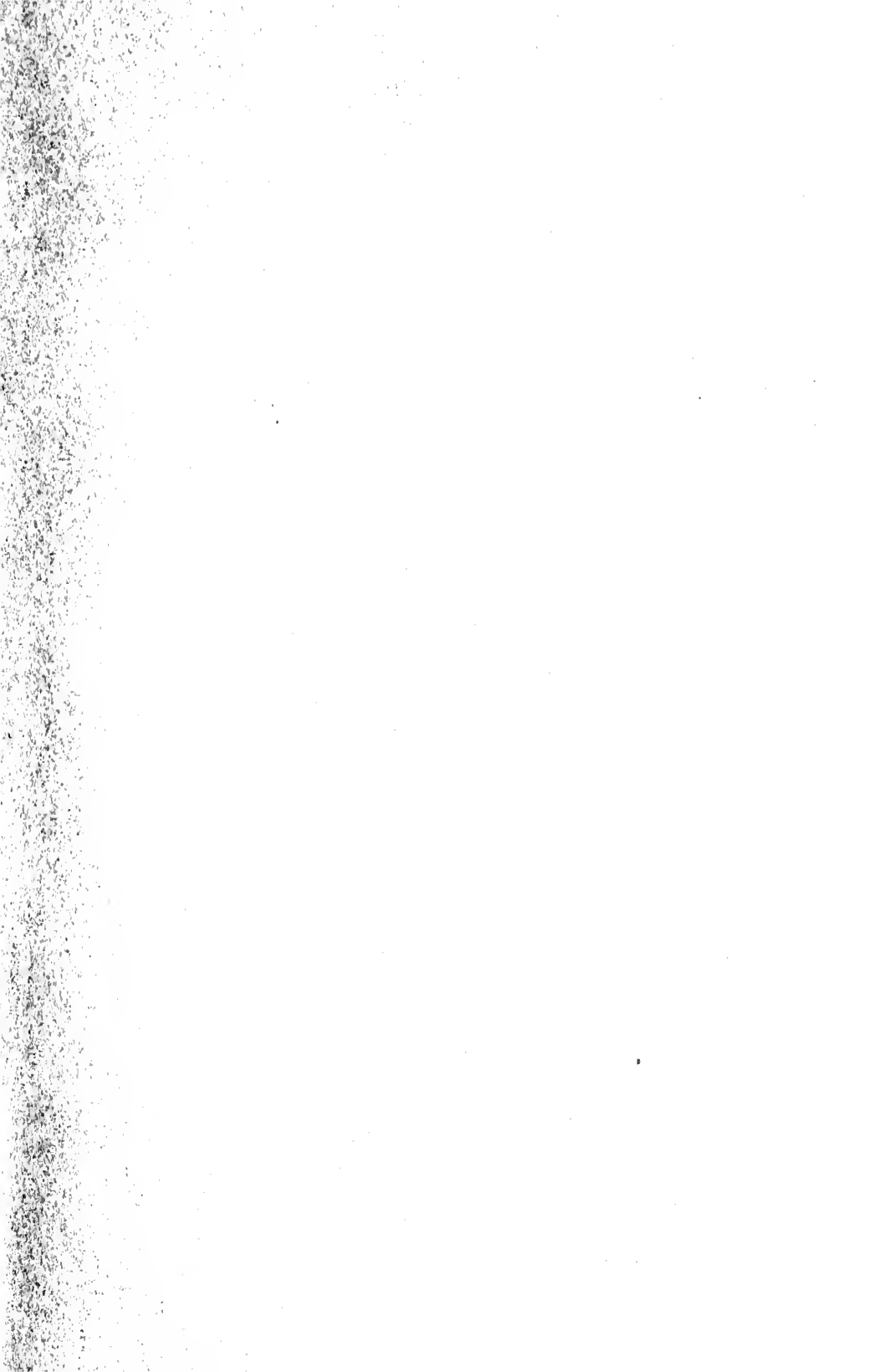
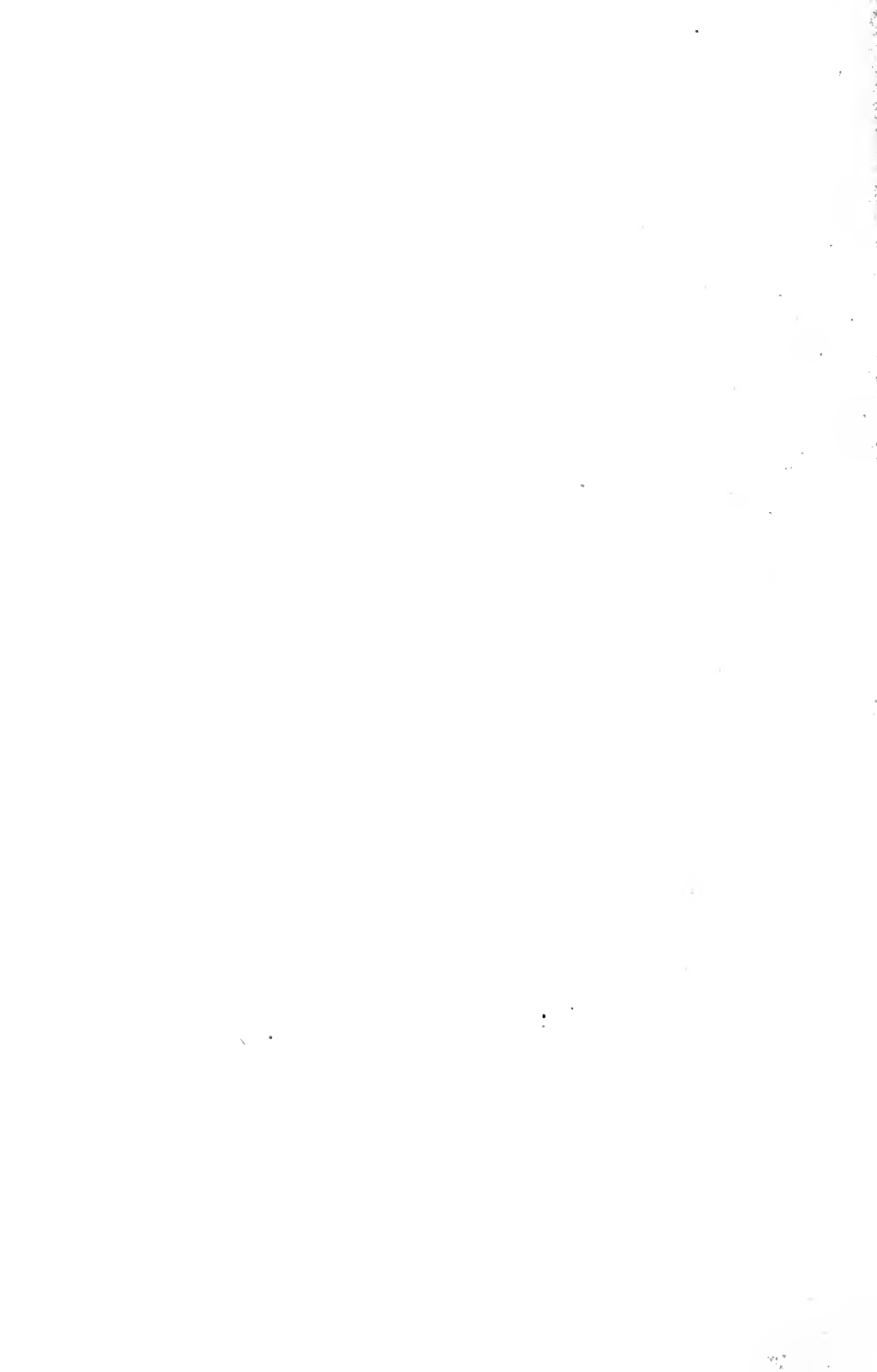


EX LIBRIS







SPIRITUALISM

A Record of Experiences in Psychological Research

PERSONAL EXPERIENCES IN SPIRITUALISM. By Howard Carrington. Illustrated. Pp. 274. London: T. Werner

MR. CARRINGTON'S new book goes far toward fixing the author's status as a sincere investigator of abnormal phenomena, whether interpreted as such as trickery or as manifestations of the supernatural. He frankly states that he believes 98 per cent. of the mediums to be false, but deems the remaining 2 per cent. worthy of further investigation, if not of belief. His attitude toward this 2 per cent. is that of the explorer toward an undiscovered river source, of the chemist toward an unknown element—the fact of their power is believed in but their existence is still a mystery.

Another interesting feature of the book is that it draws a clear line of demarcation between scientific and philosophical research. Many writers on psychic phenomena employ both methods, so that one really finds them speculating upon the attributes of the unknown before they have established the presence of the unknown as a fact.

Mr. Carrington's contribution to this phase of the subject is chiefly that of editor. "Death: Its Causes and Phenomena," (Funk & Wagnall's Company,) which he compiled in conjunction with John R. Meader, is a 550-page volume aiming to set forth all that science has learned in regard to death, together with what philosophy has contributed to show that it is not the end, physical, mental, or spiritual. This book is a storehouse of unusual information—from the latest clinical demonstration to the latest theological belief, from the earliest manifestations of immortality gathered by Biblical writers to the more recent materializations in the medium's cab-

both dealing with phenomena commonly called spiritualistic. In both the writer's zeal for truth is manifested. He brings to his experiments a long experience as prestidigitator and as a detector of trickery. He reveals the truth about many interesting mysteries which for months, and sometimes years, baffled the most searching investigation. "Slate writing," "spirit pictures," &c., are explained; the fraud in the "table-tapping," Lily Dale, and "The Great Annular Mystery" is laid bare. The first part of the book is an exposure of the 98 per cent., and the results, although quite absorbing and often dramatically set forth, are all negative.

The second part of the book consists almost entirely of phenomena produced by the Eusapia Palladino, accounts of which have not hitherto been published, or if published, have been set forth with imperfect accuracy. For example, it is shown that Prof. Münsterberg's account of one séance published in a magazine is not in accord with what actually happened. The author in this instance lays bare the whole history of the case by the stenographic report taken at the time. The results of the second part of the book are positive.

These positive results taken in connection with what Sir Oliver Lodge and other scientific investigators, who are also philosophers, have expounded or affirmed, lead to the conclusion to express the need of a psychical laboratory, to take up the subject where the psychological laboratory of Prof. Münsterberg leaves it.

When the first psychological laboratory was established at Harvard in 1899 its raison d'être was quite as doubtful as that of a psychical laboratory would be to-day. Yet it has been of incalculable value in the field of criminology alone. The work for a psychical laboratory would be no less promising. To be sure, it might very early in its existence reduce Mr. Carrington's 2 per cent. to a nought, but even so, we should then know exactly how to deal with all mediums in the future, that the persistent 2 per cent. utterly annihilated there, as the author points out, would be for scientific investigation.

Experiments in th

IN MEMORIAM
Charles Josselyn.



DEATH:

ITS CAUSES AND PHENOMENA WITH SPECIAL REFERENCE TO IMMORTALITY

BY

HEREWARD CARRINGTON

LATE MEMBER OF THE COUNCIL OF THE AMERICAN SOCIETY FOR PSYCHICAL RESEARCH
AUTHOR OF "VITALITY, FASTING AND NUTRITION," "THE COMING SCIENCE,"
"THE PHYSICAL PHENOMENA OF SPIRITUALISM," "HINDU MAGIC,"
"EUSAPIA PALLADINO AND HER PHENOMENA," ETC. ETC.

AND

JOHN R. MEADER

("GRAHAM HOOD")

MEMBER OF THE AMERICAN STATISTICAL SOCIETY AND OF THE SOCIETY
FOR PSYCHICAL RESEARCH
AUTHOR OF "THE LAWS OF SUCCESS," ETC.

"It is apparent that a study of the circumstances of natural death . . . may give rise to facts of the highest interest to science and to humanity."—METCHNIKOFF.

FUNK & WAGNALLS COMPANY
PUBLISHERS
NEW YORK

1912

10 100

100 1000

PREFACE

THE subject which we have discussed at length in this volume—Death—is generally looked upon as something to be “tabooed” by polite society; something unpleasant, which may some day come upon us, but which we desire to think about as little as possible in the interval. There is no logical ground for this position, however, and, scientifically speaking, death may be made as fascinating a study as any other. Divested of the superstition and glamour which usually surround it, death assumes the appearance of a most interesting scientific problem, both from its physiological and from its psychological side.

But there is another side to this question which must by no means be overlooked. We refer to the possibility of postponing death, on the one hand, and of rendering it more painless, on the other. Both of these results can only be effected by a thorough understanding of the process involved; and this, in turn, can only be obtained by a close, scientific study of the problem—one that includes all its aspects, and treats of them impartially. In summing up this evidence, in condensing what has been said—

▼

the speculations that have been offered during the past two hundred years (*see Bibliography*)—we are satisfied that we have collated a quantity of interesting material; while the particular theories as to the nature of death which we have advanced, will not, we hope, be without interest, and perhaps utility. As we differ considerably from one another in our theories as to the causation of old age and natural death, we have thought it best to devote separate chapters to these topics—each advancing his own views. Later, we have tried to reconcile our opposing theories. Finally, in collecting and presenting the views of a number of scientific men on what constitutes natural death, we have sounded opinion upon a hitherto all but neglected subject, and we wish to thank our contributors in this place for what they have done for science, no less than for us.

The final question to which we have addressed ourselves is, perhaps, the most vital and interesting of all. The question of what becomes of the mental life at death; whether consciousness persists, or is extinguished—like the flame of the candle—is of interest alike to science and to philosophy; and we have presented a considerable quantity of material bearing upon this question, tending to show that consciousness *does* persist, and that personal identity is assured to us. In arriving at this conclusion, we feel that an important forward step has been taken in the correct

PART I
PHYSIOLOGICAL

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

CHAPTER I

THE SCIENTIFIC ASPECT OF LIFE AND DEATH

DEATH is universally recognised as the inevitable fate of every living thing—the goal towards which animate life is constantly tending—and yet, strange as it may appear, human ingenuity has not yet succeeded in formulating a definition that will adequately cover this last experience of man. We know that all things that live must grow old and die, but our theories concerning the causes that produce this phenomenon are still almost entirely of a speculative character. To say that death “is a cessation of life” is to avoid the question. Even Spencer’s definition, in which he pronounced life to be “the continual adjustment of internal to external relations,” and death, a want of correspondence between those relations, leaves much to be desired. It presents the *facts* of life and death as we behold them, but it fails absolutely to trace these apparent effects to the *causes*, of which they are the natural manifestation.¹

As far as positive science is concerned, the only immortality that can be demonstrated is that of race. The individual dies, from natural causes or by accident, as the case may be, but, as each living thing is the direct result of reproduction from another form, the death of the individual has practically no effect upon the continuance of

¹ “Is it not obvious that this definition merely gives or states the *effects* of life—its phenomena—and does nothing to state what its real essence is at all? . . . Life is that which *adjusts*, not the adjustments themselves.”—*Vitality, Fasting and Nutrition*, pp. 334-5. (See also Appendix C.)

existence of the race. With this so-called potential immortality, therefore, science is satisfied. Beyond this it finds no room for speculation—no opportunity for its experiments.

To make this position clear to the mind of those who have not been accustomed to the materialistic view of the phenomena of life and death, it may be necessary to explain that science recognises no new organism in the product of reproduction any more than it distinguishes a new creation in the changes that are so constantly occurring in the form of living matter. Even a slight acquaintance with the first principles of science is sufficient to explain what this means, for we know that the atoms that constitute the human body are so lacking in stability that they are ever being discarded and replaced by other substances derived through the process of assimilation. In other words, the one property that best distinguishes living matter from dead matter is what might be termed the faculty of self-creation, or the ability to transform the dead substances assimilated into the same live substance of which this matter is composed. Thus, as long as life continues, this process goes on with unceasing regularity. (Dead matter is cast aside, just as one would discard a worn-out garment, and new matter is created to take its place. When this faculty ceases to perform its functions, death follows speedily.)

Both Huxley and Cuvier have used the river whirlpool as an exact illustration of the nature of this phenomenon of life, and most physiologists agree that this whirl of water, as seen, for example, at Niagara, is an extremely close reproduction of the natural process of assimilation and disintegration—the alternating attraction and repulsion of the ever-changing particles representing the actual conditions of physical life. That a material substratum

is left unchanged, there can be no doubt; but even this theory does not modify the conclusions that science has drawn from this reproduction of the whirl of life. Though it may be true that the animal body contains permanent elements of definite composition, they alone are insufficient to assure the continuance of physical existence.

It seems to be the popular impression that this physical body begins its work of development at birth; that it continues to progress until the individual has attained that rather indefinite period generally termed "maturity," and that, when this point has been reached, definite deterioration commences. From all that science has been able to determine, however, this idea is quite contrary to fact, for all the practical experiments in biology indicate that the body begins to lose its re-creative powers, or the capacity to change dead matter into living matter, very shortly after the period of birth, and that, from this time, the decrease in force continues steadily. As one writer has said:—

"In want of a more exact knowledge of the structure of the living molecule and the changes in structure that come on in old age, the physiologist expresses his idea of the general nature of these changes by similes and metaphors more or less apt. We may compare living matter to a clock, the mainspring of which is so constructed that, in consequence of slowly developing molecular changes, it suffers a gradual loss of elasticity. In such a mechanism there will come a time when 'winding the clock' will no longer make it run, since energy can no longer be stored in the spring. We may imagine this loss of elasticity to develop gradually, giving stages that may be roughly compared to the periods of life. To carry out the simile, it is the food we eat and the oxygen we breathe that take the place of the winding force. In consequence of a slowly developing molecular change in the organism, this energy is less efficiently utilised as the individual grows older. The clock runs more feebly and needs relatively more frequent

winding, until at last the elasticity is gone, the power of assimilation is insufficient, and we have what we call natural death.”¹

Brown, in his article on “Old Age,”² has expressed this truth more briefly. “The causes of death,” he said, “are not to be found in the summation of many external injuries, but are already established within the organism itself, and death is simply the natural end of development.” If this theory be true, it is very contradictory to the definition formulated by Spencer in his *Principles of Biology*. The latter would logically lead the student to conclude that “external relations” play the most important part in determining the length of life, and that, if perfect correspondence between the internal and external relations could be secured, existence would continue interminably. As has been shown, however, this idea is entirely contrary to the beliefs of modern physiologists. In their opinion, man would still die, even though there were no injurious changes of environment, as the natural weakening of the assimilative powers would alone be sufficient to make death inevitable.

Of course the simile of the clock is too simple an illustration to be applied comprehensively to so complex an organism as the human body. In this combination of living matter there is no single mainspring to wear out—no one cause of death against which man may protect himself—and it is due to these conditions that death does not come to every portion of the body at precisely the same moment. While it is necessarily true that death is actually the cessation of the normal functions upon which life depends, the causes which result in the suspension of the bodily mechanism may arise in any one of the several important or vital centres. According to the arrangement devised by Bichat, death may be divided

¹ W. H. Howell in *Reference Handbook of Medical Sciences*.

