.Ch., R.U.I., Assistant Medical Officer, Carlow District Asylum.
1911. Mackenzie, John Cosserat, M.B., Ch.B.Edin., County Mental Hospital, Burntwood, near Lichfield.
1891. Mackenzie, Henry J., M.B., C.M.Edin., M.P.C., Assistant Medical Officer, The Retreat, York.
1903. Mackenzie, Theodore Charles, M.D., Ch.B., F.R.C.P.Edin., M.P.C., Medical Superintendent, District Asylum, Inverness.
1914. Macleod, Jan R., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., 7, Mayfield Gardens, Edinburgh.
1917. McMaster, Albert Victor, B.A., M.R.C.S.Eng., Senior Assistant Medical Officer, Fife and Kinross District Asylum, Cupar.
1904. Macnamara, Eric Danvers, M.A.Camb., M.D., B.C., F.R.C.P.Lond., 87, Harley Street, W.
1898. Macnaghton, George W. F., M.D., F.R.C.S.Edin., M.R.C.P.Lond., M.P.C., 33, Lower Belgrave Street, Eaton Square, London, S.W.
1914. †Macneill, Celia Mary Colquhoun, M.B., Ch.B.Edin. (Pathologist, Northfield, Pre-toupan); Leith War Hospital, Seafield, Leith.
1910. †MacPhail, Hector Duncan, M.A., M.D., Ch.B.Edin. (Assistant Medical Officer, City Asylum, Gosforth, Newcastle-on-Tyne); Major *R.A.M.C.*, Northumberland War Hospital, Newcastle.
1882. Macphail, S. Ruthertord, M.D., C.M.Edin., Derby Borough Asylum, Rowditch, Derby.
1896. Macpherson, Charles, M.D.Glas., L.R.C.P.&S., D.P.H.Edin., Deputy Commissioner in Lunacy, 25, Palmerston Place, Edinburgh.
1901. McRae, G. Douglas, M.D., C.M.Edin., F.R.C.P.Ed., Medical Superintendent, District Asylum, Ayr, N.B.
1902. †Macrae, Kenneth Duncan Cameron, M.B., Ch.B.Edin. (Bangour Village, Dechmont, Linlithgowshire); Lieut. *R.A.M.C.*, M.E.F.
1894. McWilliam, Alexander, M.A., M.B., C.M.Aber., Waterval, Odiham, Winchfield, Hants.
1915. Manifold, Robert Fenton, M.B., D.Ch.Dub., Senior Assistant Medical Officer, Denbigh Asylum, North Wales.
1908. †Mapother, Edward, M.D., B.S.Lond., F.R.C.S.Eng. (Assistant Medical Officer, London County Asylum, Long-Grove, Epsom); Lieut. *R.A.M.C.*
1903. Marnan, John, B.A., M.B., B.Ch.Dubl., Senior Assistant Medical Officer, Second County Asylum, Gloucester.
1896. †Marr, Hamilton C., M.D., C.M., F.R.F.P.&S.Glasg., M.P.C., Commissioner in Lunacy (10, Succoth Avenue, Edinburgh); (*Hon. Sec. Scottish Division, 1907-1910.*); *R.A.M.C.*

1913. †Marshall, Robert, M.B., Ch.B.Glas. (Assistant Medical Officer, Gartloch Mental Hospital, Gartcosh, N.B.); Lieut. *R.A.M.C.*, 19th General Hospital, British Expeditionary Force.
1905. Marshall, Robert Maenab, M.D., Ch.B.Glasg., M.P.C., 2, Clifton Place, Glasgow.
1908. Martin, Henry Cooke, M.B., Ch.B.Edin., Assistant Medical Officer Newport Borough Asylum, Caerleon.
1896. †Martin, James Charles, L.R.C.S. & P.I., J.P., Assistant Medical Officer District Asylum, Letterkenny, Donegal; Temp. Lieut. *R.A.M.C.*
1908. Martin, James Ernest, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Long-Grove Epsom.
1907. Martin, Mary Edith, L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., L.S.A.Lond., M.P.C.Lond., Bailbrook House, Bath.
1914. †Martin, Samuel Edgar, M.B., B.Ch.Edin., Barrister-at-Law (Senior Assistant Medical Officer, St. Andrew's Hospital, Northampton); Lieut. *R.A.M.C.*, British Mediterranean Expeditionary Force.
1911. †Martin, William Lewis, M.A., B.Sc., M.B., C.M.Edin., D.P.H., M.P.C., Dipl. Psych. (*Certifying Physician in Lunacy, Edinburgh Parish Council*), 56, Bruntsfield Place, Edinburgh; Major *R.A.M.C. (T.)*
1911. †Mathieson, James Moir, M.B., Ch.B.Aber. (Assistant Medical Officer, Wadsley Asylum, Sheffield); Major *R.A.M.C.*, The Wharnccliffe War Hospital, Sheffield.
1904. †May, George Francis, M.D., C.M.McGill, L.S.A. (Winterton Asylum, Ferryhill, Durham); Lieut. *R.A.M.C.*
1912. Melville, William Spence, M.B., Ch.B.Glas., Woodilee Mental Hospital, Lenzie, Glasgow.
1890. Menzies, William F., M.D., B.Sc.Edin., M.R.C.P.Lond., Medical Superintendent, Stafford County Asylum, Cheddleton, near Leek.
1891. Mercier, Charles A., M.D.Lond., F.R.C.P., F.R.C.S.Eng., late Lecturer on Insanity, Westminster Hospital; Moorcroft, Parkstone, Dorset. (*Secretary Educational Committee, 1893-1905. Chairman do. from 1905-12.*) (PRESIDENT, 1908-9.)
1877. Merson, John, M.A., M.D., C.M.Aber., Medical Superintendent, Borough Asylum, Hull.
1871. Mickle, William Julius, M.D., F.R.C.P.Lond., 69, Linden Gardens, Bayswater, W. (PRESIDENT, 1896-7.)
1893. Middlemass, James, M.A., M.D., C.M., B.Sc.Edin., F.R.C.P., M.P.C., Medical Superintendent, Borough Asylum, Ryhope, Sunderland.
1910. †Middlemiss, James Ernest, M.R.C.S.Eng., L.R.C.P.Lond.; 131, North Street, Leeds; Lieut. *R.A.M.C.*
1883. †Miles, George E., M.R.C.S., L.R.C.P.Lond., Lieut.-Col., *R.A.M.C.*, D Block, Royal Victoria Hospital, Netley, Hants; British Empire Club, St. James' Square, S.W.
1887. Miller, Alfred, M.B., B.Ch.Dubl., Medical Superintendent, Hatton Asylum, Warwick. (*Registrar since 1902.*)
1912. †Miller, Richard, M.B., B.Ch.Dubl., Medical Superintendent, Naval Hospital, Great Yarmouth; Fleet-Surgeon *R.N.*
1893. Mills, John, M.B., B.Ch., Dipl. Ment. Dis., R.U.I., Medical Superintendent, District Asylum, Ballinasloe, Ireland.
1913. Milner, Ernest Arthur, M.B., C.M.Edin., Assistant Medical Officer, Royal Albert Institution, Lancaster.
1911. Moll, Jan. Marius, Doc. in Arts and Med, Utrecht Univ., L.M.S.S.A. Lond., M.P.C., 9, Anstey's Buildings, Kirkstreet, Johannesburg, South Africa.
1913. Molyneux, Benjamin Arthur, B.A., M.D., B.Ch.Dubl., St. Helens House, St. Helens, Hastings.
1910. †Monnington, Richard Caldicott, M.D., Ch.B., D.P.H.Edin. (Darent Industrial Colony, Dartford, Kent); *c/o* Rev. T. P. Monnington Lowick Green, Ulverston, Lancs.; Capt. *R.A.M.C.*