² *British Medical Journal*, Oct. 3, 1891.

into three classes:—(1) that which begins at the heart; (2) that which begins at the lungs; and (3) that which begins at the head. But the collapse of the vital force in a single one of these centres is sufficient to bring death with more or less rapidity to every other portion of the organism.

But, while most physiologists hold that it is the ultimate fate of all living things to die, it must not be imagined that this is the only theory to which scientists subscribe, for there are some biologists who are inclined to accept Weismann's speculative conclusions, as presented in the *Essays upon Heredity*.

In these papers, this eminent biologist expresses the opinion that all living matter once possessed potential immortality, and that death is a condition that came into the world because the continued existence of the individual had assumed the proportions of a serious danger to the general well-being of the species. In other words, death is a condition that did not necessarily exist in the beginning of things, but was eventually adopted for the reason that just such a safety-valve was necessary to permit of the perpetuation of the race.

As an illustration in proof of this theory, Weismann draws our attention to the amœba, one of the unicellular organisms or protozoa, which biologists recognise as the lowest forms of animal life. While a complete cell in itself, performing all the functions of assimilation and reproduction, it knows no process of dissolution that can be compared to the phenomenon that we designate as death. On the contrary, its very act of reproducing its species is, in itself, a striking example of the possibility of "physical immortality," for it is the fate of this creature to continue to increase in size until, finally, the limit of growth is reached. At this point the original cell divides into two parts, and, where one organism

existed, there are now two individuals, both of which are capable of performing the functions of life, and of dividing in turn into two cells—a process of reproduction that, so far as science has been able to ascertain, goes on indefinitely.

Of course, the objection may be raised—as it has been—that the original individual cell dies in the act of reproducing its offspring, and that the two cells that result from this physical separation of the larger body are actually different individualities. To this Weismann replied that there is no death in this change “because there is no corpse.” In this fission we have the illustration of the continuance of life, not its dissolution.

It is upon this hypothesis that Weismann bases his theory that living matter originally possessed the elements of potential immortality, and he explains the appearance of death among the metazoa by reference to the law of natural selection.

If this theory be correct, the possibility of never-ending existence possessed by the unicellular creature was undoubtedly passed on to the more complex organism which, in the process of evolution, was eventually produced from this lowlier manifestation of animate life. In the course of time, however, certain new but important conditions arose. In the first place, death became a necessity to the perpetuation of the species; and, in the second place, the division of functions among the many cells of the metazoa made the immortality of each particular cell unnecessary for reproductive purposes.

The very name that has been applied to this law of evolution, “natural selection,” gives an indication of the pitiless qualities that mark its operations. As its name implies, its tendency is always towards the promotion of the good of the race, without regard to the particular

interests of the individual. Thus, when it became apparent that natural death was needed to remove those individuals who were not only no longer necessary to the welfare of the species, but were actually an adverse element or obstacle in the path of natural progress, the presence of those cells that were no longer required in the process of fecundity gave nature the opportunity to effect this adjustment in the laws governing the struggle for existence.

As students of biology are well aware, bodily structures that are of no further use to nature soon retrograde, or disappear almost completely. As an example, we have the cave-dwelling animals and fishes, which, despite the fact that they show every indication of having once had eyes, are now sightless. That is to say, when the time came that they had no further use for eyes, nature permitted the sense of sight to degenerate, and at last, even the physical organs themselves deteriorated, until only a rudimentary record was left of the member that had once actually existed.

In this illustration, Weismann finds an explanation of the process by which the element of immortality was lost by the many-celled organisms. Being not only of no further utility, but of positive danger to the species, its perpetuation would have retarded the realisation of the purpose of evolution. Through the operation of the law of natural selection, therefore, death came as a beneficent solution to this great problem of the moment, the limitation of the population to those individuals who would be of service in helping to carry out the scheme of the perpetuation of the species.

It must be stated in this connection, however, that Weismann's theory is seriously questioned at the present day, if not altogether discredited. Thus Haeckel, in his *Wonders of Life*, pp. 99-101, points out that:—

“The immortality of the unicellulars, on which Weismann has laid so much stress, can only be sustained for a small part of the protists even in his own sense—namely, for those which simply propagate by cleavage, the chromacea and bacteria among the monera, the diatoms and paulotomes among the protophyta, and a part of the infusoria and rhizopods among the protozoa. Strictly speaking, the individual life is destroyed when a cell splits into daughter cells. One might reply with Weismann, that in this case the dividing unicellular organism lives on as a whole in its offspring, and that we have no corpse, no dead remains of the living matter left behind. But that is not true of the majority of the protozoa. In the highly-developed ciliata the chief nucleus is lost, and there must be from time to time a conjunction of two cells and a mutual fertilisation of their secondary nuclei before there can be any further multiplication by simple cleavage. However, in most of the sporozoa and rhizopoda, which generally propagate by spore formation, only one portion of the unicellular organism is used for this; the other portion dies, and forms a ‘corpse.’ . . . ”

The fact is that each metazoon consists of many successive generations of cells—it really is a cell cycle—and can only be homologised with a cycle of protozoan generations, not with any single protozoan, which is but a single cell. Hence it follows that the death of an individual protozoan is not homologous with the death of an individual multicellular organism. Weismann committed the fundamental error of assuming the complete homology of the two forms of death, and thus reached the false conclusion that protozoa are all certainly potentially immortal.

E. Maupas contended that there is a distinct loss of vitality in protozoa in the course of successive generations, and that conjugation must occur at some stage to effect rejuvenescence. G. N. Calkins (*Studies in the Life-History of Protozoa*) takes the same view—that the development of the protozoa is cyclical; and this is

further supported in a recent paper by M. Hartmann, who also contends that natural death does occur among the protozoa.

It would seem, therefore, that the general trend of science is in the direction of disproving this fundamental conception of Weismann; and we shall have to reconstruct our universe accordingly, and recast any system of philosophy that may have been founded on his theory of the natural immortality of protozoa.

When we come to speak of death, moreover, we must be very sure that we understand our terms accurately, as much confusion has always arisen because of inaccurate definition in all the sciences no less than in philosophy and metaphysics. We must be very sure as to just what we mean by "death" before we can undertake to argue about it; and there are some very loose conceptions afloat which it would be well to check at the outset of the investigation. Let us see what these are.

When we cut off a chicken's head, we say that the chicken is "dead"; its conscious life is extinguished, and if it continues to move, or even to run about the yard, as it does sometimes, we do not assume for that reason that any "life" still remains in the chicken, but rather that "reflex action" causes these phenomena. On the other hand, if we pluck a rose it keeps its freshness for several days, and, until that rose has withered and lost its freshness and beauty entirely, we do not say that the rose is "dead." In the one case, we assume that death has taken place instantaneously; in the other, that death does not take place for several days. Why is this?

The difficulty arises from this fact. There are in reality *two kinds of death*, which are confused in the public mind, until only one death is recognised—a

compound of these two. And yet, to keep the problem perfectly clear, it is very essential that these two kinds of death should be kept strictly apart, and in no wise confused. Only in that way can the problem be understood. Let us take the two instances that we have given, and with them, as examples, see if we cannot make this problem somewhat clearer, and distinguish the two, so that there shall be no more confusion upon this point.

When the chicken's head was cut off, its conscious life came to a termination at that moment. It is probable that the subsequent movements *were* purely reflex, and not in any way the result of conscious action and volition. The conscious life of the chicken ended at that moment therefore. *But the body, the cells, and tissues of the chicken did not die at that time.* The body of the chicken—the tissues—lived on for several days, and not until the last remnant of vitality had departed could we say that the bird was dead. That is to say, the tissues of the body continued to live on for several days after the conscious life of the bird had ceased. This tissue or cell-life, the life of the body, is technically known as "somatic life," as distinct from conscious or mental life. Now, in the case of the rose, we do not as a rule say that it is "dead" until somatic death has taken place. It is probable (to us) that the "conscious" life of the rose did come to a termination at its plucking; at that moment its "conscious" life, so far as it can be said to have one, came to an end, while its *somatic* life did not. Since the rose does not show its mental life in the same way that a chicken does, however, it is very difficult to *prove* this fact, and doubtless many would contend that no such conscious life exists at all. It is a question almost incapable of proof, but it has always appeared to us that by analogy there must be some sort of conscious life that is terminated at the moment of

picking the flower. At all events, these examples will help to clear up this problem, and enable us to distinguish the *two kinds of death*—the conscious and the somatic — which must be kept carefully in mind throughout the following discussion.¹

While science has, however, been unable to arrive at a positive conclusion regarding the origin or nature of death, it is by no means so difficult to determine the probable bounds or limitations to the duration of life. Omitting those instances that depend upon tradition for their verification, or that cannot be authenticated because of our inability to fix the unit of time used in making the calculations, or for any other reason, we occasionally find cases that show that the scriptural limitation of “threescore years and ten” falls far short of representing the greatest possible length of physical existence in man. Even to-day the death of a centenarian is not an unknown occurrence. At the same time, this question of human longevity is a much disputed one, and many facts have to be taken into consideration when estimating the evidential value of such cases, and particularly the historic cases. Leaving out of account, for the time being, the Biblical records, there are certain historical cases that have been quoted time and time again in proof of the possible limit of man's life; but these historic examples are, strangely enough, very rarely investigated. This is to be regretted, for such cases, almost without exception, when closely inquired into, are found to rest upon totally inadequate evidence. Mr. William J. Thoms investigated a number of such cases very

¹ A tissue is said to “die” when it loses permanently its power of responding to its appropriate stimuli. The brain and nervous system die, in man and warm-blooded animals, at the moment of somatic death; gland tissue dies very soon after. Smooth muscle retains its irritability forty-five minutes, skeletal muscle some hours, after death.

minutely, going into the histories of the cases with extreme care, and published the results of his investigations in a book entitled, *Human Longevity: Its Facts and Its Fictions*, &c. The author shows us how careless statements are frequently the cause of mistakes that go for a hundred years or more before they are corrected, if indeed they ever are. Mr. Thoms points out to us several sources of error, any of which might have vitiated the results in many instances. Mistaken identity may have taken place—two people of the same name having lived in a certain parish, &c. Again, a married couple may have a son who dies. They have a second son a number of years later, and they give this son the same name as the first child. These two get confused in memory and in record, and it is generally the second, or even the third and youngest son that lives to a good old age; and he, being confused with the first or second child of like name, becomes celebrated for being many years older than he really is.

A number of such sources of error are shown, and backed up by several cases in which these errors had doubtless taken place. The inaccuracy of baptismal certificates, tombstones, &c., is also illustrated. Mr. Thoms then examined in great detail the famous cases of Henry Jenkins, Thomas Parr, and the Countess of Desmond. Original trials, documents, army and navy registers, parish registers, &c., were examined in every instance.¹ The cases of Parr, Jenkins, and that of the Countess of Desmond, when examined, were found to be resting on

¹ Among other interesting documents in this connection, the reader may consult *Evidences of the Great Age of Henry Jenkins, with Notes, respecting Longevity and Long-Lived Persons*. Bell, Richmond, 1859. The case of old Thomas Parr (who was examined *post mortem* by Harvey) is to be found in a work entitled, *The Olde, Olde, Very Olde Man; or, The Age and Long Life of Thomas Parr*.

quite inadequate proof; indeed, there was no proof at all, that could properly be called evidential! The author gives a number of carefully-investigated cases, the results of which are, briefly, as follows:—Mary Billings, reputed 112 years old, proved to be 91; Jonathan Reeves, 104, proved to be 80; Mary Downton, 106, proved to be 100; Joshua Millar, 111, proved to be 90; Maudit Baden, 106, proved to be considerably less,—how much less is not certain; Thomas Geeran, 106, *ditto*; John Pratt, 106, *ditto*; George Fletcher, 108, proved to be 92; George Smith, 105, proved to be 95; Edward Couch, 110, proved to be 95; William Webb, 105, proved to be 95; John Dawe, 108 or 116, proved to be 87; George Brewer, 106, proved to be 98; Robert Howlinson, 103, proved less; Robert Bowman, 118 or 119, proved much less; Frederick Lahrbush, 106, proved less; Richard Purser, 112, proved less; William Bennett, 105, proved to be 95; Mary Hicks, 104, proved to be 97; and several others. The author gives four cases, however, in which the ages of 102, 100, 103, and 101 had undoubtedly been reached, and a chapter of cases in which ages of more than one hundred might possibly be presumed, although the evidence was not strong enough to prove the fact. But after the evidence adduced in the former portion of the book, it is certain that all such statements, especially if not backed up by documentary evidence, is to be mistrusted. Dr. De Lacy Evans gives some seventy cases of persons who had apparently reached an age of more than a hundred (*How to Prolong Life: An Inquiry into the Cause of "Old Age" and "Natural Death,"* &c., pp. 100–121, London, 1885); but none of his cases are well certified, and the names of several of the discredited cases figure prominently. The same may be said of the collection of forty-seven cases given by Dr. Hosmer Bostwick, in his *Inquiry into the Cause of Natural Death; or, Death from Old Age* (New York,

1851). There is no doubt, however, that certain cases of old age *do* sometimes come up. So far as we know, Captain Diamond's great age of 112 years has never been disproved. Metchnikoff gives us the portrait of an old woman of 105 years of age in his *Prolongation of Life* (p. 6); and it is stated, upon the authority of Albert Kruger, Superintendent of the Home of the Daughters of Jacob in New York City, that Mrs. Esther Davis, an inmate of this institution, was in 1908, 115 years of age.¹

It is all the more astonishing that there should be so few trustworthy examples of old age, when we take into account the fact that it is all but universally conceded that from 100 to 120 years should be the normal limit of life of the individual man and woman. The fact that so few actually *do* reach this age, proves conclusively how perverted are the food and other habits of the people.

Although we know, therefore, both from experience and from authentic historical facts, that men and women do occasionally pass the centenary mark, it must be admitted that such cases are rather exceptional, for, so far as modern mortality statistics are concerned, the average length of human life is nowhere much in excess of forty-two years.

Strictly speaking, therefore, practically the only positive fact that science can teach us concerning death is that it is the inevitable fate of all living things. The law that stipulates that all those who are born must die is now as certain in its operation as the law of gravitation. At

¹ In his *Philosophy of Long Life* Jean Finot has given a number of cases in which men have lived much longer than a hundred years, and some of them an incredible time; but his cases do not seem to us to rest on any very secure basis—many of the old cases being quoted which Mr. Thoms had conclusively shown to be incorrect. At the same time, we admit that some of his cases seem well established, while others will be found in T. E. Young's little book *On Centenarians* (London, 1899).

this point, however, materialistic science stops, leaving the probable fate of the individuality, or thinking-part of man, an unsolved problem. As to this "soul-part" of being, in fact, science has even questioned its very existence. To the ordinary scientist, death is a door that closes upon consciousness as the breath leaves the body. If there is any existence behind that door, his experiments have thrown no light upon it, and the man who is unwilling to accept these negative conclusions as the last word on this subject must search elsewhere for the evidence in support of the hope that is within him.

CHAPTER II

THE SIGNS OF DEATH

MANY years ago the Marquis d'Ourches offered, through the Paris *Académie de Médecine*, two prizes, one of twenty thousand francs, the other of five thousand francs, for some simple, certain sign of death. The secretary, Dr. Roger, reported on the competition. One hundred and two essays were sent in, but none was deemed worthy the first prize! The second was divided between six competitors. Five hundred francs was given to M. de Cordue for his observations on the effects of the flame of a candle on the pulp of the finger. M. Larcher was rewarded for his observations on the eye after death. (As the result of examining nine hundred patients, he found the occurrence of a shaded or greyish spot, first on the outer portion of the sclerotica, and gradually involving the whole surface.) M. Poncet received an honourable mention for his observations on the discoloration of the fundus of the eye; M. Molland, for his observations on cadaveric lividity; and MM. Bouchut and Linas for their observations on the temperature of the body. But nothing definite and decisive was discovered; and almost the same might be said to hold good to-day.

Passing in review the various signs of death, M. Brouardel has this to say:—

“The *combination* of signs of death gives us almost complete certainty of death. . . . But I believe that it is right to remain in a state of philosophic doubt; we know that apparent death may last for a longer or shorter time, and that in three cases at least . . .

persons considered to be dead have been called to life. . . . The verification of death should therefore always be entrusted to a physician, who alone is competent to estimate the value of the different signs that we have just been examining. . . . I believe that accidents will then be, if not impossible, at any rate infinitely rare, and I am obliged to add that though there is a great improbability of a living person being buried alive under those conditions, in which actual death is, or rather is not, complete—still, it is impossible to assert that the direful contingency might not happen” (pp. 61, 62).

1. GENERAL SIGNS.

Let us, then, see what these signs are, which are supposed to render death certain, and thus prevent these unfortunate “accidents,” or this “direful contingency.”

In death, *intelligence* is absent; but so it is in trance and syncope.

In death, *insensibility* is complete; but it is also practically complete in certain cases of hysteria in which there is complete anæsthesia. Surface insensibility is complete, and the patient does not react to the most painful tests, on occasion. All sense of *hearing* and *smell* are also absent. The *eye* presents some very interesting tests. It was noticed that there was an immediate lessening of the tension of the globe of the eye, just after death, owing to the fact that the blood-vessels were emptied of blood. But this proves, merely, that the heart has stopped beating—not that death has taken place; and we know that persons can often be revived long after the heart has ceased to beat. Bouchut contends that atropine and eserine have no effect after death. The pupil dilates at the moment of death, but afterwards returns to its normal condition and size, and the iris is thrown into folds. It is also asserted that the eyeball is harder after death than during life.

One very characteristic sign is the *sclerotic speck* that appears after death; the conjunctiva also assumes a brown hue. Commenting on these signs, Dr. Hartmann wisely remarked, "All these signs prove that the circulation has stopped; not that it cannot be started again."

It will be of interest to refer here to a peculiar fact, the explanation of which is still somewhat uncertain, but which caused a tremendous sensation some years ago when it was first made public. It was announced at the time that in persons dying suddenly the eye preserved the impression of whatever object was in front of it at that moment. It was suggested that murderers might be traced in this manner—since it is to be supposed that the murderer would be the last object seen by the murdered man, in most instances. The case was somewhat overstated, and many persons totally disbelieve in the possibility of the fact at all. There is, however, some ground for the belief. Kühne of Heidelberg placed a grating in front of a rabbit, then killed the animal rapidly, removed its eye, exposed the retina, and photographed it. The cross-bars of the grating were clearly seen in the print. In the case of a more complicated object, such as a table or a chair, the outline was much more blurred and indistinct, but yet recognisable. In such cases the animal must be killed immediately, and the retina photographed very soon after death. For these reasons, it would be difficult to obtain definite results in the human being. Certainly, very little trace of any scene would be found on the retina twenty-four hours after the death of the subject. This is a question of great importance that should be followed up closely; but, until some of the prejudices of the public are overcome, it is unlikely that any definite results will be obtained in this possibly fruitful field.

At death the *immobility* of the body becomes pro-

nounced, and the lower jaw falls on to the breast. But these signs are not constant, and it has been pointed out that in tetanus and in hysteria the mouth may remain closed. Complete *rigidity* of the corpse may sometimes be found before *rigor mortis* supervenes. After death, as the body cools, the muscles, especially of the face, continue to contract in odd ways, and sometimes the face will be pulled into various shapes, and give the appearance, perhaps, of the patient having died in the greatest agony. Such may not have been the case at all; the death may have been perfectly painless. Richardson attached considerable weight to the fact that live bodies usually respond to an *electric stimulus*, while dead bodies do not. But this test also has been found inconclusive.

Respiration ceases at death; yet the respiratory test is quite variable in its results. In some cases the patient may be in a trance, and appear not to breathe at all, and yet be alive. On the other hand, a patient may be dead, and the gases moving about within his body give every appearance of life. The old test of holding a mirror to the lips is known to all; the idea of placing a glass full of water on the epigastrium of the patient is not so well known. If this overflows the patient is supposed to be alive; if not, he is dead! The test is inconclusive for the reasons indicated above.

Brouardel, in his excellent manual on *Death and Sudden Death*, thus enumerates the sources of error in attempting to assure oneself of the fact of death by observations upon *the circulation*:—

“Bouchut, who has studied all these questions with great care, has rightly said that one must not be satisfied with feeling the pulse, but must go higher and consult the heart also. In a memoir published by him, and submitted to the Academy of Science, he states that an interruption of the action of the heart,

lasting for two minutes, was sufficient to render the diagnosis of death certain. Andral, who was appointed to report on Bouchut's memoir, believed that this interruption should be prolonged for five minutes. Later on, he was obliged to acknowledge that even this length of time was inadequate, since in the interval he had met with a woman who returned to life some hours after the action of the heart had ceased to be perceptible; it is true that a few contractures could be perceived from time to time, but they vanished to reappear later.

"Bouchut thinks that the heart should be listened to for half-an-hour. There are at least two sources of error here. You cannot listen to a heart for half-an-hour continuously. Try to do so; in five or six minutes you will hear buzzings and murmurs of all sorts, and at last you will hear the beating of *your own* heart. A second source of error is as follows: When an animal is dying, and you practise auscultation, you hear very plainly the two sounds of the heart, then only one sound, which presently disappears also. If the animal is opened the heart is found still beating. Therefore, it is essential that the heart should beat with a certain degree of energy in order that its beats should be heard" (pp. 50, 51).

He also points out that the keenness of hearing is not alike in all.

If the absence of the heart-beat cannot be considered a certain sign of death, perhaps some of the other signs connected with the circulation might? If the *vein* be opened immediately after death no blood will issue therefrom; but blood will issue in the course of a few hours if the wound be left open. The arteries contract, and force the blood through the capillaries into the veins. Further, the gases formed within the body force the blood to the surface, so that, if the skin be cut, blood will sometimes flow. This was the origin of many of the stories of vampires to which we refer elsewhere.¹ *Coagulation* is also a very uncertain sign. *Ligature of the*

¹ See Appendix A.

finger, cupping and *leeching*, have been resorted to; but the same objection may be raised to all, viz., the fact that the heart's action has ceased does not guarantee that it cannot be set in motion again.

After death, little livid spots appear on the surface of the body. They are known as *cadaveric sigillations* or *lividity*, and are caused by the exudation of blood into cellular tissue from the veins. It is an almost invariable sign. Dr. Molland, who examined 15,146 cases, never found it absent once. Nevertheless, it may be absent in cases where there has been abundant hæmorrhage before death; and, on the other hand, they may appear before death in certain cases—in cholera, uræmia, and asphyxia. This sign is also, therefore, inconclusive.

The *temperature post-mortem* has been considered a very important sign; but it is a very uncertain one. When the surrounding temperature is high, the body may take a very long time to cool, though death may have taken place; and certain diseases also hinder the cooling of the body. On the other hand the body may cool considerably in trance, and certain states of a kindred nature, and yet life be preserved and revived.

In slow deaths cooling is a gradual process, and varies much in rapidity. The trunk may remain warm, while the limbs are cold. The cooling is slow if the body is covered with warm clothing, or bed clothes. Wool is a bad conductor. The bodies of young persons, which have generally a subcutaneous layer of fat, take longer to cool than those of thin, old persons. In wasting diseases the heat is low in the last hours before death. It has been supposed that cooling takes place more rapidly in cases of death from hæmorrhage, but this is rarely true. In all cases of death by suffocation, cooling seems to be retarded. Casper's rule as to the cooling of the body is as follows: "A body found on the highway with clothes

on (the air being at a medium temperature), still warm, has been dead probably not more than three hours. A body found in bed and still warm has been dead at most for ten or twelve hours."

Another sign of death that can sometimes be obtained is the following. A patch of skin is removed, and, in the course of some hours, the exposed surface will become *parchment-like* in appearance, and will yield a sharp sound when tapped. We do not know if this has ever happened in a case of trance; and we have, consequently, nothing to guide us in this respect.

A sign that was for long considered certain was that of *burning* or *blistering the body*. If a live body be burned, a blister will be raised, surrounded by a reddish areola. In dead bodies this is supposed not to exist. But is that the case? M. Brouardel states that blisters may very readily be raised on dead bodies:—"Let a drop of melted sealing-wax fall on to a limb that has just been amputated, and you will succeed in producing a blister." The test of burning is therefore a doubtful sign.¹

Dr. Franz Hartmann, in his excellent manual, *Buried Alive*, has summarised quite exhaustively the various signs of death. We abridge his account of those tests that other authors have omitted to mention.

Immobility of a needle stuck in the pericardium:—This indicates that the heart has ceased to beat; not that the person is beyond recovery.

Emptiness of the central artery of the retina; disappearance of the papilla of the optic nerve; discoloration of the choroid and retina; interruption of the circulation of the veins in the retina; emptiness of the capillary vessels:—

¹ The author just cited states that he has found an excellent way of reviving those in syncope; it is to place a hammer just dipped in *very hot* water on the epigastrium. Patients nearly always revive. It is doubtful if this would succeed in every case, however—especially where the vitality is very low; and indeed the author intimates that it would not.

All these signs are open to the objection just pointed out.

Corpse-like face ; discoloration of the skin ; loss of transparency of the hands:—"These signs are now so well known to be delusive, as to require no further attention." *Emptiness of the temporal artery*:—This only indicates that the heart has lost the power to send the blood to that artery ; but it is no sign that it may not recover its strength. *White and livid colouring at the points of the fingers*:—An antiquated and misleading sign.

Relaxation of the sphincters and the pupil ; glazed eyes and haziness of the cornea ; insensibility of the eye in regard to the action of a strong light ; bending of the thumb towards the palm of the hand:—All given up nowadays as unreliable.

Disappearance of the elasticity of the muscles—also takes place in dropsy and other diseases.

Non-coagulability of the blood:—Unreliable ; in scurvy and certain other diseases the blood remains incoagulable for several days.

Absence of a humming noise in the auscultation of the finger points:—Unreliable. If the finger is not held in just the right position, nothing will be heard, even if the patient is alive. Further, humming noises, internal noises in the body of the physician, &c., are apt to be mistaken for the sounds going on in the body of the patient.

Galvanism has been considered sufficient to furnish a test that is certain. Irritability is extinguished first in the left ventricle ; then in the intestines and stomach, next in the bladder, afterwards in the right ventricle, then in the œsophagus, and after that in the iris. The muscles of the trunk finally give way—the extremities and the auricles. The collapsed edge of a wound in a dead body, in distinction from a gushing wound in a living one, is the result of a peculiar irritability—the

extinction of which is one of the indications of death. Flaccidity is an uncertain sign of death; putrefaction is unequivocal.

Within recent years, two or three additional tests have been devised. *X-ray* machines have been employed to ascertain whether any vital action was taking place within the body. It was found that, if all the internal functioning had come to a complete standstill—bowels, liver, lungs, heart, &c.—the shadow cast on the screen would come out clear and distinct; if, on the other hand, some of these organs were working (and consequently *moving*) the outline or shadow would be blurred and indistinct. We do not know to what extent this test has been carried; and its value and reliability would depend (1) upon the clearness of the shadow; and (2), upon the extent to which the internal organs can suspend their functioning, in such states as trance, and yet life be present, or possibly recalled. We must always remember that the entire vital machinery might stop, for some considerable time, and yet be enabled to resume its functioning. This fact must be taken into consideration when discussing this test.

Still more lately, Dr. Elmer Gates has published an article in the *Annals of Psychological Science* (June 1906), entitled, "On the Transparency of the Animal Body to Electric and Light Waves: As a Test of Death and a New Mode of Diagnosis, and a Probable New Method of Psychic Research." He says in part:—

"Several years ago . . . I discovered that certain wave lengths of *electric waves* (not X-rays or ultra-violet light) pass more freely through a body of a dead than of a living organism, and I proposed this as a test of death. This greater transparency at death I found to be due to the absence of the normal electric currents, which are always present in functionally active nerves and muscles.

. . . When the body is alive, it is a bundle of electric currents, and

electric waves cannot pass through these currents ; but when they cease, at death, the body becomes transparent to electric waves."

How far these electric currents would be reduced in trance and kindred states, is a matter for further inquiry. The objections previously raised must not be lost sight of in this connection.

There is yet another test of death of a somewhat "occult" character, which its votaries declare infallible ! It is the following :—

"*The Aura after Death.*—It will readily be understood that death produces an immediate great change in the human auras. All the higher principles, together with the auric egg that envelopes them, disappear, leaving the doomed material body with only its lifelong and inseparable etheric double floating over it ; the caloric aura gradually ceases with the disappearance of animal heat ; the pranic aura, which had begun to fade before the actual dissolution, turns to an ashen-grey light ; all the electric emanations, already broken up during the sickness, cease ; the magnetic flow alone continues, though in a sluggish and stationary manner ; the Tatwic ribbons lose their colour, leaving only dead, colourless lines, as in mineral matter, whereby it can be said that the auric manifestation which remains around the body is only that which belongs to the dead material compounds, until decomposition sets in. Then the auric effluvium again becomes alive, and assumes the aspects and hues of the new lives that issue out of death. Thus, the study of the human aura will bring out new and more reliable signs of real death, because to a psychic sight, the aura of a person in coma or cataleptic trance—however well this may otherwise simulate death—will never be mistaken for that of a body in which life is really and positively extinct. . . ." ¹

Without discussing the reality of these phenomena in this place, it may only be said that the difficulty of finding a seer possessing the requisite psychic sight might be

¹ *The Human Aura*, by A. Marques, pp. 55, 56.

sufficiently difficult to render this method of diagnosis impractical under all ordinary circumstances! Of course, such theories would have to be rigorously demonstrated before science could even tolerate them for a moment, in a life and death problem such as this. It is hardly necessary to add that this demonstration has so far failed to appear either in the desired quality or quantity.

2. ODOR MORTIS; OR, THE SMELL OF DEATH.

In the *Cincinnati Clinic* of September 4, 1875, was published a paper on "Odor Mortis; or, the Smell of Death," read by Dr. A. B. Isham before the Cincinnati Academy of Medicine, August 30, 1875. The paper was based upon observation made while an inmate of one of the surgical wards of the Stanton Hospital, Washington, during the summer of 1863, as well as upon instances in which the "odor" had been met with in private practice. The character of the odour was muskiferous, yet it appreciably, though almost indescribably, differed from that of musk. In this paper he presented two recent instances where this odour attracted notice, together with some new observations concerning it.

Instance 1.—July 13, 1878, on the eve of Dr. Bartholomew's departure for Europe, Dr. Isham was requested to assume charge of his patient, Mr. ——. The patient was unconscious, with irregular, noisy respiration, with only a feeble trace of pulse, indistinguishable at times, and was dying slowly from effusion within the membrane of the brain, the result of chronic alcoholism. He was with him through the middle of the night, and during this time he noticed upon his right hand a smell resembling that of musk. This hand was exclusively used in examining the patient's pulse and in noting the temperature of the body. Earlier in the night there had been

no smell upon it. The left hand acquired the same smell from handling the body, and it was also communicated to the handle of a fan held in the hand. A gentleman from Chicago, who had volunteered as a night watcher, and whose attention had been called to the odour without any suggestion as to its character, promptly distinguished it. The ladies of the household did not use musk, and no perfumery had been in the room or about the patient. Neither had Isham handled nor come in contact with anything other than the patient from which the odour could have been derived. Death occurred thirty-three hours later.

Instance 2.—About midnight, May 21, 1879, Dr. Isham was called to see Mrs. G. She had several months previously been under his care with acute duodenitis, but with impaired digestion and defective assimilation; but she had subsequently passed into the hands of an irregular practitioner. He found her *in articulo mortis*, with general anasarca, the result of blood dilution. Upon entering the room there was a plainly perceptible musky odour. There was no musk about the house, nor had any other perfumery been employed. Death ensued in about half-an-hour.

The smell, as stated, was closely allied to that of musk, yet the impression on the olfactory organs was more delicately subtle. Besides, there was an indescribable feature pertaining to it which seemed to impress the respiratory sense and trouble respiration—a vague sensation of an irrespirable or noxious gas. To the convalescent loungers of sharp olfactory sense about the wards of Stanton Hospital the smell was familiar, and was termed the *death smell*. It was not uncommon to hear the expression, “Some one is dying, for I smell him!”¹

It was rare to find the odour widely diffused, and

¹ See Appendix E.

where it appeared to be it was probably due to a continuance of the first impression upon the olfactory organs. As commonly encountered, it has suggested the idea of gaseous aggregation or body containing odoriferous particles possessing an attraction for each other, and so held together. In the hospital ward, while present in one place it was not experienced in another slightly removed. It also quickly disappeared from the first place—probably moved along by atmospheric waves. The vapour in which the odorous molecules were suspended appeared, in some instances at least, heavier than the atmospheric air. Thus, Dr. Isham had sometimes recognised the smell in lower hallways—the patient occupying the upper portion of the house; and in “Instance 1,” already detailed, it was only detected on handling the body. This affords one explanation why it may not claim more recognition. From its heaviness it subsides, and does not enter the nose. Other reasons why it may escape attention are, that the olfactory sensibilities may be blunted by long continuance in an ill-ventilated, bad-smelling sick-room; or the air currents may carry the odour in a direction not favourable to observation.

The only mention of an odour which might be analogous is reported by Dr. Badgely, of Montreal, in a report on “Irish Emigrant Fever.” It is thus quoted by Drake in his work on the “Principal Diseases of the Interior Valley of America,” as taken from the *British Medical Journal*:—

“I hazard the idea that the ammoniacal odour emanating from the living body, so strong on opening the large cavities and so striking on receiving some of the blood of the vessels—arteries as well as veins—into the hand, were all due to the same condition of this fluid—the actual presence of ammoniacal salts, one of the surest proofs of the putrescent condition of the vital fluid; in fact, to speak paradoxically, of *the existence of death during life.*”

Here the source of the smell is indicated as coming from the development of ammonia in decomposing blood. It is known that musk contains ammonia largely, together with a volatile oil. Robiquet holds that its odour depends upon the decomposition of the ammonia, liberating the volatile matters of the oil. The blood also contains a volatile oil, and it is well known that it possesses odour. This odour may be developed by adding sulphuric acid to blood and boiling it. This process was formerly resorted to in order to distinguish blood in questionable cases, but it has been rendered obsolete since the discovery of the blood corpuscles by the microscope. Such a method would be well suited to drive off the ammonia, free from decomposition, together with the volatile oil—to which substance the odour is very likely due.

Originally, Dr. Isham was inclined to limit the occurrence of the manifestation to within a very short time of death. That it cannot be so restricted is evidenced by "Instance 1," when it was noticed thirty-three hours before death. The conditions here were not unfavourable for its development. From the state of circulation, chemical changes were evidently proceeding in the blood, elevating its temperature and liberating those matters to which we would ascribe the origin of the death smell.

Richardson and Dinnis have shown by experiments that ammonia salts added to blood preserve its fluidity by preventing the decomposition of fibrin. This is not without a bearing upon the origin of the *odor mortis*. In gradual death coagulation commences first in the capillaries, and proceeds towards the heart. The escape of ammonia from the blood in the peripheral vessels, liberating the volatile principles and engendering smell, permits local decomposition of fibrin long before the heart has ceased its action.

But Lange has more recently investigated the action

of ammonia in living and dead blood. He found that carbonate of ammonia added to living blood was only given off at a temperature of 176° F. to 194° F. When, however, ammonia was added to blood from a *dead* animal, it was evolved at a temperature of from 104° to 113° F. It is well ascertained that in many diseases, just previous to death, the blood temperature is raised above the lowest figure given by Lange. In some diseases, too, the blood falls below the normal bodily temperature. This affords another and principal explanation why the *odor mortis* may not be appreciable. These experiments of Lange also show why this smell is not developed by diseases characterised by great elevation of temperature—simply because the blood has lost none of its vital properties.

Such is the attempt of science to account for this remarkable fact. When we come to consider “death coincidences” in Part III., we shall, we think, find that another interpretation of the facts may be put upon such cases. However, we will not anticipate.

3. RIGOR MORTIS.

Next to putrefaction, *rigor mortis* may be considered the surest sign of death that we know. Unless the burial clothes are put on the corpse soon after death, it is almost impossible to get them on at all, owing to the stiffening of the body. Yet it is contended by certain authorities that frequently there is no *rigor mortis* whatever. Bichat found that in cases in which an individual had been struck dead by lightning, or had been suffocated by charcoal, there was no *rigor mortis*. When complete, *rigor mortis* is very severe; the body becomes as stiff as a board, and it is next to impossible to bend or flex the arms and legs.

Generally, it may be said that *rigor mortis* appears in from three to six hours after death. Quite frequently it appears before the bodily heat has passed away. Niederkorn gives us the following table, the result of 103 cases observed by him:—

| | |
|---|------------|
| <i>Rigor mortis</i> within 2 hours after death, | 2 cases |
| From 2 to 4 „ „ „ | 45 „ |
| „ 4 to 6 „ „ „ | 24 „ |
| „ 6 to 8 „ „ „ | 18 „ |
| „ 8 to 10 „ „ „ | 11 „ |
| „ 10 to 13 „ „ „ | 3 „ |
| Total | <u>103</u> |

It is evident, therefore, that the length of time that elapses between death and *rigor mortis* varies considerably. It is asserted that “after poisoning by a large dose of strychnine, *rigor mortis* follows immediately upon the phenomena of contracture which existed at the time the patient died.”