1915. Monrad-Krohn, G. H., M.B., B.S., M.R.C.P.Lond., M.R.C.S.Eng., Assistant Medical Officer, Bethlem Royal Hospital, Lambeth, S.E.
1914. †Montgomery, Edwin, F.R.C.S.I., L.R.C.P.I. Dipl. Psych. Manch., (Prestwich Asylum, Lancs.); Lieut. *R.A.M.C.*, 77th Field Ambulance, British Expeditionary Force.
1885. Moore, Edw. E., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, District Asylum, Letterkenny, Ireland.
1899. Moore, Wm. D., M.D., M.Ch.R.U.I., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey.
1914. †Morres, Frederick, M.R.C.S.Eng., L.R.C.P.Lond. (Assistant Medical Officer, Cane Hill Asylum, Coulsdon, Surrey); *R.A.M.C.*, Lord Warden Hotel, Dover.
1896. Morton, W. B., M.D.Lond., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Wonford House, Exeter.
1896. Mott, F. W., M.D., B.S., F.R.C.P.Lond., LL.D.Edin., F.R.S., 25, Nottingham Place, Marylebone, W.
1896. Mould, Gilbert E., M.R.C.S., L.R.C.P.Lond., The Grange, Rotherham, Yorks.
1897. Mould, Philip G., M.R.C.S.Eng., L.R.C.P.Lond., Overdale, Whitefield, Manchester.
1914. †Moyes, John Murray, M.B., Ch.B.Edin., D.P.M.Leeds, Crichton Royal Institution, Dumfries; *R.A.M.C.*
1907. Mules, Bertha Mary, M.D., B.S.Durh., Court Hall, Kenton, S. Devon.
1911. †Muncester, Anna Lilian, M.B., B.Ch.Edin. (County Asylum, Chester); home address, 8, Craylockhail Terrace, Edinburgh; at present serving with Serbian Red Cross Society.
1893. Murdoch, James William Aitken, M.B., C.M.Glasg., Medical Superintendent, Berks County Asylum, Wallingford.
1916. Murray, Jessie M., M.B., B.S.Durham, 14, Endsleigh Street, Tavistock Square, London, W.C.
1909. Myers, Charles Samuel, M.A., D.Sc., M.D., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Great Shelford, Cambridgeshire.
1903. †Navarra, Norman, M.R.C.S., L.R.C.P.Lond. (City of London Mental Hospital, near Dartford, Kent); Temp. Lieut. *R.A.M.C.*
1910. Neill, Alexander W., M.D., Ch.B.Edin., Warneford Mental Hospital, Oxford.
1903. Nelis, William F., M.D.Durh., L.R.C.P.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Newport Borough Asylum, Caerleon, Mon.
1873. Newington, H. Hayes, F.R.C.P.Edin., M.R.C.S.Eng., The Gables, Ticehurst, Sussex. (*Chairman Parliamentary Committee, 1896-1904.*) (*PRESIDENT, 1889.*) (*Treasurer since 1894.*)
1869. Nicolson, David, C.B., M.D., C.M.Aber., M.R.C.P.Edin., F.S.A.Scot., 201, Royal Courts of Justice, Strand, W.C. (*PRESIDENT, 1895-6.*)
1888. Nolan, Michael J., L.R.C.P.&S.I., M.P.C., Medical Superintendent, District Asylum, Downpatrick.
1913. Nolan, James Noël Green, M.B., B.Ch., A.B.Dub., The Hospital, Helmingly Asylum, Sussex.
1909. †Norman, Hubert James, M.B., Ch.B., D.P.H.Edin. (Assistant Medical Officer, Camberwell House Asylum, S.E.); Napsbury War Hospital, St. Albans; Captain *R.A.M.C.*
1885. Oakshott, James A., M.D., M.Ch.R.U.I., Medical Superintendent, District Asylum, Waterford, Ireland.
1916. O'Carroll, Joseph, M.D., F.R.C.P., Physician Richmond and Whitworth Hospitals; Lord Chancellor's Medical Visitor in Lunacy; 43, Merrion Square, Dublin.
1903. O'Doherty, Patrick, B.A., M.B., B.Ch.R.U.I., District Asylum, Omagh.
1914. O'Flynn, Dominick Thomas, L.R.C.P. & S.I., Assistant Medical Officer London County Asylum, Hanwell, Middlesex.

1901. Ogilvy, David, B.A., M.D., B.Ch.Dubl., Medical Superintendent, London County Asylum, Long Grove, Epsom, Surrey.
1911. †Oliver, Norman H., Capt. *R.A.M.C.*, Special Hospital for Officers, Latchmere, Ham Common, Surrey.
1892. O'Mara, Francis, L.R.C.P.&S.I., District Asylum, Ennis, Ireland.
1902. Orr, David, M.D., C.M.Edin., M.P.C., Pathologist, County Asylum Prestwich, Lancs.
1910. Orr, James H. C., M.D., Ch.B.Edin., Rosslynlee Asylum, Midlothian.
1899. Osburne, Cecil A. P., F.R.C.S., L.R.C.P.Edin., The Grove, Old Catton Norwich.
1914. Osburne, John C., M.B., B.Ch.Dubl., Assistant Medical Officer, Lindville Cork.
1890. Oswald, Landel R., M.B., C.M.Glasg., M.P.C., Physician Superintendent, Royal Asylum, Gartnaval, Glasgow.
1916. †Overbeck-Wright, Alexander William, M.D., Ch.B., M.P.C., D.P.H. Major *I.M.S.* Superintendent, Lunatic Asylum, Agra, U. P., India (at present on military duty); Lecturer on Mental Diseases, King George's Hospital, Lucknow, and Agra Medical School, Agra. *Address c/o Messrs. King, King & Co., Bombay.*
1905. †Paine, Frederick, M.D.Bru.x., M.R.C.S., L.R.C.P.Lond., Claybury Asylum, Woodford Bridge, Essex; *R.A.M.C.*
1898. Parker, William Arnot, M.B., C.M.Glasg., M.P.C., Medical Superintendent, Gartloch Asylum, Gartcosh, N.B.
1898. Pasmore, Edwin Stephen, M.D., M.R.C.P.Lond., Chelsham House, Chelsham, Surrey.
1916. †Patch, Charles James Lodge, L.R.C.P.&S.Edin., Assistant Medical Officer, Renfrew District Asylum, Dykebar, Paisley; Capt. *R.A.M.C.*
1899. Patrick, John, M.B., Ch.B., R.U.I., Medical Superintendent, Tyrone Asylum, Omagh, Ireland.
1892. Patterson, Arthur Edward, M.D., C.M.Aber., M.P.C., Senior Assistant Medical Officer, City of London Asylum, Dartford.
1907. Peachell, George Ernest, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, Dorset County Asylum, Herrison, Dorchester.
1910. †Pearu, Oscar Phillips Napier, M.R.C.S., L.R.C.P., L.S.A.Lond., (Assistant Medical Officer, London County Asylum, Horton, Epsom); Capt. *R.A.M.C.*, Lord Derby's War Hospital, Warrington, Lancs.
1915. †Pennant, Dyfrig Huws, D.S.O., M.R.C.S., L.R.C.P.Lond., 21, Bovinton Street, Roath Park, Cardiff; Capt. *R.A.M.C.*
1913. Penny, Robert Augustus Greenwood, M.R.C.S., L.R.C.P.Lond., Devon County Asylum, Exminster.
1893. Perceval, Frank, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, County Asylum, Prestwich, Manchester, Lancashire.
1911. Perdrau, Jean René, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer and Pathologist, Dorset County Asylum, Dorebester.
1911. †Petrie, Alfred Alexander Webster, M.D., B.S.Lond., Ch.B., F.R.C.S. Edin. (Assistant Medical Officer, Epileptic Colony, Epsom); Lt. *R.A.M.C.*
1878. Philipps, Sutherland Rees, M.D., C.M.Q.U.I., F.R.G.S., The Beacon Exminster.
1875. Philipson, Sir George Hare, M.A., M.D.Cantab., D.C.L., LL.D., F.R.C.P. Lond., 7, Eldon Square, Newcastle-on-Tyne.
1908. Phillips, John George Porter, M.D., B.S.Lond., M.R.C.S., M.R.C.P.Lond., M.P.C., Resident Physician and Superintendent, Bethlem Royal Hospital, Lambeth, S.E. (*Secretary of Educational Committee since 1912.*)
1910. †Phillips, John Robert Parry, M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer, City Asylum, Bristol); Maj. *R.A.M.C.*, Beaufort War Hospital, Bristol.