“With regard to the *duration* of rigidity,” says Dr. Brouardel,¹ “we are also obliged to make allowance for different influences. It lasts on an average twenty-four to forty-eight hours. It may, however, last for a few hours only; at other times, it persists for five, six, or seven days. Our *data* with reference to this subject are very scanty. We know that in exhausted individuals, such as those dying with cancer or phthisis, *rigor mortis* appears early, but does not last long; on the contrary, in an individual dying while in good health, it appears late, and is of long duration. . . . Cadaveric rigidity appears first in the muscles of the lower jaw, then in those of the neck and eyelids, then the lower limbs, and lastly the upper limbs. . . . The muscles of the intestinal walls may present a certain degree of rigidity.”

The heart becomes rigid after death also; a fact

¹ *Death and Sudden Death*, p. 66.

observed by the illustrious Harvey, and noted by him in his *Second Disquisition*.¹

When persons die from the result of sun-stroke or heat-stroke, they are already half rigid, and it is stated that the heart becomes rigid immediately upon the death of the body. Vallain states that when he was in Algeria, he opened the bodies of dogs dying from sun-stroke, and, when he cut into the heart, it yielded a sound like that of wood! Generally speaking, *rigor mortis* appears much sooner in a warm and moist atmosphere. Indeed, it has been asserted that it takes just as many *hours* to effect the same result in the summer time as it does *days* in the winter. When the body is fatigued, *rigor mortis* appears much more rapidly.

Dr. Brown-Séguard, writing on this subject, said :

“In rabbits, guinea-pigs, cats, and birds, as well as in dogs, I have ascertained that when they are killed by poisons causing convulsions, the more violent and the more frequent the convulsions are, the sooner cadaveric rigidity sets in, and the less is the time it lasts ; the sooner also does putrefaction appear, and the quicker is its progress.”²

What is *rigor mortis*? What is its nature? In what does it consist? This has been a very vexed question; and only of late years has it been satisfactorily settled. Kühne believed that it was due to the coagulation of myosin, an albuminous substance contained in the muscular tissue. Brown-Séguard objected to this, that no amount of such coagulation would account for the facts. Microscopic examination of muscles has frequently revealed no structural difference whatever between those in a state of rigidity, and those that were flaccid. Some

¹ Harvey's treatise on the circulation of the blood should be read by every one, as it is a model of sound, logical argument.

² Quoted by Savory, *Life and Death*, pp. 190, 191.

observers ascertained that an acid reaction was found in the muscles at such times; and concluded that rigidity was due to the conversion of alkaline substances into acids; but Ahtakaweski has proved that in tetanus the muscles are not rigid, and that the injection of an alkali into the muscular tissue does not prevent rigidity. It has even been ascertained that rigidity will take place as usual, even if all posthumous circulation be cut off! Brown-Séguard removed the spinal cord from an animal, and found that no rigidity resulted. His researches, however, have been largely disproved by recent experimenters.

While much still remains uncertain, it is now generally admitted that *rigor mortis* is the first stage of putrefaction—of which we shall presently treat—and is hence the result of bacterial decomposition. Herzen proved that there is found in the muscular tissue of a dead animal, an acid, which he called “sarcolactic acid.” By injecting some drops of this acid into the muscles of dead animals, he caused *rigor mortis* to appear in cases which had not as yet exhibited it. *Rigor mortis* is doubtless the result of certain micro-organisms, which secrete toxins in the muscular tissue, causing *rigor mortis* in this manner. The subject will become more clear when we consider the phenomena of putrefaction. To this we accordingly turn.

4. PUTREFACTION.

The phenomena of putrefaction are of great interest and importance, since they frequently enable the practitioner to tell almost exactly how long a certain body has been dead, and for that reason are of great value to forensic medicine. The subject may appear an unpleasant one to many readers; but, rightly considered, it is not so, and affords a

field for very interesting experiments and important deductions. Bear in mind the fact, that putrefaction is merely the process of returning the body to the native, mineral elements, and there should be no objection to studying this process from the scientific point of view. Remove from the mind the idea of a "corpse," and replace it by the following: here is an organic compound; let us watch its gradual disintegration and return to mother earth!

It has been proved that if a body be perfectly preserved from the air, it will not, *ceteris paribus*, decay or putrefy at all. Pasteur experimented with blood and urine, the most fermentable and putrescible of all organic fluids. These fluids he sealed up hermetically in glass tubes. Although these tubes are in his laboratory yet, having been placed there in 1854, there is to-day not the slightest trace of putrefaction in any of them. The presence of *air* is therefore necessary, in order that putrefaction may proceed. Why is this?

When a body dies, three different and distinct sets of micro-organisms occupy it, one after the other. First, there are the "aerobic" organisms, so called because they cannot live without the presence of oxygen, which they obtain from the air. Following them, there is the second set, able to live either with or without oxygen; and these M. Bordas, in his thesis on "Putrefaction," has called "amphibious." These produce carbonic acid, also hydrogen and hydro-carbons. Lastly, there comes another category of micro-organisms, the "anaerobic" class, which do not live in oxygen, and which produce hydrogen, nitrogen, and more or less compound ammoniás. These organisms follow one another, for the reason that each class secretes a poison in the presence of which it is unable to live. It then disappears, and is replaced by other colonies, and so on, until the destruction of the

body is complete. This explains why it is that air is necessary to render putrefaction possible; the *first* set of micro-organisms can only exist and set up their characteristic effects when there is a certain amount of free oxygen, and this they have to obtain from the atmosphere. If this be shut off, putrefaction can be prevented for a very long time. It illustrates, also, the beautiful provision of nature; the method employed to disintegrate the body and return it to its elements as speedily as possible.

Putrefaction takes place at a different rate and in a different manner, according to the medium in which the body is placed. We have already seen the effects of withdrawing the body from a medium altogether, placing it *in vacuo*. If the body be in the air, it will decompose in one way, if in water in another; it will putrefy in a different manner still in the earth—and even here there is a great difference, according to the nature of the soil in which the body is placed.

“Micro-organisms can, of course, enter the body through the epidermis, but they seem to be very slow in doing so in the majority of cases. Usually putrefaction begins in the digestive tract. It is especially a function of the processes which take place in the intestines. M. Duclaux, who has paid much attention to the ‘vibrios’ of the intestines, has succeeded in determining the part they play in putrefaction. At death they swarm; they penetrate into the intestinal glands, which they destroy, find their way into the veins and peritoneum, and produce gases there, and secrete diastase, which liquefies the tissues. What is the consequence of this formation of gas and diastase? The quantity of gas produced is considerable, its tension is sometimes equal to that of $1\frac{1}{2}$ atmospheres; it also pushes up the diaphragm to the third intercostal space, and drives the liquid contained in the deep vessels towards the periphery; that is what I have called the posthumous circulation.”

The significance of this fact will be apparent when we come to a discussion on "Vampires." (See Appendix A.)

If a person dies from suffocation from carbonic acid gas, his tissues contain very little oxygen, and, in consequence, the first set of micro-organisms have great difficulty in gaining a foothold within the body. Brouardel gives a case in which a corpse was found to be in a perfect state of preservation two months after death—the man having committed suicide in this manner.

Of course, other causes influence putrefaction greatly. The state of health at the time of dying is known to be one great contributory cause. Patients dying of cancer putrefy very slowly for some reason. If there be food in the stomach, decomposition takes place more rapidly than if there be none, which is what we should expect *a priori*. If the coffin is badly closed, decomposition will be more rapid than if it is well sealed: the degree of moisture of the soil, or the reverse: whether the body be placed in a wooden or a leaden coffin—all these factors help to determine the rate and character of the subsequent putrefaction.

When bodies are retained in the air for some days, and putrefaction sets in, the body swells up from the created gas, and this has to be removed, in order to prevent tainting of the atmosphere. What, then, is done? This: holes are pricked in the bodies, and a lighted match applied to these minute orifices. Long, bluish flames start forth, like those of a blow-pipe. These remain ignited sometimes for three or four days, then the combustibility of the gas ceases. When decomposition is more advanced the gas will not take fire in this manner. This is due to the fact that the gases created during the later stages of decomposition are not combustible; those in the earlier stages are.

During decomposition phosphoretted hydrogen is frequently formed. "Before the time when refrigerating apparatus was employed at the Morgue—that is to say, prior to 1882—phosphorescence was often noticed there, especially in warm weather, Wills-o'-the-wisp, which ran over and around the bodies. It was a very impressive spectacle." This has great significance, when we remember the frequent allusions to "corpse lights," &c.—spirits that were supposed to hover above the grave in the graveyard, and which have doubtless given rise to many a ghost story.

When a body decomposes under the ground little blebs form all over the surface of the body; these are filled with a sort of serum and blood. The epidermis then separates in flakes. Gases are formed in large quantities, and when the tissues have been more or less liquefied by the action of micro-organisms, the flesh is ruptured, thus giving vent to these gases. It is curious to note that when a body is completely covered with animal excreta, it decomposes very slowly indeed; whereas precisely the reverse of this is what we should expect! We shall not do more than refer to this here, leaving the more technical discussion for more strictly medical treatises.

When a body decomposes in water, many interesting changes take place. Dr. Brouardel assures us that "the first green patch which appears does not show itself in the region of the cæcum, as it does when the body putrefies in the open air, but over the sternum;" and he adds, "I cannot explain to you the cause of this variation." Hofman calculated that putrefaction is twice as rapid in air as in water. The water in which the body is floating penetrates the periphery, and enters into the blood stream, thus preventing coagulation to anything like the extent that would take place in the air. But

when the body is withdrawn from the water, putrefaction takes place with extreme rapidity.

The best account of what takes place in bodies thrown into water is the following, which we take from *Death and Sudden Death*, p. 83 :—

“Bodies more frequently undergo transformation into fatty matter in the water than in the open air; this transformation is sometimes complete by the end of five or six months. If it had remained exposed in the open air, the corpse might have putrefied before so long a time had elapsed; if it had been placed in the earth, it would be necessary to take into consideration the state of the coffin and of the soil—putrefaction might be hastened or retarded thereby. In the water the phenomena of putrefaction follow the same evolutionary course as those of fermentation within the intestines. The Fenayrou case affords a demonstration of this. A druggist named Aubert was murdered in the country by a husband and wife of the name of Fenayrou, assisted by their brother. To get rid of the corpse they threw it into the Seine, after having enclosed it in a piece of lead pipe. They hoped that thus it would stay at the bottom of the water. Three days afterwards Aubert floated, though still enclosed in the lead pipe. An enormous quantity of lead would be necessary to prevent a body from rising to the surface; the only means of keeping the body at the bottom would be to open the abdomen and perforate the intestines; in this way the gases would escape as soon as they were produced.”

Saponification.—This occurs only in bodies lying in water, or in very damp ground. As a general rule, this adipocere forms the more readily the fatter the bodies are. In recently dead bodies it is a white matter, soft, brittle, and somewhat watery. When exposed to the air it dries up.

Saponification is the scientific term. It consists of the fatty matter combined at first with the ammonia

disengaged by decomposition. It thus forms an ammoniacal soap. If it is in water, the lime of the water drives off the ammonia, and thus forms a lime soap, and may remain unchanged for a long period. Some think that the body may be completely saponified in a year. Bodies of infants may saponify in six weeks to thirteen months. It is probable that it begins in three or four months in water. In one case where the body was half out of the water, after fourteen months the lower part was saponified and the rest not. This soapy matter becomes ultimately broken up and washed away, if in water.

The different organs of the body decompose at very different rates, and in different manners. The bones, of course, last longest of all, becoming more and more light as time goes on, and they gradually lose their animal matter. It is asserted that the uterus is the last organ to decompose. In adults the brain decomposes slowly, in children more quickly. The liver becomes light after death, and will float when thrown into water. This is due to the formation of gas within its structure. The lungs of an adult (and those of a child) decompose in a different manner from those of a babe who has never breathed. The eye decomposes and vanishes at the end of about two months; the nails become loose about the twentieth day.

Bodies decompose at different rates. Some of them disintegrate and liquefy very speedily; others take months and even years to reach the same advanced stage of putrefaction. The causes of these differences are not known, but it would not be a difficult matter to conjecture, at least, in the majority of instances. That remarkable cases of the kind *exist*, there can be no doubt. Brouardel mentions one in which a leaden coffin was opened at the end of three months, and the corpse

“looked as if it were in a bath of sweat; it was covered with moisture, and the skin was corrugated.” In another case, “a woman poisoned by Pel was found, four years after death, in the exact condition in which she was when put into her coffin.” In yet another remarkable case, a number of soldiers were buried together. Five years later they were disinterred, when we find that “some of them were skeletons, clothed with remains of their belts, &c., others were still in such a state of preservation that their features could be recognised.” “The fact,” he adds, “cannot be explained at present. All sorts of hypotheses are possible. We may assume that all these men had not the same species of micro-organism in their digestive tubes” (p. 98).

As the net result of our inquiry, therefore, we find that every test of death is unreliable, with the single exception of *putrefaction*. Even here, certain discolorations and spots may appear on the surface of the body on occasion, which may be mistaken for decomposition; and it would be well to wait until unmistakable signs develop. But, on the whole, decomposition may be considered a fairly reliable test. It is, at all events, the *only* fairly reliable sign, and certainly the only sign that the layman can trust and avail himself of. Sir Benjamin Ward Richardson, writing on this subject, stated that only in a *combination* of signs, all appearing together, is safety to be found. He enumerates the following indications:—Respiratory failure, cardiac failure, absence of turgescence or filling of the veins on making pressure between them and the heart, reduction of the temperature of the body, *rigor mortis*, coagulation of the blood, putrefactive decomposition, absence of red colour in semi-transparent parts under the influence of a powerful stream of light, absence of muscular contraction under the

stimulus of galvanism, heat, or of puncture, absence of red blush on the skin after subcutaneous injection of ammonia, absence of signs of rust or oxidation of a bright steel blade after plunging it deep into the tissues. Sir Benjamin sums up the matter thus:—

“If *all* these signs point to death . . . the evidence may be considered conclusive that death is absolute. If these leave any sign for doubt, or even if they leave no doubt, one further point of practice should be carried out. The body should be kept in a room, the temperature of which has been raised to a heat of 84° F., with moisture diffused through the air, and in this warm and moist atmosphere it should remain until distinct indications of putrefactive decomposition have set in.”

CHAPTER III

TRANCE, CATALEPSY, SUSPENDED ANIMATION, &c.

DR. GEORGE MOORE, in his *Use of the Body in Relation to the Mind*, p. 31, says:—"A state of the body is certainly sometimes produced (in man) which is nearly analogous to the torpor of the lower animals—a condition utterly inexplicable by any principle taught in the schools." This was written some years ago, but it still holds good. Very little, indeed, is known about this subject—more than some of its mere phenomena—which were recognised and carefully studied by Braid, who wrote his memoir, *Observations on Trance; or, Human Hibernation*, in 1850. When we come to inquire into the cause, the real *essence* of trance and kindred states, we find an amazing lack of knowledge on these subjects—mostly due to the fact, no doubt, that it has always been considered a mark of "superstition" to investigate such cases; and so, until the last few years, these peculiar conditions have been left strictly alone by the medical profession. When a condition of catalepsy could be shown to be due to a disordered, nervous condition, *then* it was legitimate to study such a case; but when the causes of the trance were psychological or unknown, then it immediately became "superstition"! Even to-day this state of affairs is not outgrown. We doubt if more than one physician in a hundred would be willing to recognise the "medium trance," *e.g.*, as a separate state requiring prolonged psychological investigation.

In spite of the fact that Professor William James pointed out the absurdity of this attitude, it is still the one all but universally maintained.

Writing on trance, ecstasy, catalepsy, and kindred states in Pepper's *System of Medicine*, vol. v. pp. 314-52, Dr. Charles K. Mills thus defines these conditions :—

“*Catalepsy* is a functional nervous disease characterised by conditions of perverted consciousness, diminished sensibility, and especially by muscular rigidity or immobility, which is independent of the will, and in consequence of which the whole body, the limbs, or the parts affected remain in any position or attitude in which they may be placed.”

The following is the author's definition of ecstasy :—

“*Ecstasy* is a derangement of the nervous system, characterised by an exalted visionary state, absence of volition, insensibility to surroundings, a radiant expression, and immobility in statuesque positions. Commonly, ecstasy and catalepsy, or ecstasy and hysterico-epilepsy, or all three of these disorders, alternate, co-exist, or occur at intervals in the same individual. Occasionally, however, the ecstatic seizure is the only one that attracts attention. Usually, in ecstasy, the concentration of mind and the visionary appearance have reference to religious or spiritual subjects.

“*Trance* may be defined as a derangement of the nervous system, characterised by general muscular immobility, complete mental inertia, and insensibility to surroundings. The condition of a patient in a state of trance has been frequently and not inaptly compared to that of a hibernating animal. Trance may last for minutes, hours, days, weeks, or even months. In trance, as in ecstasy, the patient may remain motionless and apparently unconscious of all surroundings ; but in the former or visionary state, the radiant expression and the statuesque positions are not necessarily present. In trance, as stated by Wilks, the patients may lie like an animal hibernating for days together, without eating or drinking, and apparently insensible to all objects around them. In ecstasy, the mind, under certain limitations, is active ;

it is concentrated upon some object of interest, admiration, or adoration. Conditions of trance, as a rule, last longer than those of ecstasy."

Baird's theory of trance is that it is:—

"A functional disease of the nervous system in which the cerebral activity is concentrated in some limited region of the brain, with suspension of the activity of the rest of the brain, and consequent loss of volition. Like other functional nervous diseases, it may be induced either physically or psychically—that is, by the influences that act on the nervous system or on the mind; more frequently the latter, sometimes both combined."

Dana¹ reported about fifty cases of prolonged morbid somnolence. He did not include among them cases of drowsiness due to old age, diseased blood-vessels, cerebral mal-nutrition, or inflammation, various toxæmiæ as malaria, uræmia, syphilis, &c., dyspepsia, diabetes, obesity, insolation, cerebral anæmia, and hyperæmia, cerebral tumours and cranial injuries, exhausting diseases, and the sleeping-sickness of Africa.

He found that the prolonged somnolence shows itself in very different ways. Sometimes the patient suffers from simply a great prolongation of natural sleep; sometimes from a constant, persistent drowsiness, which he is often obliged to yield to; sometimes from frequent brief attacks of somnolence, not being drowsy in the intermission; sometimes from single or repeated prolonged lethargic attacks; finally, sometimes from periodical attacks of profound somnolence or lethargy which last for days, weeks, or months. He says that most cases of functional morbid somnolence are closely related to the epileptic or hysterical diathesis; but a class of cases is met with in which no history or evidence

¹ "Morbid Drowsiness and Somnolence."—*Journal of Nervous and Mental Diseases*, vol. xi., April 18, 1884.

of epilepsy or hysteria can be adduced, and, though they may be called epileptoid or hysteroid, these designations are simply makeshifts; the patients seem to be the victims of a special morbid hypnosis.

Very much the same ground is taken by Dr. William B. Hammond in his *Spiritualism and Allied Causes and Conditions of Nervous Derangement*, and by Dr. Marvin in his *Philosophy of Spiritualism*. It will be seen at once, the attitude assumed towards trance, ecstasy, and all kindred states is the attitude of pure materialism. Doubtless this attitude would be perfectly justifiable were it capable of covering and explaining *all the facts*; but it can fairly be said that such an interpretation of the states noted is quite incapable of explaining them all. The medium-trance is totally different from any of the states that have been discussed; it shows no identity with any of them. It is not dependent upon any morbid state of body, and cannot be regarded as a morbid symptom. Indeed, when a medium is ill, trance is generally impossible! Further, the supporters of such a view would have to account for the supernormal knowledge displayed by the medium while in the trance state. That is the *crux*. We do not care what theory of the nature of the trance state may be held, provided that it is capable of explaining all the facts. The current materialistic theories certainly cannot do this.

So little is known of this state we call *trance*, indeed, that it has been found difficult even to define. Dr. J. Brindley James says of this condition:—

“What, then, is trance? It is a sleep-like condition that comes on spontaneously, quite apart from any gross lesion of the brain or from any toxic agency, and from which the sleeper cannot be roused even by the most energetic measures.”¹

¹ *Trance: its Various Aspects and Possible Results*, pp. 3, 4.

It will be obvious that this does little more than define the state, which is as much as any work on the subject has so far attempted. Dr. James points out that, owing to our ignorance of the nature of trance and of its limitations, it is quite possible to mistake it for death on occasion unless the most exacting tests be employed. Various persons are apt to fall into this trance-like condition—"mostly educated persons of nervous temperament."¹ This trance-like condition is said to result most commonly from the following diseases or their complications:—

"Cataplexy, hysteria, chorea, hypnotism, somnambulism, neurasthenia, stroke by lightning, sun-stroke, anæsthesia from chloroform, &c.; eclampsic coma in pregnancy, still-birth; cold, asphyxia from various gases, vapours, and smoke; narcotism from opium and other agents; convulsive maladies, drowning, nervous shock from gunshot, electricity, and other injuries; smothering under snow, earth, grain, or in bed; strangulation, epilepsy, mental and physical exhaustion, syncope, extreme heat and cold, alcoholic intoxication, hæmorrhages, suspended animation from mental disorders, excessive emotion, fright, intense excitement, &c.; apoplectic seizures, so-called 'heart-failures,' and many other diseases."²

The condition known to us as trance is both uncertain and fluctuating. There can be no doubt that hypnotic trance, or trance induced by the mesmeric process (if there be any difference between them), is remarkably deep—so deep indeed, that Dr. Esdaile was enabled to perform, under its influence, some 261 operations of a painful and critical character, which he enumerates in his *Clairvoyance*, pp. 168–9. Such operations as the removal of a cancer of the eyeball; amputation of a thigh, a leg, an arm:

¹ *How the State can Prevent Premature Burial.* By James R. Williamson.

² *Plan for Forming Associations for the Prevention of Premature Burial, &c.*, pp. 5, 6.

various operations for the removal of tumours—operations that certainly cannot be performed easily or upon a patient who is not under the influence of an anæsthetic, mental or physical. It is amusing, in the light of our present knowledge, to see the attempts of many medical men of that day to account for Esdaile's cases. They went so far as to assert that the patients operated upon were merely hardened rogues paid to withstand the pain! The phenomenon of trance, both natural and induced, is now acknowledged, however, and recognised by all psychologists.

When we come to consider the *nature* and causes of trance, we find the greatest difficulty in forming any conception of it. All purely physiological explanations must certainly be abandoned. They do not account for the hypnotic phenomena, far less for trances of spontaneous or mediumistic type. Trance differs essentially also from sleep, though of course the two have something in common. A nearer analogy, probably, is the hypnotic trance; and it has occurred to us that the mediumistic trance might be a type of hypnotic influence *from "the other side,"* just as the hypnotic trance that we know is a species of mental influence from *this* side. In other words, both hypnotic and mediumistic trances may be samples of mental influence—the one from the mind of a living, the other from that of a dead operator. This would seem to be strengthened by the fact that mediums are frequently very insusceptible to hypnotic or even to normal suggestion from operators on this side. Mrs. Piper has been tested for this, for example, and no trace of any faculty of thought transference has been found, and only a light state of hypnosis could be induced in her, even after prolonged attempts. This would seem to indicate that the more an individual spirit is *en rapport* with another world, the less is it *en rapport* with this.

Mr. Myers, in his *Human Personality*, has distinguished three distinct types of trance. He says:—

“The first step, apparently, is the abeyance of the supra-liminal self, and the dominance of the sub-liminal self, which may lead in some cases to a form of trance (or what we have hitherto called secondary personality), where the whole body of the automatist is controlled by his own sub-liminal self, or incarnate spirit, but where there is no indication of discarnate spirits. The next form of trance is where the incarnate spirit, whether or not maintaining control of the whole body, makes excursions into, or holds telepathic intercourse with, the spiritual world. And, lastly, there is the trance of possession by another, a discarnate spirit. We cannot, of course, always distinguish between these three main types of trance, which, as we shall see later, themselves admit of different degrees and varieties.”

Mr. Myers contends elsewhere that the simplest aspect of trance is “suggested sleep,” which would seem to agree somewhat with the theory advanced above. *Dreams*, the author shows, by analogy, to be “bubbles breaking upon the surface from the deep below.” Extending his analogy, he has conceived clairvoyance as a state in which the spirit of the seer is enabled to leave the body and travel through different scenes and localities. In *ecstasy*, the soul would change its environment and pass for a time into the spiritual world, retaining such relations to the organism as enables it to return to its ordinary condition. And so, our author goes on, “when the last change comes, and we ask ourselves with what added ground for speculation we now strain our gaze beyond that obscurest crisis,” we find—that death is an irrevocable self-projection of the spirit: that condition in which the spirit has emerged from the body, and, because of altered physical conditions, is unable to return to it.

SLEEP AND DEATH.

Many analogies have been drawn between sleep and death, and death is often called "the last sleep." But there is always this distinction between the two, that in the one case we revive and return to animate the body, and in the other case we do not. Where consciousness is, what becomes of it during the hours of sleep, has always been one of the most bitterly disputed points in psychology. Certain it is that self-consciousness is absent *pro tem.*; but whether it is annihilated, as materialism teaches, or merely withdrawn, as the opposite school avers, is a question that is as far as ever from being satisfactorily answered. Many are the battles that have been fought over this point, but none of them have ever been won! Truly the field is open, and the world is at the feet of the man who shall discover the innermost nature of sleep. It is equally a mystery with death, and it is probable that there is some close interdependence between them. Veridical and supernormal dreams; cross-correspondence between dreams and the statements made by trance mediums: above all, such remarks as "your sleep is our life," would seem to indicate that the human spirit is simply withdrawn during the hours of sleep—being revived in some other sphere. However, these are questions into which we cannot enter now.

Both trance and catalepsy occur spontaneously; both may also be induced artificially by hypnotism. Both are mistaken for death, and in many respects they are very similar. In catalepsy the body is rigid, whereas in trance this is very rarely the case—this forming the chief mark of distinction (external indication) between the two states. What the *internal* differences are we do not know. Various attempts, however, have been made to define them.

Dr. Franz Hartmann, *e.g.*, thus distinguishes them:— There seems hardly any limit to the time during which a person may remain in a trance; but catalepsy is due to some obstruction in the organic mechanism of the body on account of its exhausted nervous power. In the last case the activity of life begins again as soon as the impediment is removed or the nervous energy has recuperated its strength.

Whatever the innermost nature of this trance state may be, it seems certain that some individuals have the faculty of inducing this condition at will, just as it may be induced by hypnotic processes from without. The Fakirs of India doubtless possess this power to some extent. Braid gave what was probably the first authentic account of their remarkable cases of suspended animation, and voluntary interment; which are also to be found narrated in more recent works—*e.g.*, Hudson's *Law of Psychic Phenomena*, pp. 309–20. There are many such cases, and it is reported that a number of persons have been buried alive in consequence of the inability of the attending physician to distinguish the induced state from true death. It is not to be wondered at; and until these states and conditions receive the study and attention they deserve, such cases of premature interment will probably continue to occur.

When we come to inquire into the immediate causes of catalepsy and allied states, we find that very little is known about these conditions. Dr. Alexander Wilder, in his *Perils of Premature Burial*, p. 19, says that:—

“We exhaust our energies by overwork, by excitement, too much fatigue of the brain, the use of tobacco, and sedatives and anæsthetics, and by habits and practices which hasten the Three Sisters in spinning the fatal thread. Apoplexy, palsy, epilepsy, are likely to prostrate any of us at any moment; and catalepsy, perhaps, is not far from any of us.”

Again, Dr. W. R. Gowers, in Quain's *Dictionary of Medicine*, p. 216, says:—

“Nervous exhaustion is the common predisponent; and emotional disturbance, especially religious excitement, or sudden alarm, and blows on the head and back, are frequent immediate causes.”

Dr. James Curry, on the other hand, thinks that fainting fits and losses of blood are the chief factors in inducing these death-counterfeits. (See *Observations on Apparent Death*, pp. 81, 82.) M. Charles Londe, in *La Mort Apparente*, p. 16, says:—

“Intense cold, coincident with privations and fatigue, will produce all the phenomena of apparent death. . . .”¹

Struve, in his essay on *Suspended Animation*, p. 140, takes the same view. It has frequently been pointed out that the sequela of certain diseases, the use of narcotics, &c., will result in states that cannot be distinguished from death. These cases of suspended animation will sometimes last for many days, as has frequently been shown; and if the body be buried during this interval, we should have a case of “premature burial.”

How long may a body cease to show signs of life, and yet be revived? That is a much disputed point; but there can be no question that, if air be permitted access to the body of the patient, it can be revived after a very long period—a period not of hours, but of days and weeks. Indeed, Sir Benjamin Ward Richardson said on this point:—

“We are at this moment ignorant of the time when vitality ceases to act upon matter that has been vitalised. Presuming that an organism can be arrested in its living in such manner that its parts shall not be injured to the extent of actual destruction of

¹ We have considered freezing to death on p. 115.

tissue, or change of organic form, the vital wave seems ever ready to pour into the body again so soon as the conditions for its action are re-established. Thus, in some of my experiments for suspending the conditions essential for the visible manifestations of life in cold-blooded animals, I have succeeded in re-establishing the condition under which the vital vibrations will influence, after a lapse not of hours, but even of days; and for my part I know no limitation to such re-manifestation, except from the simple ignorance of us who inquire into the subject.”¹

Assuredly this is a significant admission! In the light of this fact, certain historic cases of “raising the dead” might be re-interpreted, and put upon a rational basis. There can be no doubt that re-animation has taken place after very long intervals on occasion—even when there has been no external sign of life in the interval. Of course the time would be comparatively brief, if the supply of air were cut off. In a coffin of the usual dimensions, it has been estimated that from twenty minutes to an hour would insure death from suffocation. But even here we must allow, as Tebb and Vollum point out (*Premature Burial*, p. 211), for a certain persistence of the vital energy, which continues after all atmospheric air has been cut off.

“Experiments on dogs show that the average duration of the respiratory movements after the animal has been deprived of air is four minutes five seconds. The duration of the heart’s action is seven minutes eleven seconds. The average of the heart’s action after the animal has ceased to make respiratory efforts is three minutes fifteen seconds. These experiments further showed that a dog may be deprived of air during three minutes fifty seconds, and afterwards recover without the application of artificial means.”²

¹ *Ministry of Health*, pp. 154–5.

² Report on “Suspended Animation,” by a Committee of the Royal Med. Chirur. Society, July 12, 1862.

It may be said that with modern improvements, and with the aid of artificial stimulants, this period has been very greatly exceeded.

It may be objected to all that we have said that, in practically all instances, death would take place within a very few minutes in any case—even if the patient woke and found himself in the coffin. Why, then, make all this fuss? Apart from the humanitarian side of the question, there is often the definite possibility of resuscitating the patient—if the case be taken in time. And then, forty minutes must be a veritable eternity to one buried alive! In a case of cremation, even if the patient *did* revive in the coffin, death would be so speedy that it would almost be at hand before the situation was realised.

In this connection we desire to call attention to certain facts of interest that are to be noted in the animal world. Professor S. J. Holmes, writing in the *Popular Science Monthly*, for February 1908, calls attention to the instinct of feigning death among various animals and insects. Some of them assume attitudes that render them almost indistinguishable from their surroundings; others draw themselves up into a ball; still others remain in a state of apparent catalepsy, in whatever attitude they are placed, this state lasting for an hour or even longer. It is interesting to note in this connection that the attitudes assumed by these various animals at such times often bear no resemblance to the attitudes they assume in death. Darwin observed this, and said:—

“I carefully noted the simulated positions of seventeen different kinds of insects belonging to different genera, both poor and first-rate shamblers. Afterwards I procured naturally dead specimens of some of these insects (including an *Iulus*, spider, and *Oniscus*) belonging to distinct genera, others I killed with camphor by an

easy slow death ; the result was that in no instance was the attitude exactly the same, and in several instances the attitudes of the feigners and of the really dead were as unlike as they could possibly be."

Professor Holmes does not consider that in the insects at least, this feigning of death is a conscious impulse, but rather of the nature of a reflex action. He states that the mere handling or touching of certain insects—for example, the water scorpion—will cause them to feign death for an hour, even if they are left entirely alone, or covered up, and their tormentor leaves the room. It is interesting to note, in this connection, that these creatures cannot be made to feign death by any amount of handling under water. As soon as they are in the air, however, they feign death repeatedly. As soon as the state has worn off, if they are touched again, they again feign death for an hour or so, and this may be repeated a number of times in succession.

Among the higher animals, on the contrary, such as the fox, it would appear that this instinct is largely an act of consciousness, and that they are perfectly aware of their surroundings, and of the reason for their feigning in this manner. A fox, when feigning death, will often cautiously open its eyes, raise its head, look around, and finally scamper off, if its pursuers have withdrawn to a safe distance.

It would appear that, in the majority of cases, especially among the insects, the induced state resembles that of catalepsy; the muscular rigidity noticed—which is intense—would indicate this, and the fact that they suffer a great amount of maltreatment (pricking, mutilation, burning, &c.) without showing any signs of sensibility, would seem to show that this is lost, and that more or less complete anaesthesia is

present. The state is probably closely akin to what has been called "hypnotism" in the lower animals. Practically nothing is known of that condition of the nervous system which makes such results possible, and this is as true of the higher as of the lower creatures.

CHAPTER IV

PREMATURE BURIAL

1. CASES.

WE have seen, as the result of the two preceding chapters, that there is no certain sign of death (with the single exception of putrefaction, which is not generally waited for), and that there are, on the contrary, many states and conditions which very closely simulate death; that, for days in fact, it is almost impossible to distinguish true from false death—so similar are they. The question here arises, Is it not possible, and in fact probable, that in certain cases a living person is buried by mistake, under the impression that he is dead? Might it not be quite possible that accidents of the sort occur and premature burial take place? It would certainly seem that such *must* be the case; and when we turn to an account of the actual facts we find that such *has* happened very frequently. It is improbable that premature burial takes place as frequently as it did some years ago, but it is doubtless true that many cases are on record, amply testifying to the fact that it has occurred with horrible frequency, from time to time, in the past. A large number of such cases, authenticated more or less fully, are to be found in Tebb and Vollum's *Premature Burial*, in Franz Hartmann's *Buried Alive*, and in the *Encyclopædia of Death*, vol. ii., pp. 7–114. A great mass of cases are here adduced; and, although Dr. David Walsh

attacked the evidence in his little book, *Premature Burial*, there can be no doubt that a large number of the cases printed stand the test of scrutiny, and are veritable cases of "premature burial." Similar cases are coming to the attention of the public from time to time continually, and it is surely high time that some means be adopted to check this evil. It is true that there is a Society for the Prevention of Premature Burial—both in England and America—but it is unable to accomplish much, owing to the tyranny that it has encountered in more than one direction. Such a movement deserves the whole-hearted support of the people; and we shall now endeavour to lay before the reader our reason for taking this stand so strongly.

Nothing that the human mind can conceive can appeal to the imagination as more horrible than the idea of premature burial. To awake in a coffin—cold, dark, and helpless—far beneath the surface of the ground, and know that the living tomb is one from which it is impossible to escape, suggests a tragedy that is in every sense appalling. If we attempt to picture such a fate, it is easy to comprehend how the agony of a whole lifetime may be compressed within the few minutes that elapse between the moment when the victim awakes to the horror of his position and the time when he again lapses into unconsciousness, as the effect of suffocation. It is not strange that such a subject should have appealed to the writer of realistic fiction, but we must not imagine that these cases occur only in the pages of the sensational novel. In writing upon this subject, Professor R. L. O. Roehrig, formerly of Cornell University, said:—

"The possibility of premature burial always exists, for that there is real danger of been buried, embalmed, dissected, or cremated alive has been fully acknowledged by various unquestionable, highly respectable authorities, and many celebrated authors have written

on this particularly important subject, among them Alexander Humboldt, Hartmann, and Hufeland. All have shown that in every case of death which cannot be plainly accounted for by violent external causes, fatal vulnerations, accidents by firearms or other deadly weapons, suicide or murder, it is of the utmost importance to abstain from all sudden alarm and meddlesome interference, and most patiently to wait until every possible doubt as to the real and entire extinction of life has been absolutely removed.

“Under no conditions should the fear of ridicule, supercilious contempt, or mockery coming from the thoughtless, or any other sort of intimidation, influence us in our conduct on so grave an occasion. Nobody can be certain that he will not at some time have to undergo this horrible misfortune, for the most celebrated and experienced physicians have been misled by appearances, while even the assertions of the public inspectors of the dead have often led to the most deplorable consequences.”