1906. Phillips, Nathaniel Richard, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, County Asylum, Abergavenny, Monmouthshire.
1905. Phillips, Norman Ronth, M.D.Brux., M.R.C.S., L.R.C.P.Lond., 67, Billing Road, Northampton.
1891. Pierce, Bedford, M.D., F.R.C.P.Lond., Medical Superintendent, The Retreat, York. (*Hon. Secretary N. and M. Division 1900-8.*)
1888. Pietersen, J. F. G., M.R.C.S., L.R.C.P.Lond., Ashwood House, Kingswinford, near Dudley, Stafford.
1896. Planck, Charles, M.A.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Brighton County and Borough Asylum, Haywards Heath.
1912. †Plummer, Edgar Curnow, M.R.C.S., L.R.C.P.Lond. (Medical Superintendent, Laverstock House, Salisbury); Capt. *R.A.M.C.*, British Expeditionary Force.
1889. Pope, George Stevens, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Somerset and Bath Asylum, "Westfield," near Wells, Somerset.
1913. Potts, William A., M.A.Camb., M.D.Edin.&Birm., M.R.C.S., L.R.C.P.Lond., *Medical Officer to the Birmingham Committee for the Care of the Feeble-minded*, 118, Hagley Road, Birmingham.
1876. Powell, Evan, M.R.C.S.Eng., L.S.A., Medical Superintendent, City Lunatic Asylum, Nottingham.
1910. Powell, James Farquharson, M.R.C.S., L.R.C.P., D.P.H.Lond., M.P.C., Assistant Medical Officer, The Asylum, Caterham, Surrey.
1916. Power, Patrick William, L.R.C.P., L.R.C.S., Senior Assistant Medical Officer, County Asylum, Chester.
1908. Prentice, Reginald Wickham, L.M.S.S.A.Lond., Beauworth Manor, Alresford, Hants.
1901. Pugh, Robert, M.D., Ch.B.Edin., Medical Superintendent, Brecon and Radnor Asylum, Talgarth, S. Wales.
1904. †Race, John Percy, M.R.C.S., L.R.C.P., L.S.A.Lond., Journals and notices to Winterton Asylum, Ferryhill, Durham (Wheatley Hill, Doncaster); Capt. *R.A.M.C.*
1899. Rainsford, F. E., M.D., B.A.Dubl., L.R.C.P.I., L.R.C.P.&S.E., Resident Physician, Stewart Institute, Palmerston, co. Dublin.
1894. †Rambaut, Daniel F., M.A., M.D., B.Ch.Dub. (St. Andrews, Northampton); Lieut. *R.A.M.C.*, 40th Casualty Clearing Station, British Mediterranean Expeditionary Force.
1910. †Rankine, Surg. Roger Aiken, *R.N.*, M.B., B.S., M.R.C.S., L.R.C.P.Lond., M.P.C.
1889. †Raw, Nathan, M.D., B.S.Durh., L.S.Sc., F.R.C.S.Edin., M.R.C.P.Lond., M.P.C. (66, Rodney Street, Liverpool); Lt.-Col. *R.A.M.C.*, Liverpool Merchants' Hospital, A.P.O.S. 11, British Expeditionary Force, France.
1893. Rawes, William, M.D.Durh., F.R.C.S.Eng., Medical Superintendent, St. Luke's Hospital, Old Street, London, E.C.
1870. Rayner, Henry, M.D.Aberd., M.R.C.P.Edin., Upper Terrace House, Hampstead, N.W. (PRESIDENT, 1884.) (*General Secretary, 1887-89.*) (*Co-Editor of Journal 1895-1911.*)
1913. †Read, Charles Stamford, M.B.Lond., M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer, Fisherton House, Salisbury); Lieut. *R.A.M.C.*, Royal Victoria Hospital, Netley.
1903. Read, George F., L.R.C.S.&P.Edin., Hospital for the Insane, New Norfolk, Tasmania.
1899. Redington, John, F.R.C.S.&L.R.C.P.I., Portrane Asylum, Donabate, Co. Dublin.
1911. †Reeve, Ernest Frederick, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., (Senior Assistant Medical Officer, County Asylum, Rainhill, Lancs.); Lieut. *R.A.M.C.*
1911. †Reid, Daniel McKinley, M.D., Ch.B.Glasg. (Royal Asylum, Gartnavel, Glasgow); Lt., *R.A.M.C.*
1910. †Reid, William, M.A.St. And., M.B., Ch.B.Edin. (Senior Assistant Medical Officer, Burntwood Asylum, Lichfield); Capt. *R.A.M.C.*

1887. Reid, William, M.D., C.M.Aberd., Physician Superintendent, Royal Asylum, Aberdeen.
1886. Revington, George T., M.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, Central Criminal Asylum, Dundrum, Ireland.
1899. Rice, David, M.D.Brux., M.R.C.S., L.R.C.P.Lond., D.P.H., Medical Superintendent, City Asylum, Hillesdon, Norwich.
1897. Richard, William J., M.A., M.B., Ch.M.Glasg., Medical Officer, Govan Parochial Asylum, Merryflats, Govan.
1899. Richards, John, M.B., C.M.Edin., F.R.C.S.E., Medical Superintendent, Joint Counties Asylum, Carmarthen.
1911. Roberts, Henry Howard, M.D., Ch.B.Edin., D.P.H.Glasg., Ennerdale, Haddington, Scotland.
1914. †Roberts, Ernest Theophilus, M.D., C.M.Edin., D.P.H.Camb., M.P.C. (129, Bath Street, Glasgow); Hawkstone, Cambuslang, Glasgow; Capt. *R.A.M.C.*
1903. †Roberts, Noreliffe, M.D., B.S.Durh., (Senior Assistant Medical Officer, Horton Asylum, Epsom, Surrey); Major *R.A.M.C.*, Horton County of London War Hospital, Epsom.
1887. Robertson, Geo. M., M.D., C.M., F.R.C.P.Edin., M.P.C., Physician-Superintendent, Royal Asylum, Morningside, Edinburgh.
1908. Robertson, George Dunlop, L.R.C.S.&P.Edin., Dipl. Psych., Assistant Medical Officer, District Asylum, Hartwood, Lanark.
1916. Robertson, Jane I., M.B., Ch.B.Glasg., Gartnavel Asylum, Glasgow.
1895. Robertson, William Ford, M.D., C.M.Edin., 60, Northumberland Street, Edinburgh.
1900. Robinson, Harry A., M.D., Ch.B.Vict., 140, Edge Lane, Liverpool.
1911. †Robson, Capt. Hubert Alan Hirst, *I.M.S.*, M.R.C.S., L.R.C.P.Lond., Punjab Asylum, India.
1914. †Rodger, Murdoch Mann, M.D., Ch.B.Glas., The Rowans, Bothwell, Scotland; Lieut. *R.A.M.C.*
1908. †Rodgers, Frederick Millar, M.D., Ch.B.Vict., D.P.H. (Senior Medical Officer, County Asylum, Winwick, Lancs.); Temp. Major, *R.A.M.C.*, Lord Derby's War Hospital, Winwick.
1908. Rolleston, Charles Frank, B.A., M.B., Ch.B.Dub., Assistant Medical Officer, County of London Manor Asylum, Epsom.
1895. Rolleston, Lancelot W., M.B., B.S.Durh., (Medical Superintendent, Middlesex County Asylum); Lieut.Col. *R.A.M.C.*, Napsbury War Hospital, Napsbury, near St. Albans.
1888. Ross, Chisholm, M.D.Syd., M.B., C.M.Edin., 151, Macquarie Street, Sydney, New South Wales.
1913. Ross, Derind Maxwell, M.B., Ch.B.Edin., Morningside Asylum, Edinburgh.
1910. †Ross, Donald, M.B., Ch.B.Edin., Argyll and Bute Asylum, Lochgilphead; Temp. Lieut. *R.A.M.C.*
1905. Ross, Sheila Margaret, M.D., Ch.B.Edin., 83A, Friar Gate, Derby.
1899. Rotherham, Arthur, M.A., M.B., B.C.Cantab., Commissioner under Ment. Defec. Act, Board of Control, 66, Victoria Street, Westminster, S.W.
1906. Rowan, Marriott Logan, B.A., M.D.R.U.I., Medical Superintendent, Derby County Asylum, Mickleover.
1883. Rowland, E. D., M.B., C.M.Edin., *I.S.O.* (attached *R.A.M.C.*), 71, Main Street, George Town, Demerara, British Guiana.
1902. †Rows, Richard Gundry, M.D.Lond., M.R.C.S., L.R.C.P.Lond. (Pathologist, County Asylum, Lancaster); Major *R.A.M.C.*, British Red Cross Military Hospital, Maghull, Liverpool.
1877. Russell, Arthur P., M.B., C.M., M.R.C.P.Edin., The Lawn, Lincoln.
1912. †Russell, John Ivison, M.B., Ch.B.Glasg. (Jeanfield, 18, Woodend Drive, Jordan Hill, Glasgow; Temp. Capt. *R.A.M.C.*
1915. Russell, William, M.B., Ch.B.Edin., Dip.Psych.Edin., D.T.M.Edin., Assistant Physician, Pretoria Mental Hospital, S. Africa.
1912. †Rutherford, Cecil, M.B., B.Ch.Dubl. (Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey); Temp. Capt. *R.A.M.C.*, No. 16 Standard Hospital, Mediterranean Expeditionary Force.