Prone as the scientist may be to question the accuracy of the assertion that, at the smallest average, one person is buried alive in the United States every twenty-four hours, it is important to note that the London Humane Society has reported the fact of having brought back to life no less than 2175 apparently dead persons within a term of twenty-two years; that a similar society in Amsterdam restored 990 persons in twenty-five years; and that the Hamburg Society saved 107 persons from premature burial in less than five years. Personally, we know of several cases of this kind, and, in one instance, a prominent New York physician recently discovered to his horror that the body that he was dissecting was that of a live man. Professor Roehrig, who asserts that he has saved many persons from this fate, states that he once rescued a child from the dissecting table, in spite of the insulting mockery of all the other physicians who were in attendance. In view of these facts, it is not difficult to believe that the following gruesome experience, related

by a French physician in the Paris *Figaro*, may be fact, not fiction:—

“Five years ago,” he writes, “I was preparing for an examination, and went one night alone into the dissecting room for the purpose of studying certain abdominal viscera, carrying a light in my hand. An insane woman, having died on the day before, was extended naked upon the marble slab. I placed my candle upon her chest, and made a cut through the skin over the stomach. At that moment the supposed corpse gave a terrible scream, and, rising up, caused the light to fall and become extinguished. Then a terrible struggle began; the woman, with one of her cold, clammy hands took hold of my hair, and with the other clawed my face with her finger nails. I was beside myself with terror, and blindly struck about me with the scalpel which I still held in my hand. Suddenly my knife struck an obstacle; a sigh followed, the grasp on my hair was loosened, I fainted, and knew nothing more. When I awoke it was daylight, and I found myself upon the floor lying beside the bloody corpse of the woman whom I had killed, as my knife had gone directly to her heart. I replaced the corpse upon the table and said nothing about it; but the recollection of this event fills me with horror, while the marks which the nails left upon my face are still there.”

It has been pretty authoritatively asserted that Mdlle. Rachel, the celebrated actress, was embalmed while still alive, and there are those who will always believe that Washington Irving Bishop, the distinguished mind-reader, died from the effects of an autopsy performed while the unfortunate man was in one of the trances to which he was frequently subject. It is also stated that the mother of the famous General Lee was buried alive and resuscitated two years before his birth. Although pronounced to be dead by her physician, she regained consciousness sufficiently during the process of interment to attract the attention of the sexton. Ebenezer Erskine, one of the founders of the (United) Free Church of Scotland, is also

said to have been born after the burial of his mother. As in the case of Mrs. Lee, Mrs. Erskine was buried while in a trance. As the gravedigger had noticed that there was a valuable ring on one of her fingers he determined to secure it, and, stealing to the new-made grave during the night, he removed and opened the casket, and cut off the finger on which the ring had been placed. It was by this act of felony that her life was saved.

A comparatively short time ago, George Hefdecker, a farmer living near Erie, Pa., died suddenly of what was supposed to be heart failure. The body was buried temporarily in a neighbour's lot in the Erie Cemetery, and when, some time later, the transfer to a newly-purchased family lot was made, the casket was opened at the request of the relatives. To their horror it was then discovered that the body had turned completely round, and the face, as well as the interior of the coffin, bore unmistakable traces of the terrible struggle that had occurred.

A similar story comes from St. Petersburg, Russia, in connection with the interment at Tiobayn, near that city, of a peasant girl named Antonova. She had presumably died, and was buried, but after the gravedigger had completed his work he was startled by sounds that seemed to come from the new-made grave. Instead of removing the coffin and breaking it open, however, he rushed off to find a doctor, and when he and the public officials arrived it was too late. The casket contained a corpse, but, as the position of the body clearly proved, death had only just taken place.

When the question of premature burial came up for discussion before the French Senate some years ago, a most remarkable story was told under oath by Cardinal Archbishop Donnet. In part, his testimony was as follows:—

“In the summer of 1826, on the close of a summer day, in a church which was exceedingly crowded, a young priest who was in the act of preaching was suddenly seized with giddiness in the pulpit. The words he was uttering became indistinct; he soon lost the power of speech, and sank down on the floor. He was taken out of the church and carried home. All was thought to be over. Some hours after the funeral bell was tolled, and the usual preparations made for the interment. His eyesight was gone; but if he could see nothing, he could hear, and I need not say that what reached his ears was not calculated to reassure him. The doctor came, examined him, and pronounced him dead; and after the usual inquiries as to his age, the place of his birth, &c., gave permission for his interment the next morning. The venerable bishop, in whose cathedral the young priest was preaching when he was seized with the fit, came to the bedside to recite the ‘De Profundis.’ The body was measured for the coffin. Night came on, and you can easily feel how inexpressible was the anguish of the living being in such a situation. At last, amid the voices murmuring around him, he distinguished that of one whom he had known from infancy. That voice produced a marvellous effect, and he made a superhuman effort. Of what followed I need only say that the seemingly dead man stood next day in the same pulpit. That young priest, gentlemen, is the same man who is now speaking before you, and who, more than forty years after that event, implores those in authority not merely to watch vigilantly over the careful execution of the legal prescriptions with regard to interments, but to enact fresh ones in order to prevent the occurrence of irreparable misfortunes.”

Bouchut, in his *Les Signes de la Mort*, p. 43, gives the following case:—

“A person of high standing was taken with one of those diseases in which death usually does not occur suddenly, but is preceded by certain signs. The physician who attended him found him one evening in a dangerous state, and when he visited him again the following morning, he was told upon entering the house that the patient had died during the night. They had the

body already placed in the coffin; but the doctor, doubting that death could occur so suddenly, caused the supposed 'dead' to be put back into bed. The man soon revived, and lived for many years afterward."

Dr. Hartmann gives the two following cases collected by himself, and published in his *Buried Alive*, pp. 52, 53:—

"At Wels (Austria) a woman died, and as no signs of putrefaction appeared at the end of five days, all sorts of means were resorted to to revive the body. They were of no avail, and it was finally resolved not to delay the burying any longer. On the night preceding the funeral a large crowd met for the purpose of holding the 'Wake.' It was a merry party, and some of those present got drunk and amused themselves in making jests with the corpse and offering it liquor. In the midst of the merry-making, the woman woke and sat up in her coffin! The company ran away, and when they returned they found that the woman had gone to bed, where she slept, and was well the next day. She had been conscious of all that had taken place, but had not been able to move.

"In another town in Austria, a student made a bet that he would not be afraid to go at night to the graveyard, open a grave, steal the corpse, and carry it to his room. This he did accordingly, and the grave he opened happened to be that of a young girl who had been buried on the previous day. He took the body upon his shoulders and carried it to his room, where he put it upon a lounge near the stove. He then went to sleep. During the night he was awakened by a noise. The girl had awakened from her trance, and was sitting up. He was so much terrified that his hair turned white; but the girl, thus saved, returned to her parents."

Sometimes the termination of such cases is not so fortunate, however. It will be observed that in the following case, reported in the *British Medical Journal*, April 26, 1884, p. 844, death resulted from the interment:—

“The *Times of India*, for March 21, has the following story :— ‘On last Friday morning the father of a large family at Goa, named Manuel, aged seventy years, who had been for the last four months suffering from dysentery, appearing to be dead, preparations were made for the burial. He was placed in a coffin and taken from his house at Worlee to a chapel at Lower Mahim, preparatory to burial. The priest, on putting his hand on the man’s chest, found his heart still beating. He was thereupon removed to the Jamsetjee Jejeebhoy Hospital, where he remained in an unconscious state up to a late hour on last Friday night, when he died.’”

The following case is quoted in Tebb and Vollum’s *Premature Burial*, p. 55 :—

“A young married woman residing at Salon died shortly after her confinement in August last. The medical man, who was hastily summoned when her illness assumed a dangerous form, certified her death, and recommended immediate burial in consequence of the intense heat then prevailing, and six hours afterwards the body was interred. A few days since, the husband having resolved to re-marry, the mother of his late wife desired to have her daughter’s remains removed to her native town, Marseilles. When the vault was opened, a horrible sight presented itself. The corpse lay in the middle of the vault, with dishevelled hair, and linen torn to pieces. It evidently had been gnawed by the unfortunate victim. The shock which the dreadful spectacle caused to the mother has been so great that fears are entertained for her reason, if not for her life.”

Another remarkable case is the following (*Encyclopædia of Death*, vol. ii., p. 107) :—

“Thirty-four years ago, a man by the name of John Hurelle was pronounced dead by three doctors, who held an examination. Everything was prepared for the funeral ; the guests were invited, a clergyman summoned, and the body placed in a coffin. On the

morning when the funeral was to occur, the mother thought she saw signs of life, though four days had passed since he was said to have been dead. The funeral did not take place. When those present took the seemingly lifeless body and placed it on a bed, the man said: 'Let me'—and then stopped. For eight months he lay in a sort of stupor, while his mother gave him nourishment. At the expiration of that time he regained consciousness, and finished the sentence by saying 'be.'"

Another case collected by Dr. Hartmann himself, is the following:—

"In a small town in Prussia, an undertaker, living within the limits of the cemetery, heard during the night cries proceeding from within a grave in which a person had been buried on the previous day. Not daring to interfere without permission, he went to the police and reported the matter. When, after a great deal of delay, the required formalities were fulfilled and permission granted to open the grave, it was found that the man had been buried alive; but he was now dead. His body, which had been cold at the time of the burial, was now warm and bleeding from many wounds, where he had skinned his hands and head in his struggles to free himself before suffocation made an end to his misery."

"In the month of December 1842, an inhabitant of Eyures, in France, died and was buried. A few days afterwards a rumour began to spread that his death was due to an overdose of opium having been given to him by a physician. Finally, the authorities ordered the grave to be opened, and it was found that the supposed dead man had awakened and opened with his teeth the veins of his arm for the purpose of ending his torture, and then he had died in his coffin."—(Lenormand, *Des Inhumations Précipitées*, p. 78.)

Many persons seem to think that premature burials are few and far between. There was never a greater fallacy, says M. Tozer:—

“Some years ago the Paris *Figaro* dealt at considerable length with the subject of the possibility of premature burial occurring somewhat frequently, and within fifteen days the editor received over four hundred letters from different parts of France, all from persons who either had been almost buried alive, or who knew of such cases.”¹

Dr. Franz Hartmann, immediately after the publication of his book on the subject, and within two months (May—June, 1896), received no less than sixty-three letters from persons who had escaped premature burial through fortunate accident. When such wholesale numbers are observed, what are we to think but that premature burial, so far from being a great rarity, is a frequent phenomenon—happening constantly in our very midst?

In an article in the *Insurance News* for April 1, 1901, George T. Angell, founder and president of the American Humane Education Society, says that

“Nothing can be more certain than that large numbers (and perhaps multitudes) of persons have been buried alive, and that many, after having been pronounced dead, have shown signs of life in time to save themselves from such burial, and have declared that, *while unable to move they were fully conscious of what was said and done about them.* My own father barely escaped such burial, being declared by his physicians dead. There are in Boston alone many thousands of persons living in hotels and boarding-houses where, whenever death is declared, every effort will be made to send the body of the supposed deceased, at the earliest possible moment, to the undertaker, the crematory, or the grave. In not one case in a hundred will the body be permitted to remain in the hotel or boarding-house until the beginning of decay.”

Dr. Henry J. Garrigues, of New York City, in a paper

¹ *Premature Burial*, by Basil Tozer, p. 16.

read before the Society of Medical Jurisprudence, contended that any law permitting burial without thorough tests to determine the extinction of life was nothing short of homicidal. Under the law of "necessary precautions," he said, "there is nothing to prevent anybody from being buried alive or frozen to death in an undertaker's ice-box." His objection to the laws that now exist so generally throughout the country is based upon the fact that they are designed to protect the community, without regard to the protection of the person supposed to be dead. "And yet," as Dr. Garrigues admitted, "the question of whether a person is dead or alive is most difficult to decide. If the action of the vital organs is suspended, every appearance of death may be produced, when, under proper manipulation, they may be restored to life."

In citing the counterfeits of death, Dr. Garrigues referred to persons who, though taken from the water apparently dead, were afterwards resuscitated, and he stated the belief that, if it were not so common to believe that people were dead merely because they were cold and limp, many others would be revived. Asphyxiation, heart failure, apoplexy, intoxication, lightning stroke, anæsthetics, narcotics, concussion—all these produced the counterfeits of death, and often so closely resembled it that the science and the experience of the physician were frequently at fault. Thus the danger of mistaking live persons for dead remains, even after all tests for determining death have been tried. There is not one but which may fail under certain conditions. The most common test of all, that of trying to ascertain if the breath has stopped, is the one that is usually made, and yet science knows of many cases of suspended animation where breathing has ceased for fully forty-eight hours. The same is true regarding the stopping

of the heart, and so on through the entire list. There have been cases of suspended animation in which all signs have failed, and yet the patient recovered. In his opinion, the only sure indication of death is the decomposition of the body.

Dr. Garrigues' opinions upon this subject were fully upheld by Dr. John Dixwell, of Harvard University. In an address before the Committee on Legal Affairs of the Massachusetts Legislature, February 12, 1908, he stated that he personally had narrowly escaped premature burial. "During an illness, in the early seventies," he said, "very eminent physicians determined that I was dead, but I am alive to-day, while they all are dead. Accordingly I know that this horror exists as a fact. It is ridiculous to dispute it. I recall a case at the Massachusetts General Hospital. A woman had been sent there suffering from bronchitis. After a time it was decided that she was dead, and she was sent to the morgue. There she suddenly woke up, and is alive to-day."

"I have often been told," says Dr. Alexander Wilder,¹ "that the modern practice of embalming made death certain. I admit it; but those who are too poor to pay for this funeral luxury must yet take the chance in the old-fashioned way. There is no doubt, however, that the number annually put to death by the embalmers is sufficiently large to demand attention. An investigator of this subject in New York has openly declared his belief that a considerable number of human beings are annually killed in America by the embalming process."

Dr. Edward P. Vollum, surgeon in the United States Army, is another physician who has written freely upon the danger of premature burial. In addition to collaborating with Tebb in compiling a book upon this subject,

¹ *Burying Alive a Frequent Peril*, p. 12.

he is the author of several papers treating of the dangers of burial alive, from one of which we quote:—

“Any one whose vital machinery is thrown out of gear by excesses, strains, or depressing causes may pass into and out of this transitory state if they have a reserve of strength. Shocks cause apparent death, such as from gunshot, strokes of lightning, charges of electricity, concussion, heat and sun-stroke, fright, intense excitement, &c. So do exhaustions from mental and physical exertion, especially in the badly nourished, asphyxia from various causes, intense cold, anæsthesia, intoxicants, hæmorrhage, narcotism, convulsive disorders, so-called heart failures and apoplectic seizures, epilepsy, and syncope.

“The above cases are quite plain, and many are saved by medical aid. But there are other forms of this mysterious state that may defy the highest medical skill and all known tests and signs. These are the constitutional cases, due to some warp of temperament, as seen in trance, catalepsy, cholera, auto-hypnotism, somnambulism, &c., which, like hibernation, are inexplicable by any principles taught by science. We know but little of these idiosyncrasies except that they are usually hereditary, and that their victims easily fall into a deathlike lethargy from overwork, worry, and foul air, and that during their attacks efforts at resuscitation should be kept up until putrefaction appears, lest they be mistaken for dead and disposed of accordingly. Quain's *Dictionary of Medicine* says: ‘The duration of trance has varied from a few hours or days to several weeks or months.’ The British medical press during the last fifty years has given numerous cases which revived from the consciousness of the preparations for closing the coffin. Many notables have been subject to this disorder, such as the great anatomist Winslow, the French Cardinal Donnet, and Benjamin Disraeli. The last-named lay in this state for a week.

“All such cases are in peril because of their uncertainty. Of course, old cases of heart disease and apoplexy may be recognised by the patient's physician, but, as a rule, the diagnosis cannot be sure without an autopsy. All signs of death are deceptive, and all these cases should be held as not beyond resuscitation until

decomposition appears. Hufeland says: 'Death does not come suddenly; it is a gradual process from actual life to apparent death, and from that to actual death.'

"The revivals sometimes reported during epidemics of cholera, small-pox, and yellow fever depend, as in so-called sudden deaths, upon the fact that the patients are usually struck down in their ordinary health with a reserve of strength which bridges them over after the force of the disease is spent.

"The estimates of such disasters are based upon the discoveries made when the dead are removed from cemeteries, as is done in some great cities every five years. A portion of the skeletons are always found turned to one side or on the face, twisted, or with the hands up to the head. These are counted as living burials. And then there is the admittedly large number of narrow escapes from being buried alive, recovered, as a rule, by some chance. Hidden and mixed with ignorance, laxity, and indifference as this whole matter is, the authorities naturally differ in their views as to the frequency of these cases. A personal inquiry in Europe and in the United States for several years past has convinced me that they are alarmingly frequent. The proportion of discovered cases must be small compared with those that never come to light. Dr. Lionce Lenormond, in *Des Inhumations Précipitées*, says that a one-thousandth part of the human race have been and are annually buried alive. M. le Guen, in *Dangers des Inhumations Précipitées*, estimates premature burials at two a thousand. He collected 2313 cases from reliable sources. Hundreds of foreign authorities with similar views could be given. Dr. Moore Russell Fletcher, in *One Thousand Persons Buried Alive by Their Best Friends* (Boston, 1890), gives many horrors taken from American sources. Carl Sextus, of New York, collected in eighteen years 1500 cases of death counterfeits of scientific value. He estimates living burials at two per cent."

We have now given a number of cases of premature burial, or cases in which burial would have taken place shortly had not some fortunate and unforeseen accident

happened. A number of similar cases will be found detailed in the authors quoted, and in other works upon the subject. Bruhier, in his work, *Dissertations sur l'Incertitude des Signes de la Mort*, &c., produces accounts of 181 cases, among which there are those of 52 persons buried alive, 4 dissected alive, 53 that awoke in their coffins before being buried, and 72 other cases of apparent death. Hartmann himself gives more than a hundred cases. Tebb and Vollum collected an equal number, and very many cases appear elsewhere in the literature upon this subject. Enough has been said at all events to show how extraordinarily numerous these cases are; and it becomes evident that some steps should be taken to prevent such burials from taking place. We hope that the publication of this book will at all events stimulate public interest in this direction, and help to initiate some widespread movement for the prevention of such horrible cases as those described.

2. EFFORTS TO PREVENT PREMATURE BURIAL.

During the past few years the question of the prevention of premature burial has been taken up by several of the State legislatures, and laws have been suggested, and, in some cases enacted, tending to reduce the possibility of such a catastrophe. One of the best examples of such legislation is the bill presented to the Massachusetts Legislature. This provides that local boards of health shall be notified within six hours of the death of any person, and that, as soon as possible, an examination shall be made of the reported deceased, and that certifications of death shall be issued only after ten tests have been made—for heart action, respiration, circulation, *rigor mortis*, &c., and the use of subcutaneous injections of ammonia.

This subject of premature burial, now being agitated in the United States, was thoroughly considered in Europe, beginning more than a century ago. As Dr. Vollum has shown in his article on *Final Tests for Death*, France first recognised the necessity for legal protection against these dangers. Germany was the first to put them in force. Then followed France, Austria, Belgium, Spain, the Netherlands, and Scandinavia. The pith of these laws is in the requirement of an expert examination of the apparently dead independently of the attending physician. In Germany, Austria, and Belgium the examiners, called inspectors of the dead, are officers of the State, specially qualified for their duties. In the other States mentioned they are physicians of standing, also qualified. They must decide the cause and fact of death, and register a certificate of verified death before a burial permit can be issued or the body disturbed in any way with the view to embalming, autopsy burial, or cremation. The underlying principle of these laws is well expressed in the Austrian imperial law thus:—

“That the only sure sign of death being general decomposition, which as a rule comes late in the case, the examiner of bodies, in the absence of this proof, must not be guided by any single sign, and must base his conclusions on an assemblage of all signs that point to death, and to any injuries that may involve the vital apparatus.”

These laws, framed both in the interests of the State and the individuals, are supported by the legal and the medical professions, and have always given satisfaction to the authorities and comfort and a sense of safety to the people, excepting in France, where the period allowed before burial is only twenty-four hours, and the inspections are thought to be rather perfunctory, especially in

Paris. The German and Austrian systems are alike, excepting in the former all bodies must go to the waiting mortuaries; in the latter this is voluntary, as it is in the other States named.

The German system is best seen in Munich. This city of about 50,000 people is divided into twenty-one burial districts, in each of which there is an inspector of the dead, with an alternate, besides the woman who makes the toilet of the body, called *leichenfrau*, and who arranges the funeral appointments. She is also qualified by a technical examination. The attending physician is always present at the death crisis. He gives his verdict of death, but the law does not trust his unsupported opinion, however celebrated he may be. The inspector comes, and in the meantime nothing about the body must be touched by any one. He makes his certificate, which covers every possible point in the case, and this is countersigned by the attending physician. Delay and resuscitation may be employed at this stage if the inspector sees fit. Ordinarily he allows from two to twelve hours' delay in the residence for ceremonies, &c., when the body must go to the waiting mortuary, where it remains for seventy-two hours or longer, under medical observation, when the mortuary physician gives his certificate, if all goes without unforeseen incidents, and the interment takes place in the adjoining cemetery.

Thus it is seen that there are, with the *leichenfrau*, four independent expert inspectors. All are on the *qui vive* in carrying out the system, which is popular and understood by all classes. The waiting mortuary consists of a main hall, where the bodies lie in open coffins, enbowered by plants in the midst of light, warmth, and ventilation. There is also a laboratory equipped with apparatus for resuscitation, *post-mortem* room, separate

rooms for infectious cases and accidents, a chapel, and quarters for the physician and attendants.

Count Michael von Karnice Karnieki, formerly chamberlain to the Czar of Russia, invented, in 1898, an exceedingly clever apparatus for the prevention of premature burial. Being firmly convinced that thousands of persons are buried every year while in a state of lethargy, he prepared a system of signalling, which has been adopted in one or two instances, but only, so far as we know, in Europe.

In this invention, a tube protrudes about four feet above the surface of the grave, and, upon the top of it, is fixed a small metal box with a spring lid. To the lower end of the tube, which just enters the upper lid of the coffin, is fixed an india-rubber ball, charged so fully with air that the slightest extra pressure upon it would result in the discharge of this air through the tube. This would release the lid of the box, which is adjusted to spring open at the slightest pressure. Moreover, the opening of this lid would automatically raise a small flag, and, at the same time, would start an electric bell, not only over the grave, but in the sexton's house as well. Under this system, the slightest suggestion of breathing on the part of the supposedly dead person, or the smallest movement of the body, would suffice to open the box, raise the flag and sound an alarm, while the additional mechanism in the tube would immediately begin to pump air down to the interior of the coffin, that the person who has been buried by mistake might be preserved from suffocation until such time as assistance might arrive.

On March 1, 1909, the House of Commons ordered to be printed for distribution "A Bill to Amend the Law Relating to the Registration of Deaths and Burials." The Committee of Examination confessed themselves

“ much impressed ” by the weight of the evidence brought before them, tending to show that the current medical examinations were insufficient ; and they ordered a more thorough and complete examination and certification in the future.

CHAPTER V

BURIAL, CREMATION, MUMMIFICATION, &c.

ALTHOUGH burial is an extremely unhygienic and unwholesome custom, it is a practice that is common to all Christian countries. Originating in the popular faith in the doctrine that the body should be preserved that it might arise in its entirety at the "day of judgment," this idea, though now seldom advanced as an excuse, is at the bottom of the antipathy that is so frequently shown in regard to cremation. Of course, it is needless to say that, as the process of putrefaction soon returns the physical body to the dust of the earth, through which it passes again into all forms of vegetable and animal life, the impossibility of any sort of bodily resurrection, without the performance of a more stupendous miracle than the human mind could imagine, is obvious.

In fact, the only argument that can be advanced in favour of the practice of burying the dead, as against that of cremation, is based upon the principle that a buried body may be exhumed—after a considerable space of time has elapsed, if necessary—and the effects of poisons, &c., traced—murderers frequently having been brought to justice by this means when they would have undoubtedly escaped punishment for their crimes, if the most convincing evidence against them could have been destroyed by fire. Such an argument as this, however, weighs but little as against the many great advantages

that would be derived from the practice of cremating bodies, for cremation is so manifestly the only wholesome and hygienic method of disposing of the dead, that it should be legally adopted by all nations calling themselves civilised.

Incineration, or cremation, was the ancient Roman method of reducing the body to ashes, but the ancient Jews early adopted the custom of burial. Thus Abraham, in his treaty for the cave of Machpelah, expressed the desire to secure a suitable place in which "to bury his dead out of his sight;" and about the only records of burning the dead that we find in the history of the Jewish people are (1) the case of Saul and his sons, whose bodies were undoubtedly too badly mangled to be given the royal honours of embalmment, and (2) the burning of those who died of the plague, a sanitary measure apparently adopted to prevent further spread of the contagion.

As all nations of the ancient civilisation held that it was not only an act of humanity but a sacred duty to pay great honours to the departed, the burial and funeral rites were frequently of a very elaborate character. Among the Hebrews, these began with the solemn ceremony of the last kiss, and, after the eyes had been closed, the corpse was laid out and perfumed by the nearest relative, and the head, covered with a napkin, was subjected to complete ablution in warm water, a precaution that was supposed to make premature burial impossible.

While the Jews frequently embalmed the body of the dead, in no part of the world was this rite performed so scientifically as in Egypt. When great personages like Jacob and Joseph died, the greatest care was exercised in embalming them, but there is no means of ascertaining whether the earlier generations followed this practice, or simply buried their dead in caves, or in the ground.

We know, however, that the elaborate process followed in later years was finally abandoned for a simpler and less effective method—that of merely swathing the corpse round with numerous folds of linen and other stuffs, and anointing it with a mixture of aromatic substances, of which aloes and myrrh formed the principle ingredients. To be sparing in the use of spices on such an occasion was regarded as a most discreditable economy, for the profuse use of very costly perfumes was regarded as the highest tribute of esteem that could be paid to the departed. In view of these facts, it is easy to believe the writer in the *Talmud* who tells us that no less than eighty pounds of spice were used in burying Rabbi Gamaliel, and Josephus reports that, at the funeral of Herod, five hundred servants were in attendance as spice-bearers. From the narrative in the New Testament we see that a similar custom was followed at the burial of Christ.

The Jews, like most Oriental nations, were given to the most inordinate exhibitions of grief. From the moment that the vital spark was known to have departed from the body, the members of the family, especially the women of the household, burst forth into the most doleful lamentations, upon which they were joined by neighbours and relatives, all of whom crowded to the house as soon as they heard of the bereavement. By the more aristocratic classes anything like outside participation in the grief of the family was forbidden, and, instead, this service was performed by certain women who were known as public or professional mourners. When engaged, they seated themselves in the family circle, and, by studied dramatic effect and eulogistic dirges, excited greater lamentations on the part of the immediate family. Sometimes instrumental music was also introduced.

As in all Oriental countries, burial among the Jews occurred more quickly after death than is generally the practice in this country. Even when the body had been carefully embalmed, interment was not long delayed, and, when this precaution had not been taken, it was invariably held within less than twenty-four hours. This was partly due to the climatic conditions, and partly to the circumstance that the Jews taught that anybody who came near the death chamber was unclean for a week.

The casket, or coffin, is the invention of the Egyptians, but the Jews and some other races early adopted it. Originally these chests of the dead were composed of many layers of pasteboard glued tightly together; later they were of wood, or stone, but for the most eminent men was reserved the honour of being buried in coffins of sycamore wood.

Although the bodies of the dead were sometimes placed in these caskets before being transferred to the grave, the most common method of transporting the corpse from the home of the family to the place of interment was by means of a bier, or bed, which was sometimes composed of very costly materials. Instances are known in which kings and extremely wealthy personages have been conveyed to their tombs on their own beds, but the bier in common use among the poorer classes was usually little more than plain wooden boards, fastened to two long poles, and on which, concealed by a sheet, or other thin coverlet, the body lay. It is just such a bier as this that is described in the Bible, and they are still used in all Eastern countries.

When the deceased was of humble position, none but the relatives and close friends attended the obsequies, unless the family could afford to employ the public mourners and their minstrels, in which case the latter walked before and around the bier, frequently lifting the

coverlet and exposing the corpse, which was always a signal to the company to renew their shrill cries and doleful lamentations. Thus, at the magnificent funeral of Jacob, these mercenaries maintained an almost ceaseless expression of the most passionate grief, and when the boundary of Canaan appeared—the site of the sepulchre—the entire company halted, and, for seven days and nights indulged in these violent exercises of mourning under the leadership of the host of professionals who had been employed for the occasion.

Although sepulchres have long been in use in Eastern countries, even the ancient races seldom made the mistake of erecting them in close proximity to human dwellings. No matter how elaborate they may have been—and from those that are still left it is easy to imagine that money was not spared when some of the tombs were constructed—the health regulations of the time required that they should be built without the precincts of the city. Among the Jews—as shown in the regulations of the Levitical cities—it was specified that the distance should not be less than 2000 cubits from the city walls. Jerusalem alone was excepted, and even there, this privilege was reserved for the members of the royal family of David, and some few others of exalted distinction.

During the first three centuries of the Christian era this custom remained unchanged. The Emperor Theodosius issued an edict expressly forbidding the burial of the dead within any town, whether in churches or not, and Chrysostom not only confirmed this view, but when the Donatists buried their martyrs in churches, they were obliged to remove them. Even in the fourth century, when the building of oratories, or chapels, over the remains of eminent Christians—martyrs, prophets, &c.—began, the canon law held this practice to be unlawful,

and it was not until the sixth century that this statute was to any great degree disregarded.

Thus, it will be seen that while the Roman nation continued to maintain the custom of cremation, the Christians adopted the practices of the Jews, and buried their dead. St. Augustine, in several passages, commends this custom, not for the reason—as he says—that we are to infer that there is any sense or feeling in the corpse itself, but simply because we are to believe that even the bodies of the dead are under the providence of God, to whom such pious offices are pleasing, through faith in the Resurrection.

CREMATION.

The idea of having hundreds and thousands of decaying bodies in the immediate vicinity of human habitations should be so repellent to any sensible person, that argument ought to be unnecessary. The only point that can be urged against this practice, as we have already said, is that, in certain cases, it is important, from a medico-legal point of view, to have the body where it can be exhumed, if necessary.

It seems to us important that we should insist as strongly as possible upon this point—the logical necessity of cremating the dead. Rightly considered, this practice does not in any way conflict with Christian teaching, but conforms to its highest standards. After death, we are not concerned with the material man, but with the spiritual replica (granting anything to exist at all), and no one in these enlightened days would think for a moment that a truly physical resurrection of the body took place. It would not be desirable, in the first place, and is an obvious impossibility, in the second.

Yet it is only this worn-out and effete tradition of physical resurrection which prevents the general adoption of cremation—the far more sanitary and rational process. Let us consider some of its benefits a little more closely.

In the first place, then, there is the very evident reason that there will not be enough space, very soon, to contain all the bodies that are to be consigned to the earth. The population of Brooklyn and of New York (to take typical cases) increased more than seven times in fifty years—from 1840 to 1890, and the population is now more than four million. And, as Mr. Augustus G. Cobb well says:¹—

“The effect, in twenty years, on these six cemeteries will be to increase by a million additional bodies the 1,336,000 already received. Brooklyn is twenty-three times as large to-day as it was fifty years ago, when the first interment was made in Greenwood; and, as a natural consequence, this cemetery, once suburban, has become intramural. It need surprise no one to learn that its exhalations have been complained of in South Brooklyn, and, considering the thousands annually interred within its grounds, and the increasing density of population, we can readily believe that the evil, instead of diminishing, will increase. . . .”

It is needless to point out that such a mass of decomposing organic material, so close to the very homes of the inhabitants, is apt to prove extremely dangerous: first, by contaminating the wells, springs, and water in the neighbourhood; and secondly, by vitiating the atmosphere and rendering a serious epidemic not only possible but exceedingly likely. When we know that germs can be carried through the air for miles—as they can—the immediate peril of a graveyard need hardly be pointed out. As Sir Lyon Playfair (after making a most ex-

¹ *Earth Burial and Cremation*, pp. 26, 27.

haustive investigation of the whole question) expressed it:—

“In most of our churchyards the dead are harming the living by destroying the soil, fouling the air, contaminating water-springs, and spreading the seeds of disease.”

Says Mr. Cobb:—

“Opposition to incineration springs chiefly from ignorance of the manner in which it is effected; and to remove all misapprehension, it cannot be too distinctly stated that the body *never* rests in flames, while during the entire process there is no fire, or smoke, or noise to grieve in any manner the bereaved. The consuming chamber in which the body is placed is built of fireclay, and is capable of resisting the highest temperature. Under it and around it the fire circulates, but it cannot enter in. The interior, smooth, almost polished, and white from the surrounding heat, presents an aspect of absolute, dazzling purity; and as the body is the only solid matter introduced, the product is simply the ashes of that body. During the entire process of incineration the body is hidden from view. . . . The heated air soon changes it to a translucent white, and from this it crumbles into ashes.”

Is not this picture far more pleasant than that of the grave? Is it not far more cleanly, hygienic, and sensible? Is it not obvious that cremation is simply unpopular for the reason that it is based on a mass of false sentiment and worn-out theological dogmas as to the resurrection of the body? From every rational point of view, everything is in favour of the process, nothing against it.

We are familiar with the so-called objections to cremation advanced by M. Jean Finot in his *Philosophy of Long Life*. We can only say that they appear to us, for the most part, as totally inadequate. Some of his *facts*, it is true, are worthy of serious consideration: his negative evidence as to the pollution of the air in the neighbour-

hood of cemeteries, &c. But his idea that the life of the body is perpetuated in the lives of the worms that devour it!—*that* appears to us little short of absurd. In direct opposition to this view let us quote the opinion of Mrs. Annie Besant, who, in her *Death, and After?* says:—

“One of the great advantages of cremation, apart from all sanitary considerations, lies in the swift restoration to Mother Nature of the physical elements comprising the dense and ethereal corpses brought about by the burning, and hence the quicker freedom of the soul from the body. On the assumption that a soul of some sort exists, this would certainly seem far the more rational supposition; and if materialism be true, and no soul persists, then cremation has the field entirely, since there would remain no valid objection to the practice whatever.”

EMBALMING.

Embalming is a method of preserving bodies by injections and dressings, either internally or externally applied.

This term is generally given to the process employed by the ancient Egyptians and others, by which corpses were preserved as mummies. The practice is very ancient, and is probably founded on religious rites and observances. The Egyptians believed that it would be possible for the departed spirit, at some future time, to reanimate the body of the deceased, and hence took great pains to preserve it as perfectly as possible. Some of the processes employed were very elaborate and expensive, and could only be afforded by the wealthy. The most elaborate process was somewhat as follows:—

A deep cut was made beneath the ribs on the left side, and through the opening thus made the internal organs were removed, with the exception of the heart and kidneys. The brain was also extracted through the nose by means of a bent iron instrument. The cavities of the skull and trunk were washed out with palm-wine, and

filled with raisins, cassia, and similar substances; and the skull was dressed by injecting drugs of various kinds through the nostrils. The body was then soaked in natron for seventy days. It was then removed and wrapped carefully in linen cloth, cemented by gums.

The less expensive process consisted in removing only the brains and injecting the viscera with cedar oil. When the body was soaked in natron for the same period of time (seventy days), the viscera and soft parts came away *en masse*, and only the skin and bones were left.

The very poor, who could not afford either of the above methods, embalmed their dead by washing the body in myrrh and salting it for seventy days. The body, thus embalmed, was ready for the sepulchre; but it was often kept at home for a considerable time afterwards, and was produced on certain occasions—such as a dinner-party!—and carried round the room “to remind the diners that death was ever with them.”

Doubtless the method of embalming differed greatly in different countries and in the same country at various times. The above process was described by Herodotus in his writings as being practised in Egypt at that time. Animals were also embalmed, especially those held to be sacred. It is certain, however, that only a small percentage of the dead organic matter could have been disposed of in this manner; and it is not known what became of the remainder or disposition was made of it.

Embalming is carried on at the present day, but for very different reasons and in a different manner. The object is not to preserve the body for centuries, as the Egyptians hoped to do, and in fact actually succeeded in doing. In some countries the use of salts of arsenic, corrosive sublimate, &c., is prohibited by law for medico-legal reasons; but embalming can only be performed by toxic substances. Many of these have been tried, with

limited success. Essential oils, alcohol, cinnabar, camphor saltpetre, pitch, resin, gypsum, tan, salt, asphalt, Peruvian bark, cinnamon, corrosive sublimate, chloride of zinc, sulphate of zinc, acetate of aluminium, sulphate of aluminium, creosote, carbolic acid, &c., have all been recommended by modern embalmers. In these days details of procedure vary, but all must conform to the law.

The length of time which a body will keep before decomposition sets in varies greatly. In those cases in which but little flesh is left on the bones, and when the blood has decreased greatly in volume (for example, in consumption, where great emaciation has taken place before death), the body will keep far longer than one which has a large amount of tissue still upon the bones and a large volume of blood. Blood being the active principle in decomposition, its prompt removal is necessary in cases of this character. The time of year, the disease from which the person died, &c., all have an appreciable effect upon the length of time the body will naturally take to decompose; and hence all these factors must be taken into account by the embalmer in selecting the amount and the strength of the fluid to be injected into the arteries of the corpse.

The general procedure is somewhat as follows:—The body being laid out, an incision is made with a sharp knife, and the artery is drawn to the surface by means of a metal hook. The artery selected varies, some embalmers choosing the brachial artery, others the axillary artery, &c. It depends upon the individual choice of the embalmer. If a visible scar is objected to, the brachial artery cannot be used. After the artery is brought to the surface and cut, the embalming fluid is forced into it by means of a small pump provided with two valves, after the manner of the heart. It is intended, indeed, to take the place of the heart in forcing the

blood through the body. One of these valves forces the fluid into the artery; the other sucks up the fluid from the bottle in which it is contained. The fluid passes directly across to the heart and other vital organs, and when this has been done a second incision is made just below the heart, which is punctured. The blood is then drawn off from the heart, and the double process is continued until all the blood in the body has been replaced by the embalmer's fluid. Sometimes a second artery is cut in the leg. If the fluid is found to come away clear at this point, without an admixture of blood, the body is clear of blood—the chief decomposing agent.