1907. Rutherford, Henry Richard Charles, F.R.C.S.I., L.R.C.P.I., D.P.H., St. Patrick's Hospital, James's St., Dublin.
1896. Rutherford, James Mair, M.B., C.M., F.R.C.P. Edin., M.P.C., Brislington House, Bristol.
1913. †Ryan, Ernest Noel, B.A., M.D., B.Ch. Dub., *R.A.M.C.*, 6th London Field Ambulance (T.).
1902. Sall, Ernest Frederick, M.R.C.S., L.R.C.P. Lond., Medical Superintendent, Borough Asylum, Canterbury.
1908. Samuels, William Frederick, L.M. & L.S. Dubl., Medical Superintendent Central Asylum, Tangong, Rambutan, Perak, Federated Malay States.
1894. Sankey, Edward H. O., M.A., M.B., B.C. Cantab., Resident Medical Licensee, Boreatton Park Licensed House, Baschurch, Salop.
- Sankey, R. H. Heurtley, M.R.C.S. Eng., 3, Marston Ferry Road, Oxford.
1873. Savage, Sir Geo. H., M.D., F.R.C.P. Lond., 26, Devonshire Place, W. (*Late Editor of Journal.*) (PRESIDENT, 1886.)
1906. †Scanlan, John J., L.R.C.P. & S. Edin., L.R.F.P. & S. Glasg., D.P.H. (1 Castle Court, Cornhill, E.C.); Capt. *R.A.M.C.*, 5th London Field Ambulance, 47th (London) Division, British Expeditionary Force.
1896. Scott, James, M.B., C.M. Edin., 98, Baron's Court Road, West Kensington, W.
1915. Scott, James McAlpine, M.D., Ch.B. Glasg., Junior Assistant Medical Officer, Stirling District Asylum, Larbert.
1889. Scowcroft, Walter, M.R.C.S., L.R.C.P.I., Medical Superintendent, Royal Lunatic Hospital, Cheadle, near Manchester.
1911. Scroope, Geoffrey, M.B., B.Ch. Dub., Assistant Medical Officer, Central Asylum, Dundrum.
1880. Seccombe, George S., M.R.C.S., L.R.C.P. Lond., c/o Messrs. H. S. King and Co., 65, Cornhill, E.C.
1912. Sergeant, John Noel, M.B., B.S. Lond., M.R.C.S., L.R.C.P. Lond., Medical Superintendent, Newlands House, Tooting Bec Common, S.W. (*Secretary South-Eastern Division from 1913.*)
1882. Seward, William J., M.B. Lond., M.R.C.S. Eng., 15, Chandos Avenue, Oakleigh Park, N.
1913. †Shand, George Ernest, M.D., Ch.B. Aberdeen; (Senior Assistant Medical Officer, City Mental Hospital, Winson Green, Birmingham); Journals to Capt., *R.A.M.C.*, No. 6 Clearing Hospital, British Expeditionary Force.
1901. †Shaw, B. Henry, M.B., B.Ch. R.U.I. (Assistant Medical Officer, County Asylum, Stafford); *R.A.M.C.*
1909. †Shaw, William Samuel J., M.B., B.Ch. R.U.I., Major *I.M.S.*, Superintendent, North Veravola, Poona, India.
1905. Shaw, Charles John, M.D., Ch.B., F.R.C.P.E., Medical Superintendent, Royal Asylum, Montrose.
1915. †Shaw, Hugh Kirkland, M.B., Ch.B. Edin. (Assistant Medical Officer, Stirling District Asylum, Larbert); Surgeon *R.N.*
1904. Shaw, Patrick, L.R.C.P. & S. Edin., Senior Medical Officer (Hospital for the Insane, Kew, Victoria, Australia); "Lingerwood," Wills Street, Kew, Victoria, Australia. *On active service.*
1909. Shepherd, George Ferguson, F.R.C.S., L.R.C.P. Irel., D.P.H., 9, Ogle Terrace, South Shields.
1900. Shera, John E. P., M.D. Brux., L.R.C.P. & S. Irel., Somerset County Asylum, Wells, Somerset.
1912. Sheridan, Gerald Brinsley, M.B., B.Ch. R.U.I., Assistant Medical Officer, Portrane Asylum, Donabate, Co. Dublin.
1914. Sherlock, Edward Burball, M.D., B.Sc., D.P.H. Lond., Medical Superintendent, Darenth Industrial Colony, Dartford.
1914. †Shield, Hubert, M.B., B.S. Durh. (Assistant Medical Officer, Gateshead Borough Asylum, Stannington, Newcastle-on-Tyne); Capt., *R.A.M.C.* (T.), 1st Nottingham Field Ambulance, British Expeditionary Force, France.

1877. Shuttleworth, George E., B.A.Lond., M.D.Heidelb., M.R.C.S. and L.S.A. Lond., 25, New Cavendish Street; 8, Lancaster Place, Hampstead, N.W.
1901. †Simpson, Alexander, M.A., M.D., C.M.Aber. (Medical Superintendent, County Asylum, Winwick, Newton-le-Willows, Lancashire); Lt.-Col., *R.A.M.C.*, Lord Derby War Hospital, Warrington.
1905. Simpson, Edward Swan, M.D., Ch.B.Edin., East Riding Asylum, Beverley, Yorks.
1888. Sinclair, Eric, M.D., C.M.Glasg., Inspector-General of Insane, Richmond Terrace, Demain, Sydney, N.S.W.
1891. Skeen, James Humphry, M.B., Ch.M.Aber., M.P.C., Medical Superintendent, Fife and Kinross District Asylum, Cupar, N.B.
1900. Skinner, Ernest W., M.D., C.M.Edin., J.P., Mountsfield, Rye, Sussex.
1914. Slaney, Chas. Newnham, M.R.C.S., L.R.C.P.Lond., The Elms, Parkhurst, I.W.
1901. Slater, George N. O., M.D.Lond., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Essex County Asylum, Brentwood.
1897. Smalley, Sir Herbert, M.D.Durh., M.R.C.S., L.R.C.P.Lond., Prison Commission, Home Office, Whitehall, S.W.
1914. Smith, Charles Kilman, M.B., Ch.B.Aberd., Assistant Medical Officer, Borough Asylum, Portsmouth.
1910. †Smith, Gayton Warwick, M.D.Lond., B.S.Durh., D.P.H.Cantab., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey; Capt. *R.A.M.C.*
1905. Smith, George William, M.B., Ch.B.Edin., Brislington House, near Bristol.
1907. Smith, Henry Watson, M.D., Ch.B.Aberd., Medical Superintendent, Lebanon Hospital for the Insane, Asfurujeh, near Beyrout, Syria.
1899. Smith, John G., M.D., C.M.Edin., Herts County Asylum, Hill End, St. Albans, Herts.
1885. Smith, R. Percy, M.D., B.S., F.R.C.P.Lond., M.P.C., 36, Queen Anne Street, Cavendish Square, W. (*General Secretary*, 1896-7. *Chairman Educational Committee*, 1899-1903.) (PRESIDENT, 1904-5.)
1913. Smith, Thomas Cyril, M.B., B.Ch.Edin., County Asylum, Gloucester.
1911. Smith, Thomas Waddelow, F.R.C.S., L.R.C.P.Lond., M.P.C., Assistant Medical Officer, City Asylum, Mapperley Hill, Nottingham.
1884. Smith, W. Beattie, F.R.C.S.Edin., L.R.C.P.Edin., 4, Collins Street, Melbourne, Victoria.
1914. Smith, Walter H., B.A., M.D., B.Ch.Dub., Senior Assistant Medical Officer, County Asylum, Shrewsbury.
1901. Smyth, Robt. B., M.A., M.B., Ch.B.Dubl., Medical Superintendent, County Asylum, Gloucester.
1899. Smyth, Walter S., M.B., B.Ch.R.U.I., Assistant Medical Officer, County Asylum, Antrim.
1913. Somerville, Henry, B.Sc., M.R.C.S., L.R.C.P.Lond., F.C.S., Harrold, Sharnbrook, Bedfordshire.
1885. Soutar, James Greig, M.B., C.M.Edin., M.P.C., Medical Superintendent, Barnwood House, Gloucester. (PRESIDENT, 1912-13.)
1906. Spark, Percy Charles, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, London County Asylum, Banstead, Surrey.
1875. Spence, J. Beveridge, M.D., M.C.Q.U.I., Medical Superintendent, Burntwood Asylum, near Lichfield. (*First Registrar*, 1892-1899; *Chairman Parliamentary Committee*, 1910-12.) (PRESIDENT, 1899-1900.)
1913. Spensley, Frank Oswald, M.R.C.S., L.R.C.P.Lond., Senior Medical Officer, Darenth Asylum, Dartford, Kent.
1891. Stansfield, T. E. K., M.B., C.M.Edin., Medical Superintendent, London County Asylum, Bexley, Kent.

1901. Starkey, William, M.B., B.Ch.R.U.I., Medical Superintendent, Borough Asylum, Blackadon, Ivybridge, S. Devon.
1907. †Steele, Patrick, M.D., Ch.B., M.R.C.P.Edin. (Assistant Medical Officer, District Asylum, Dundee); St. Colmer, Inverness; Lt. *R.A.M.C.*
1898. Steen, Robert H., M.D.Lond., M.R.C.P.Lond., Medical Superintendent, City of London Asylum, Stone, Dartford. (*Hon. Sec. S.E. Division, 1905-10; Acting Hon. Gen. Sec. since 1915.*)
1914. Stephens, Harold Freize, M.R.C.S.Lond., L.R.C.P.Eng., 9, Belmont Avenue, Palmer's Green, London, N.
1914. †Stevenson, George Henderson, M.B., Ch.B.Edin., D.P.H.Lond. (Joyce Green Hospital, Dartford, Kent); *R.A.M.C.*
1912. †Stevenson, William Edward, M.B., B.S.Durh.; Lieut. 19th Battalion Royal Welsh Fusiliers, Winceell Down Camp, Winchester.
1909. †Steward, Sidney John, M.D., D.S.O., B.C.Cantab., M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer, Langton Lodge, Farncombe, Surrey); Capt., *R.A.M.C., T.R.*
1915. Stewart, A. H. L., M.R.C.S., 72, Wimpole Street, W.
1868. Stewart, James, B.A.Belf., F.R.C.P.Ed., L.R.C.S.I., 204, Gloucester Terrace, Paddington, W.
1913. †Stewart, Ronald, M.B., Ch.B.Glasg. (Gartlock Asylum, Gartcosh, Glasgow); Capt. *R.A.M.C.*, No. 38 Hospital, Mediterranean Expeditionary Force.
1887. Stewart, Rothsay C., M.R.C.S.Eng., L.S.A.Lond., Medical Superintendent, County Asylum, Narborough, near Leicester.
1914. †Stewart, Roy M., M.B., Ch.B.Edin. (Assistant Medical Officer, County Asylum, Prestwib); Capt. *R.A.M.C.*, Mediterranean Expeditionary Force, *c/o G.P.O.*
1905. Stilwell, Henry Francis, L.R.C.P.&S.E., Hayes Park, Hayes, Middlesex.
1899. Stilwell, Reginald J., M.R.C.S., L.R.C.P.Lond., Moorcroft House, Hillingdon, Middlesex.
1897. Stoddart, William Henry Butter, M.D., B.S., F.R.C.P.Lond., M.R.C.S.Eng., M.P.C., Harcourt House, Cavendish Square, W. (*Hon. Sec. Educational Committee, 1908-1912.*)
1909. †Stokes, Frederick Ernest, M.B., Ch.B.Glasg., D.P.H.Cantab. (Assistant Medical Officer, Borough Asylum, Portsmouth); Major, *R.A.M.C. (T.)*, 2/3 Wessex Field Ambulance.
1905. Strathearn, John, M.D., Ch.B.Glasg., F.R.C.S.E., 23, Magdalen Yard Road, Dundee.
1903. Stratton, Percy Houghton, M.R.C.S., L.R.C.P.Lond., 10, Hanover Square, W.
1885. Street, C. T., M.R.C.S., L.R.C.P.Lond., Haydock Lodge, Ashton, Newton-le-Willows, Lancashire.
1909. †Stuart, Frederick J., M.R.C.S., L.R.C.P.Lond. (Senior Assistant Medical Officer, Northampton County Asylum, Berrywood); Major *R.A.M.C.*, War Hospital, Dunston, Northampton.
1900. Sturrock, James Prain, M.A.St.And., M.D., C.M.Edin., 25, Palmerston Place, Edinburgh.
1886. Suffern, Alex. C., M.D., M.Ch.R.U.I. (Medical Superintendent, Rubery Hill Asylum, near Bromsgrove, Worcestershire); Lt.-Col. *R.A.M.C.*, 1st Birmingham War Hospital, Rubery Hill, Worcestershire.
1894. Sullivan, William C., M.D., B.Ch.R.U.I., Rampton Criminal Lunatic Asylum, Retford, Notts.
1910. †Sutherland, Joseph Roderick, M.B., Ch.B.Glasg., M.R.C.S., L.R.C.P.Lond., D.P.H., County Sanatorium, Stonehouse, Lanarkshire.
1908. Swift, Eric W. D., M.B.Lond., Medical Superintendent, Government Asylum, Bloemfontein.
1908. Tattersall, John, M.D.Lond., M.R.C.S., M.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Hanwell, W.
1910. Taylor, Arthur Loudoun, B.Sc., M.B., Ch.B., M.R.C.P.Edin., 30, Hartington Place, Edinburgh.

1897. Taylor, Frederic Ryott Percival, M.D., B.S.Lond., M.R.C.S., L.R.C.P. Lond., Medical Superintendent, East Sussex Asylum, Hellingly.
1908. Thomas, Joseph D., B.A., M.B., B.C.Cantab., Northwoods House, Winterbourne, Bristol.
1911. †Thomas, William Rees, M.D., B.S.Lond., M.R.C.S., M.R.C.P.Lond., M.P.C. (Moss-side, Maghull, near Liverpool); Capt. *R.A.M.C.* British Red Cross War Hospital, Maghull, near Liverpool.
1880. †Thomson, David G., M.D., C.M.Edin. (Medical Superintendent, County Asylum, Thorpe, Norfolk); Lieut.-Col. *R.A.M.C.*, Norfolk War Hospital, Thorpe, Norwich. (PRESIDENT, 1914-15.)
1903. Thomson, Herbert Campbell, M.D., F.R.C.P.Lond., Assist. Physician Middlesex Hospital, 34, Queen Anne Street, W.
1905. †Tidbury, Robert, M.D., M.Ch. R.U.I. (Heathlands, Foxhall Road, Ipswich); Lieut. *R.A.M.C.*
1901. Tighe, John V. G. B., M.B., B.Ch.R.U.I., Medical Superintendent, Gateshead Mental Hospital, Stannington, Northumberland.
1914. †Tisdall, C. J., M.B., Ch.B. (Crichton Royal Institution, Dumfries); *R.A.M.C.*
1903. Topham, J. Arthur, B.A.Cantab., M.R.C.S., L.R.C.P.Lond., County Asylum, Chartham, Kent.
1896. Townsend, Arthur A. D., M.D., B.Ch.Birm., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Hospital for Insane, Barnwood House, Gloucester.
1904. Treadwell, Oliver Ferreira Naylor, M.R.C.S.Eng., L.S.A.Lond., 102, Belgrave Road, S.W.
1903. †Tredgold, Alfred F., M.R.C.S., L.R.C.P.Lond. (6, Dapdune Crescent, Guildford, Surrey); Major, *R.A.M.C.*, Mediterranean Expeditionary Force.
1908. Tuach-MacKenzie, William, M.D., Ch.B.Aberd., Medical Superintendent, Royal and District Asylums, Dundee.
1881. Tuke, Charles Molesworth, M.R.C.S.Eng., Chiswick House, Chiswick.
1888. Tuke, John Batty, M.D., C.M., F.R.C.P.Edin., Resident Physician, New Saughton Hall, Polton, Midlothian.
1885. Tuke, T. Seymour, M.A., M.B., B.Ch.Oxon., M.R.C.S.Eng., Chiswick House, Chiswick, W.
1915. Tulluch, William John, M.D.St. Andrews, Director Western Asylums Research Institute, 10, Claythorn Road, Glasgow.
1906. †Turnbull, Peter Mortimer, M.B., B.Ch.Aberd., Tooting Bee Asylum, Tooting, S.W.; Temp. Lieut. *R.A.M.C.*
1909. Turnbull, Robert Cyril, M.D.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Essex County Asylum, Colchester.
1889. Turner, Alfred, M.D., C.M.Edin., Plympton House, Plympton, S. Devon.
1906. Turner, Frank Douglas, M.B.Lond., M.R.C.S., L.R.C.P.Lond., Medical Officer, Royal Eastern Counties Institution, Colchester.
1890. Turner, John, M.B., C.M.Aberd., Medical Superintendent, Essex County Asylum, Brentwood.
1917. Vevers, Oswald Henry, M.R.C.S., L.R.C.P.Lond., late Junior Assistant Medical Officer, Nottingham City Asylum; Norton Vicarage, Worcester.
1904. Vincent, George A., M.B., B.Ch.Edin., Assistant Medical Superintendent, St. Ann's Asylum, Port of Spain, Trinidad, B.W.I.
1894. †Vincent, William James N., M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond. (Medical Superintendent, Wadley Asylum, near Sheffield); Lt.-Col. *R.A.M.C.*, Wharfedale War Hospital, Sheffield.
1914. Vining, Charles Wilfred, M.D., B.S.Lond., M.R.C.P.Lond., D.P.H., M.P.C., Assistant Physician, Leeds General Infirmary, 40, Park Square, Leeds.

1913. †Walford, Harold R. S., M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer, Kent County Asylum, Barming Heath, Maidstone); Lieut. *R.A.M.C.*
1914. Walker, Robert Clive, M.B., Ch.B.Edin., West Riding Asylum, Menston, near Leeds.
1908. Wallace, John Andrew Leslie, M.D., Ch.B.Edin., M.P.C., The Hospital, Gladesville, Sydney, N.S.W.
1912. Wallace, Vivian, L.R.C.P. & S.I., Assistant Medical Officer, Mullingar District Asylum, Mullingar.
1889. Warnock, John, M.D., C.M., B.Sc.Edin., Medical Superintendent, Abbasiyeh Asylum, nr. Cairo, Egypt.
1895. Waterston, Jane Elizabeth, M.D.Brux., L.R.C.P.I., L.R.C.S.Edin., M.P.C., 85, Parliament Street, Box 78, Cape Town, South Africa.
1902. Watson, Frederick, M.B., C.M.Edin., Elm Lodge, Clay Hill, Enfield.
1891. Watson, George A., M.B., C.M.Edin., M.P.C., Lyons House, Rainhill, Liverpool.
1908. Watson, H. Ferguson, M.D., Ch.B.Glas., L.R.C.P.&S.E., L.R.F.P.&S.Glas., D.P.H., Northcote, Edinburgh Road, Perth.
1885. Watson, William Riddell, L.R.C.S. & P.Edin., 6, Queen's Mansions, Brook Green, London, W.
1911. †Webber, Leonard Mortis, M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer, Netherne, Merstham, Surrey); Temp. Lieut. *R.A.M.C.*
1911. †White, Edward Barton C., M.R.C.S., L.R.C.P.Lond. (Senior Assistant Medical Officer, Cardiff City Mental Hospital, Whitechurch); Major, *R.A.M.C.*, Welsh Metropolitan War Hospital, Whitechurch.
1884. †White, Ernest William, M.B.Lond., M.R.C.P.Lond. (Betley House, nr. Shrewsbury). (*Hon. Sec. South-Eastern Division, 1897-1900.*) (*Chairman Parliamentary Committee, 1904-7.*) (PRESIDENT 1903-4.); Temp. Major *R.A.M.C.*
1905. †Whittington, Richard, M.A., M.D.Oxon., M.R.C.S., L.R.C.P.Lond., (Downford, Montpelier Road, Brighton); Major, *R.A.M.C., T.F.*, 2nd East General Hospital, Brighton.
1889. Whitwell, James Richard, M.B., C.M.Edin., Medical Superintendent, Suffolk County Asylum, Melton Woodbridge.
1903. Wigan, Charles Arthur, M.D.Durh., M.R.C.S.Eng., L.S.A.Lond., Deepdene, Portishead, Somerset.
1883. Wigglesworth, Joseph, M.D., F.R.C.P.Lond., Springfield House, Winscombe, Somerset. (PRESIDENT, 1902-3.)
1913. †Wilkins, William Douglas, M.B., Ch.B.Vict., M.R.C.S., L.R.C.P.Lond. (County Mental Hospital, Cheddleton, Leek, Staff.); Capt. *R.A.M.C.*
1900. †Wilkinson, H. B., M.R.C.S., L.R.C.P.Lond. (Assistant Medical Officer Plymouth Borough Asylum, Blackadon, Ivybridge, South Devon); Lieut. *R.A.M.C.*
1887. Will, John Kennedy, M.A., M.D., C.M.Aberd., M.P.C., Bethnal House, Cambridge Road, N.E.
1914. Williams, Charles, L.R.C.P. & S.Edin., L.S.A.Lond., Assistant Medical Officer, The Warneford, Oxford.
1907. †Williams, Charles E. C., M.A., M.D., B.Ch.Dubl.; Greystones, Carnford Cliffs, Bournemouth; Capt. *R.A.M.C.*, No. 12 General Hospital, British Expeditionary Force, France.
1905. Williams, David John, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, The Asylum, Kingston, Jamaica.
1915. †Williams, Gwilym Ambrose, L.R.C.P.Lond., M.R.C.S.Eng. (Pathologist and Assistant Medical Officer, East Sussex County Asylum, Hellingly); *R.A.M.C.*, 27th General Hospital, Mediterranean Expeditionary Force.
1916. Wilson, Marguerite, M.B., Ch.B.Glasg., Assistant Medical Officer, The Retreat, York.
1912. Wilson, Samuel Alexander Kiuneir, M.A., M.D., B.Sc.Edin., M.R.C.P.Lond., Registrar, National Hospital, Queen's Square, 14, Harley Street, W.

1897. Winder, W. H., M.R.C.S., L.R.C.P.Lond., D.P.H.Cantab., Deputy Medical Officer, H.M. Convict Prison, Aylesbury.
1875. Winslow, Henry Forbes, M.D.Lond., M.R.C.P.Lond., M.R.C.S.Eng., 164, Marine Parade, Brighton.
1899. Wolseley-Lewis, Herbert, M.D.Bru.x., F.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, Kent County Asylum, Barming Heath, Maidstone. (*Secretary Parliamentary Committee, 1907-12. Chairman since 1912.*)
1869. Wood, T. Outterson, M.D.Durh., M.R.C.P.Lond., F.R.C.P., F.R.C.S. Edin., 7, Abbey Crescent, Torquay. (PRESIDENT, 1905-6.)
1912. †Woods, James Cowan, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., (10, Palace Green, Kensington, W.); Temp. Major *R.A.M.C.*
1885. †Woods, J. F., M.D.Durh., M.R.C.S.Eng. (7, Harley Street, Cavendish Square, W.); Capt. *R.A.M.C.*
1912. Wootton, John Charles, M.R.C.S.Eng., L.R.C.P.Lond., Haydock Lodge, Newton-le-Willows, Lanes.
1900. †Worth, Reginald, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond. (Medical Superintendent, Middlesex Asylum, Tooting, S.W.); Maj. *R.A.M.C.*
1862. Yellowlees, David, LL.D.Glas., M.D.Edin., F.R.F.P.&S.Glasg., 6, Albert Gate, Dowan Hill, Glasgow. (PRESIDENT, 1890.)
1914. †Yellowlees, Henry, M.B., Ch.B.Glas., 6, Albert Gate, Dowan Hill, Glasgow; Lt., *R.A.M.C.*, 26th British General Hospital, British Expeditionary Force.
1910. Younger, Edward George, M.D.Bru.x., M.R.C.P., M.R.C.S., L.S.A.Lond., D.P.H., Physician to the Finsbury Dispensary, 2, Mecklenburgh Square, W.C.

ORDINARY MEMBERS	...	...	...	...	...	635
HONORARY MEMBERS	...	...	...	...	...	32
CORRESPONDING MEMBERS	...	...	...	...	...	18

Total 685

† Serving with H.M. Forces.

Members are particularly requested to send changes of address, etc., to The Acting Honorary General Secretary, 11, Chandos Street, Cavendish Square, London, W., and in duplicate to the Printers of the Journal, Messrs. Adlard & Son & West Newman, Ltd., 23, Bartholomew Close, London, E.C.

OBITUARY.

Members.

1908. Brown, Ralph, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Bethlem Royal Hospital, S.E.
1894. Fitzgerald, Charles E., M.D., M.Ch.Dubl., F.R.C.S.I., Surgeon-Oculist to the King in Ireland, President of the Royal College of Physicians of Ireland, 27, Upper Merrion Street, Dublin.
1903. †Hanbury, Langton Fuller, M.R.C.S., L.R.C.P.Lond. (Medical Superintendent, West Ham Borough Asylum, Ilford, Essex). Sportsman's Battalion, Royal Fusiliers. (*Missing, reported killed in action.*)
1898. Hine, George T., F.R.I.B.A., 35, Parliament Street, London, S.W.
1881. Hughes, C. H., M.D., St. Louis, Missouri, United States.
1899. Kirwan, James St. L., B.A., M.B., B.Ch., R.U.I., Medical Superintendent, District Asylum, Ballinasloe, Ireland.
1899. Macartney, William H. C., L.R.C.P.&S.I., Riverhead House, Sevenoaks.
1911. †Moon, George Bassett, L.R.C.P. & S.Edin., L.R.F.P.&S.Glas., (Assistant Medical Officer, Surrey County Asylum, Netherne); Surgeon *R.N. (killed in action).*
1868. Orange, William, C.B., M.D.Heidlh., F.R.C.P.Lond., M.R.C.S.Eng., 11, Marina Court, Bexhill-on-Sea. (PRESIDENT, 1883.)
1877. Turnbull, Adam Robert, M.B., C.M.Edin., Corsewell, Colinton, Midlothian. (*Hon. Secretary for Scottish Division, 1894-1901.*) (PRESIDENT-ELECT, 1909-10.)

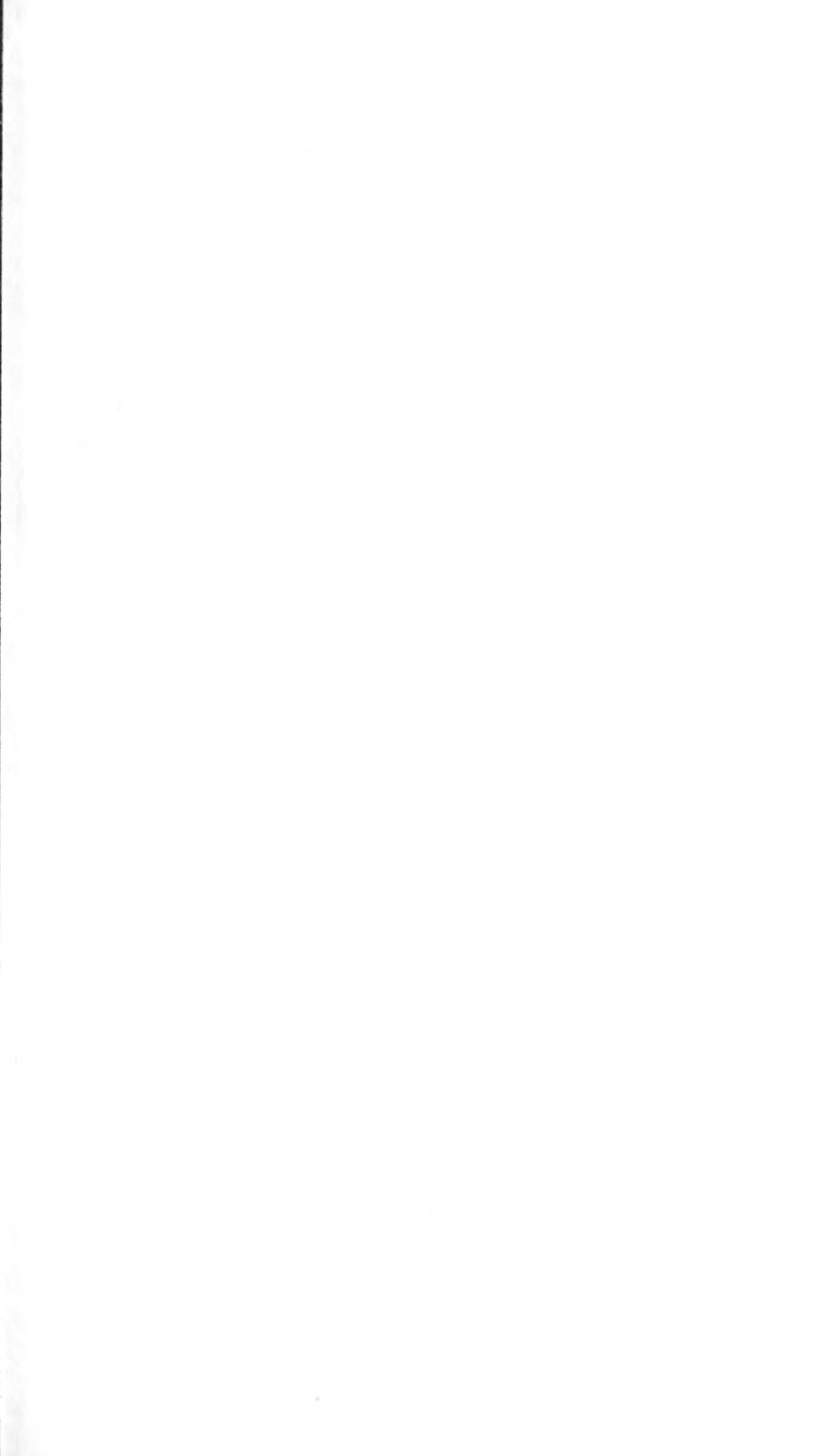
List of those who have passed the Examination for the Certificate of Efficiency in Psychological Medicine, entitling them to append M.P.C. (Med.-Psych. Certif.) to their names.

- | | |
|---------------------------------|---------------------------|
| Adams, J. Barfield. | Conolly, Richard M. |
| Adamson, Robert O. | Conry, John. |
| Adkins, Percy, R. | Cook, William Stewart. |
| Ainley, Fred Shaw. | Cooper, Alfred J. S. |
| Ainslie, William. | Cope, George Patrick. |
| Alcock, B. J. | Corner, Harry. |
| Alexander, Edward H. | Cotton, William. |
| Anderson, A. W. | Couper, Sinclair. |
| Anderson, Bruce Arnold. | Cowan, John J. |
| Anderson, John. | Cowie, C. G. |
| Andriezen, W. | Cowie, George. |
| Apthorp, F. W. | Cowper, John. |
| Armour, E. F. | Cox, Walter H. |
| Attegalle, J. W. S. | 8 Craig, M. |
| Aveline, H. T. S. | Cram, John. |
| Ballantyne, Harold S. | Crills, G. H. |
| Barbour, William. | Cross, Edward John. |
| Barker, Alfred James Glanville. | Cruickshank, George. |
| Bashford, Ernest Francis. | Cullen, George M. |
| Bazalgette, S. | Cunningham, James F. |
| Begg, William. | Dalgetty, Arthur B. |
| Belben, F. | Davidson, Andrew. |
| Bird, James Brown. | Davidson, William. |
| Blachford, J. Vincent. | 6 Dawson, W. R. |
| Black, E. J. | De Silva, W. H. |
| Black, Robert S. | 11 Devine, H. |
| Black, Victor. | Distin, Howard. |
| Blackwood, John. | Dixon, J. F. |
| Blandford, Henry E. | Donald, Wm. D. D. |
| 7 Bond, C. Hubert. | Donaldson, R. L. S. |
| Bond, R. St. G. S. | Donelan, James O'Conor. |
| Bowlan, Marcus M. | Douglas, A. R. |
| Boyd, James Paton. | Downey, Augustine. |
| 13 Boyd, William | Drummond, Russell J. |
| Bradley, J. T. | Eager, Richard. |
| Bristowe, Hubert Carpenter. | Eames, Henry Martyn. |
| Brodie, Robert C. | Earls, James H. |
| Brough, C. | East, W. Norwood. |
| Brown, William. | Easterbrook, Charles C. |
| Browne, Hy. E. | Eden, Richard A. S. |
| Bruce, John. | Edgerley, S. |
| Bruce, Lewis C. | Edwards, Alex. H. |
| Brush, S. C. | Elkins, Frank A. |
| Bulloch, William. | Ellis, Clarence J. |
| Calvert, William Dobree. | English, Edgar. |
| Cameron, James. | Eustace, J. N. |
| Campbell, Alex Keith. | Eustace, Henry Marcus. |
| Campbell, Alfred W. | Evans, P. C. |
| Campbell, Peter. | Ewan, John A. |
| Carmichael, W. J. | Ezard, Ed. W. |
| Carruthers, Samuel W. | Falconer, A. R. |
| Carter, Arthur W. | Falconer, James F. |
| Chambers, James. | Farquharson, Wm. Fredk. |
| Chambers, W. D. | Fennings, A. A. |
| Chapman, H. C. | Ferguson, Robert. |
| Christie, William. | Findlay, G. Landsborough. |
| Clarke, Robert H. | Fitzgerald, Gerald. |
| Clayton, Frank Herbert A. | Fleck, David. |
| Clayton, Thomas M. | Fortune, J. |
| Clinch, Thomas Aldous. | Fox, F. G. T. |
| Coles, Richard A. | Fraser, Donald Allan. |
| Collie, Frank Lang. | Fraser, Thomas. |
| Collier, Joseph Henry | Frederick, Herbert John. |

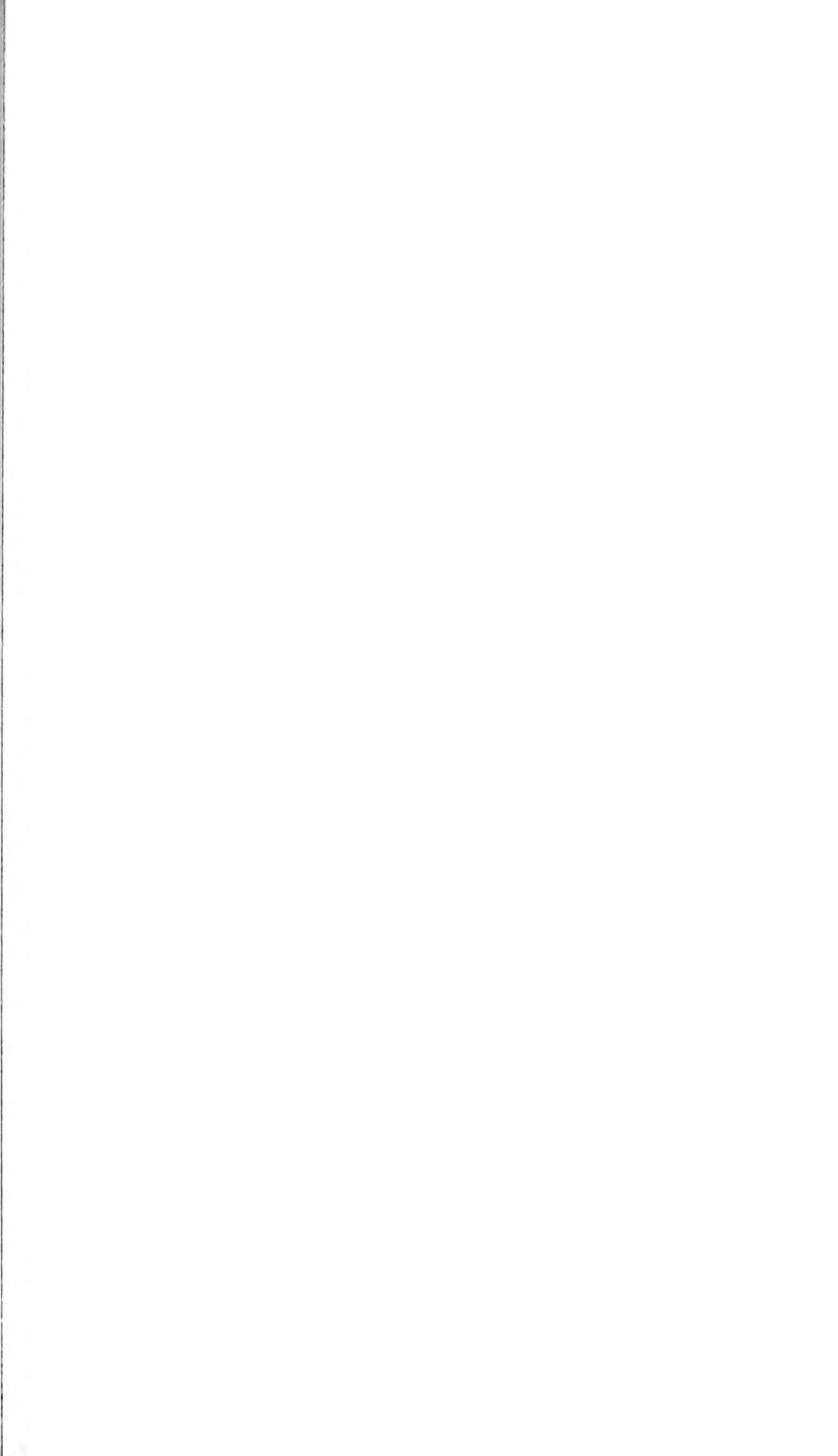
- Gage, J. M.**
Gaudin, Francis Neel.
Gawn, Ernest K.
Gemmell, William.
Genney, Fred. S.
Gibb, H. J.
Gibson, Thomas.
Giles, A. B.
Gill, J. Macdonald.
Gilmour, John R.
Goldie, E. M.
Goldschmidt, Oscar Bernard.
Goodall, Edwin.
Gostwyck, C. H. G.
Graham, Dd. James.
Graham, F. B.
Grainger, Thomas.
Grant, J. Wemyss.
Grant, Lacklan.
Gray, Alex. C. E.
Gray, Theodore G.
Griffiths, Edward H.
Haldane, J. R.
Hall, Harry Baker.
Halsted, H. C.
Haslam, W. A.
Haslett, William John Handfield.
Hassell, Gray.
Hector, William.
Henderson, Jane B.
Henderson, P. J.
Hennan, George.
Hewat, Matthew L.
Hewitt, D. Walker.
Hicks, John A., jun.
Hitchings, Robert.
Holmes, William.
Horton, James Henry.
Hotchkis, R. D.
Howden, Robert.
Hughes, Robert.
Hunter, G. T. C.
Hutchinson, P. J.
2 Hyslop, Thos. B.
Ingram, Peter R.
Jeffery, G. R.
Jagannadhan, Annie W.
Johnston, John M.
Johnstone, Emma M.
Keith, W. Brooks
Kelly, Francis.
Kelso, Alexander.
Kelson, W. H.
Ker, Claude B.
Kerr, Alexander L.
Keyt, Frederick.
King, David Barty.
King, Frederick Truby.
Laing, C. A. Barclay.
Laing, J. H. W.
Law, Thomas Bryden.
Leeper, Richard R.
Leslie, R. Murray.
Livesay, Arthur W. Bligh.
Livingstone, John.
Lloyd, R. H.
Lothian, Norman V. C.
Low, Alexander.
- McAllan, Stewart.**
Macdonald, David.
Macdonald, G. B. Douglas.
Macdonald, John.
Macdonald, W. F.
Macevoy, Henry John.
McGregor, George.
MacInnes, Ian Lamont.
Mackenzie, Henry J.
Mackenzie, John Cumming.
Mackenzie, T. C.
Mackenzie, William H.
Mackenzie, William L.
Mackie, George.
McLean, H. J.
Macmillan, John.
5 Macnaughton, Geo. W. F.
Macneice, J. G.
Macpherson, John.
Macvean, Donald A.
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Marr, Hamilton C.
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1 Mortimer, John Desmond Ernest
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Patton, Walter S.
Paul, William Moncrief.
Peachell, G. E.

- Pearce, Francis H.
 Pearce, Walter.
 Penfold, William James.
 Perdrau, J. A.
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 Philip, William Marshall.
 12 Phillips, J. G. Porter.
 Phillips, J. R. P.
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 Pilkington, Frederick W.
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 Ralph, Richard M.
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 4 Raw, Nathan.
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 Rigden, Alan.
 Ritchie, Thomas Morton.
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 Robertson, G. D.
 3 Robertson, G. M.
 Robson, Francis Wm. Hope.
 Rorie, George A.
 Rose, Andrew.
 Ross, D. Maxwell.
 Ross, Donald.
 Rowand, Andrew.
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 Rust, James.
 Rust, Montague.
 10 Rutherford, J. M.
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 Scott, George Brebner.
 Scott, J. Walter.
 Scott, William T.
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 Sheen, Alfred W.
 Simpson, John.
 Simpson, Samuel.
 Skae, F. M. T.
 Skeen, George.
 Skeen, James H.
 Slater, William Arnison.
 Slattery, J. B.
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- Smith, T. Waddelow
 Smith, William Maule.
 Smyth, William Johnson.
 Snowball, Thomas.
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 Sproat, J. H.
 Stanley, John Douglas.
 Staveley, William Henry Charles.
 Steel, John.
 Stephen, George.
 Stewart, William Day.
 Stoddart, John.
 9 Stoddart, William Hy. B.
 Strangman, Lucia.
 Strong, D. R. T.
 Stuart, William James.
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 Taylor, W. J.
 14 Thomas, W. Rees.
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 Thompson, George Matthew.
 Thomson, A. M.
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 Thomson, George Felix.
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 Trotter, Robert Samuel.
 Turner, W. A.
 Umney, W. F.
 Vining, C. W.
 Walker, James.
 Wallace, J. A. L.
 Wallace, W. T.
 Warde, Wilfred B.
 Waters, John.
 Waterston, Jane Elizabeth.
 Watson, George A.
 Welsh, David A.
 West, J. T.
 White, Hill Wilson.
 Whitwell, Robert R. H.
 Wickham, Gilbert Henry.
 Will, John Kennedy.
 Williams, D. J.
 Williamson, A. Maxwell.
 4 Wilson, G. R.
 Wilson, James.
 Wilson, John T.
 Wilson, Robert.
 Wood, David James.
 Yeates, Thomas.
 Yeoman, John B.
 Young, D. P.
 Younger, Henry J.
 Zimmer, Carl Raymond.

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 7 To whom the Gaskell Prize (1897) was awarded.
 8 To whom the Gaskell Prize (1900) was awarded.
 9 To whom the Gaskell Prize (1901) was awarded.
 10 To whom the Gaskell Prize (1906) was awarded.
 11 To whom the Gaskell Prize (1909) was awarded.
 12 To whom the Gaskell Prize (1911) was awarded.
 13 To whom the Gaskell Prize (1912) was awarded.
 14 To whom the Gaskell Prize (1913) was awarded.









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