The fluid which is injected into the body has a tendency to harden the tissues, and they could be made actually brittle if enough were used. The embalmer uses his judgment as to the strength of the fluid. Generally, an 8-ounce bottle of prepared embalming fluid is mixed with half a gallon of water, this being the typical "embalmer's solution."

From a medico-legal point of view, there is much that can be said against embalming. Brouardel has pointed out that embalming can only be performed with toxic substances, and this fact would vitiate any subsequent investigations that might have to be made—in a poison case, for example. Embalming might preserve bodies a much greater length of time than would otherwise be the case; but what is the object to be gained thereby? The body must ultimately decompose, whether embalmed or not, and of what use is the preservation of bodies? Our chief object should be, *not* to preserve them, but to get them out of the way as speedily and as hygienically as possible. It is surely a more pleasing thought to think of a cremated body than to dwell upon the condition of one that has been buried six months or a year.

MUMMIFICATION.

The mummified bodies of some of the Egyptians have doubtless been seen by every one. So perfectly have some of these bodies been preserved that even the features can be recognised after more than three thousand years. The bandages wrapped round the bodies were doubtless antiseptic in character; but the details of their methods have been lost.

Apart from such cases, mummification of bodies may sometimes take place spontaneously, and the body be mummified instead of decomposing. This is especially the case in dry, hot countries, where there is but little moisture in the air. In the sandy soil of Mauritius, *e.g.*, it is asserted that bodies frequently become mummified. Where there is a lack of air, the body will also occasionally assume this condition, even in our climate. M. Audouard reports a case of a mummified body, discovered by him, in which "the skin was like parchment, shrivelled, and of a buff colour. When it was tapped with the back of a knife, it resounded like cardboard." The body had become very light. M. Audouard found also that the skin was perforated with a number of holes, like a colander, and that dust from within escaped through these little holes! A thigh of the leg weighed just one-third of the normal weight. The body had been devoured by mites, which had eaten all the tissues of the woman. The dust within the hollow and mummified limb consisted mostly of the excretions of the mites.

It is asserted that mummification of the body of an unborn child will take place, if the child be preserved *in utero*, and no air is allowed to enter the uterus. It is sometimes seen in the young, more rarely in adults.

Lately, when one of us revisited the Egyptian room in the British Museum, he noticed very carefully the

physical peculiarities of some of the excellent specimens of mummification there exhibited. One case is especially interesting. A hand and arm, stripped of the winding bandages, is shown—perfect in its texture, all the nails, and even the texture of the skin, being clearly visible. The arm is shrunk to about one-fourth its normal size (it is merely the skin stretched over the two bones of the fore-arm). The hand is partly clenched. The whole is jet black, and has the appearance of being made of unpolished ebony. The human, living arm has now become petrified, as it were, and takes on the exact appearance of wood. The arm is extremely hard and brittle—so much so, indeed, that it is *cracked* along its upper surface—just as a piece of wood might be cracked or split. This struck us at the time as a very remarkable phenomenon—apparently showing the ultimate tendency of such organic substances to petrify, become coal-like and finally return to the mineral elements from which they sprang.

M. M^égnin divides the work of the “labourers of death” into four periods. In the first, quaternary compounds are attacked and destroyed; in the second, fatty substances are attacked; in the third, the soft parts are liquefied; lastly, in the fourth period, the dried-up mummy is filled with mites.

In all cases (with the exception of cremation), a fermentation takes place before the body is completely destroyed; gas is produced, and the organism is returned to the mineral kingdom more or less rapidly—the rapidity and character of this return being governed by several considerations. This is the invariable process, except in those rare cases in which the body remains frozen, or where it is devoured by wild animals or birds of prey. When the body is immersed in the ocean, it is soon devoured by sharks, crabs, and other carnivorous sea-creatures.

The body, when lying in peaty soils, or when surrounded with other antiseptic influences, will mummify. The body must be rather thin and juiceless, however. There is a church at Toulouse where the structure of the place seems to cause mummification of bodies, owing to a current of air being always present.

The process of preserving the body by *drying*, which has sometimes prevailed among savage people, is probably somewhat similar to the method of preserving meats which is practised by the natives of certain parts of South America. As described by Charles J. Post, the artist and explorer, this is as follows :—

“The national food of the country is the ‘chalona’ and the ‘chuno.’ These are consumed so generally that there are many villages east of the Andes in which the people have no other means of support than that which is afforded by the preparation of these edibles. The ‘chalona’ is nothing more or less than mutton that has been dried so thoroughly that it bears a close resemblance to a mummy. The natives take the carcase of the sheep up into the mountains—sometimes 2000 feet or more above the sea-level—and there they let it lie all day beneath the rays of the sun. When the dew begins to fall, or there is any apparent dampness in the atmosphere, they cover it securely, and do not expose it to the air again until these conditions have disappeared. When fully preserved under proper conditions, the carcase of the sheep will not weigh more than ten or twelve pounds.

“The Indians eat this meat raw, masticating it to a degree that corresponds to our modern method of ‘Fletcherism.’ If it is to be cooked, however, it is necessary to stew it for fully ten hours the day before it is to be used, and to boil it again for not less than four hours the day that it is to be served. The natives eat it in combination with the ‘chuno’—potatoes that have been treated in the same fashion until they have been dried to about the size of a bantam egg.”

As Mr. Post suggests, this is a process of mummification.

CHAPTER VI

THE CAUSES OF DEATH

1. SUDDEN DEATH.

IN the present chapter we propose to give a brief résumé of all the causes of sudden death that are known, taking these descriptions largely from Dr. Brouardel's excellent work on *Death and Sudden Death*. Although this author has omitted consideration of certain causes of sudden death, his summary of the facts is the completest that we have been able to discover; while his extensive experience entitles him to a respectful hearing in whatever he says. His own discussions of the causes of sudden death are very exhaustive; here we shall but touch upon this side of the question; since our chief interest is the study of natural, and not unnatural, death—as all *sudden* deaths are. When death results from any disease, it is tolerably clear to us what the actual cause of the death is, in that case. We can at all events form a mental picture, in rough outline, of what has taken place; but the same is not true in cases of sudden and unexpected death. Often the cause is most difficult to find, and it must be acknowledged that, even here, much is still uncertain and unknown. Much less is known of the nature and cause of “natural” death—as we have seen, and shall see further. Before we proceed to a consideration of this last and most vital question, however, we must first of all consider sudden death, arising from various causes—when such causes are known.

In the first place, then, it may be said that such a thing as "sudden death" does not, strictly speaking, exist at all! In those cases where it is supposed to have taken place, it can invariably be shown that some cause or causes, acting for considerable periods of time upon the body, have produced these results. Says Dr. Brouardel:—

"Why does sudden death occur? No one dies suddenly, apart from the effects of violence, as long as all the organs are sound; but there are some diseases which develop slowly and secretly, without the attention of the patients having been called to them by any pain or by any feeling of illness, and without a physician ever having been called in, and which terminate naturally by a rapid death. . . . We will define sudden death as 'the rapid and unforeseen termination of an acute or chronic disease, which has in most cases developed in a latent manner.' . . . However carefully we may perform every autopsy, however minute our exploration of the body may be, however thorough may be our knowledge of the causes of death, we sometimes meet with cases which it is impossible to explain. The proportion is about 8 or 10 per cent."

This is a very significant admission, of which we shall have occasion to remind the reader at a later stage of our investigation.

Turning now to the causes of natural death, we find the first place occupied by lesions of the heart and circulatory system.¹ And we read that "a lesion may remain

¹ If an artery breaks, that is said to be the cause of the death of the individual, but few stop to ask, "Why should the artery break?" Would it not be more accurate, strictly speaking, to say that the real cause of the person's death was *that* cause which so weakened the wall of the artery that its rupture was possible? Or, if death takes place owing to some central inhibition, would it not be better to seek the cause of the inhibition rather than rest content with the mere verdict of "heart failure"? To all thinking persons, the true causes of death lie deeper than the mere effect or resultant—the "last straw that broke the camel's back" in very truth! Strictly speaking, the cause of death, in such cases, is *the cause of this last cause*; and, what *that* is, one of us has tried to show in another place.—*Vitality, Fasting and Nutrition* (pp. 324-31).

latent during the greater part of life, and be only revealed by accident" (p. 125). Lesions of the heart may result from a number of causes—(1) fatty over-growth of the heart; (2) fatty degeneration of the muscular tissue of the heart; (3) fibroid degeneration of the heart; (4) lesions of the coronary arteries; (5) syphilitic affections of the heart; (6) rupture of the heart, &c. Then we have lesions of the pericardium. Following this, as causes of sudden death, we have mitral and tricuspid incompetence, endocarditis, *angina pectoris*, and neoplasms of the heart.

In looking up the literature on death we came across a rare manuscript, viz., lectures on medical jurisprudence given by Sir Douglas Maclagan in 1888. This manuscript is in pen and ink, and is doubtless the only one of its kind in existence. Amongst a variety of interesting topics, the subject of death in its various forms is treated by the author at great length, and certain facts are detailed in this manuscript that we have not discovered in any book printed and on the market. There are, however, certain statements contained in the book with which we can by no means agree. Thus, our author includes under "natural death," deaths due to hæmorrhage, diarrhœa, wasting diseases, deficient power, organic lesions, apoplexy, toxæmia, epilepsy, mental emotion, perforation of the viscera, closure of the glottis, congestion of the lungs, effusion in the lungs, diseases of the spine, paralysis, and tetanic spasm. With the single exception of deficient power, we should hesitate to class any of the above deaths as natural. Deaths due to disease are invariably *unnatural* and premature. It is for this reason that we have not included in this volume deaths due to disease, murder, suicide, and infanticide. It may be well for us to state in this place also, that we have omitted all discussion of death from the medico-legal

point of view, this seeming to us out of place in a work of this character.

We next come to lesions of the arteries. Here we find : Congenital lesions, arterio-sclerosis, aneurisms, spontaneous rupture of the aorta. Of the veins : various ruptures, also air in the veins. There are also lesions of the capillaries, miliary aneurisms, meningeal hæmorrhages, capillary embolisms, local disturbances of the circulation. Some of these, it may be said, can hardly be classed as causes of sudden death, in the orthodox sense of that term.

A large number of sudden deaths are due to lesions of the cerebro-spinal system and the major neuroses. Here we may classify meningitis—tubercular, chronic, cerebro-spinal, &c. Abscesses of the brain, cerebral tumours, lesions of the spinal cord, lesions of the nerves, epilepsy, hysteria, inhibition, and sudden death from emotion or mental causes. We shall have occasion to recur to this latter cause of death, when we come to consider its nature in cases of “natural death.”

There is, next, a whole set of causes of sudden death due to lesions of the respiratory system. Among these we find : lesions of the larynx, of the trachea, of the thyroid body, of the mediastinum, pulmonary congestion, pneumonia, capillary bronchitis, pulmonary phthisis, cancer of the lung, emphysema of the lungs, pleurisy, rupture of the diaphragm, and compression of the chest.

Next, we have lesions of the digestive system. These are:—Lesions of the pharynx, of the œsophagus, of the stomach (which might include a number of subdivisions), lesions of the intestines (also subject to subdivisions), lesions of the liver, of the spleen, of the pancreas, and of the suprarenal capsules. Among doubtful causes (to us) are included corpulency, climatic excesses of heat, cold, &c. These can hardly be called *causes* of sudden death ; rather,

occasions of sudden death—when the organism is already in such a state that life can easily be terminated by a very slight mal-adjustment of external circumstances.

In the female there are also special causes of death, to which the male is not subject. Among these are: vaginal examination, extra-uterine gestation, recto-uterine hæmatocele, rupture of the uterus, vulvo-vaginal varices, syncope arising out of uterine conditions, &c.

There are also many cases of sudden death in fevers and kindred states—in anthrax, mumps, diphtheria, acute rheumatism, typhoid fever, plague, &c. &c. A very full study of death from some of these conditions will be found in Dr. John D. Malcolm's *Physiology of Death from Traumatic Fever* (London, 1893). Sudden death may also be due to hæmophilia.

Sudden death may take place in various diseases which cannot of themselves be said to be the cause of the death—*e.g.* in diabetes, uræmia, gout, dropsy, as well as in cases of alcoholism. In children, sudden death may result from syncope, convulsions, asphyxia, pulmonary congestion, and various intestinal disorders. All of these classes are subject to various subdivisions. They will all be found discussed in full in Dr. Brouardel's book on *Death and Sudden Death*, to which excellent manual we would refer the reader for further particulars regarding such cases.

Death from Burns and Scalds.—A great intensity of heat is not required to destroy vitality of the skin. The danger to life is much more in proportion to the extent of surface of the body exposed to the action of the fire than to its intensity. Sometimes it may prove fatal by setting up inflammation of the internal tissues. In the case of corrosions with acids, the marks are generally of a dirty brown colour.

Death by Hæmorrhage.—The body is blanched. On

dissection, the great venous trunks are flabby and empty. The large regions internally are pale. We may find hypostasis in the inferior parts of the lungs, even when death is caused by hæmorrhage. We may find evidence of hæmorrhage in the internal parts, generally partly fluid and partly clotty. It is often quite impossible to detect from what vessel the blood has come.

Dr. Harrison, writing years ago on death from hæmorrhage, said, in his *Medical Aspects of Death*:—

“Death may be said to begin at different parts of the body; and it will be found that the nature, symptoms, and peculiarities of the act of dying are determined by the organ first mortally attacked. The alterations which directly occasion dissolution seem principally effective either in the arrest of the circulation or the respiration.

“As the heart is the great mover in the circulation, we can easily conceive that whatever brings it to stop must be fatal to life. Extensive losses of blood operate in this manner, and they furnish us with a good illustration of the manner in which death takes place. The sufferer becomes pale and faint, his lips white and trembling; after a while the breathing becomes distressed, and a rushing noise seems to fill the ears. The pulse is soft, feeble, and wavering; the exhaustion and prostration are more and more alarming. Soon a curious restlessness takes place, and he tosses from side to side. At length, the pulse becomes uncertain, and the blood is feebly thrown to the brain. The surface assumes an icy coldness; the mind is yet untouched, and the sufferer knows himself to be dying; in vain the pulse is sought at the wrist—in vain efforts are made to re-excite warmth—the body is like a living corpse. Now, a few convulsive gaspings arise, and the countenance sets in the stiff image of death. Such are the more striking phenomena which attend the fatal hæmorrhages.

“The failure of the vital powers, from the withdrawal of blood, may be regarded as a sort of type of this mode of death, since the various symptoms which have been named arise from the cessation of the healthy circulation.

“A dread of the loss of blood may almost be considered as an instinctive feeling ; at any rate, its importance is early impressed on the mind, and is never forgotten. In childhood, it is looked at with alarm ; and the stoutest mind cannot but view with horror those perilous gushes of blood which bring us into the very jaws of destruction.”

2. MENTAL CAUSES OF DEATH.

Disease and death are more frequently the effect of mental causes than might be generally imagined. We know, for example, that persons who are immoderately addicted to intellectual pursuits expose themselves to affections of the brain, for it, like any other organ, enters its protest when especially abused. They are liable to headaches and a host of nervous ailments, while inflammation and other organic diseases of the brain will sometimes supervene. As they advance in life, apoplexies and palsies are apt to appear. Whenever there exists a predisposition to apoplexy, close mental application is always attended with the utmost danger, especially in the latter part of life. Epilepsy is another disease of the nervous system that may be induced, or exaggerated, by the state of the mind, and extreme mental dejection, hypochondria, and even insanity, may sometimes result from these causes. Many individuals distinguished for their special talents and learning have been subject to such unhappy maladies, and yet it is difficult to determine how much of the disease may justly be ascribed to the abstract labours of intellect, and how much to mental anxiety, for it is known that undue strain upon the emotions—either excitement or depression—may be productive of these results.

Thus, in the case of Sir Walter Scott, the extreme literary labours that he performed do not seem to have

had any injurious effect upon his health, until the brightness of his fortune had become overcast by the clouds of adversity. When, with his mental tasks, were mingled the agitating emotions of anxiety, resulting in irregularity of habits, his physical health began to break, and the fatal disease of the brain soon brought a tragic ending to his life.

While there may be occasions when even the ordinary exertions of the brain are attended with danger, their effect upon the health is usually comparatively slight, unless they are combined with one or more of the numerous feelings, pleasurable and painful, which, according as they are mild or intense, are known to us as affections or passions.

As Dr. William Sweetser said, in his work, *Mental Hygiene*:—

“The agency of the passions in the production of disease, especially in the advanced stages of civilisation, when men’s relations are intimate, and their interests clash, and their nervous susceptibilities are exalted, can scarcely be adequately appreciated. It is doubtless to this more intense and multiplied action of the passions, in union, at times, with the abuse of the intellectual powers, that we are mainly to attribute the greater frequency of the diseases of the heart and brain in the cultivated than in the ruder states of society. Few, probably, ever suspect the amount of bodily infirmity and disease resulting from moral causes—how often the frame wastes, and premature decay comes on, under the corroding influence of some painful passion. . . . In delicate and sensitive constitutions, the operation of the painful passions is ever attended with the utmost danger; and should there exist a predisposition to any particular form of disease, as consumption, or insanity, it will generally be called into action under their strong and continued influence.”

Modern investigations in psychology have demonstrated so conclusively that the closest sympathy exists

between the mind and the body, that the definition describing passion as "any emotion of the soul which affects the body, and is affected by it," will not be subjected to very serious criticism. As to the direct effects of these passions, they appear especially in those organs and functions which have been denoted as organic—in the lungs, the stomach, the liver, the kidneys, the bowels, &c. In fact, so sudden and apparent is the influence of the different emotions upon the viscera of the chest and abdomen, that Bichat, as well as other eminent physiologists, was once led to draw the erroneous conclusion that these organs were actually the seat of those emotions.

While it is undoubtedly true that some passions act most obviously upon the heart, others on the respiration, and some on the digestive organs, it has been clearly proved that, so far from being limited to one particular organ, a number of the organic viscera are almost invariably included within the influence of a strong emotion. At the same time, such a close correspondence exists between the mental or moral feelings and the physical body, that the condition of the former may either determine or be determined by that of the latter. For example, indigestion may sometimes be the cause, and sometimes the consequence of an irritable or unhappy temper. Sour stomach may either occasion or result from a sour disposition. To sweeten one is certain to have a neutralising effect upon the other. It is, therefore, obvious that an unhealthy mental state imparts an unhealthy influence to the bodily organism, and, if such evidence were needed, scores of historical facts might be cited to establish the truth of this theory.

The pleasurable passions—love, hope, friendship, pride, joy, &c.—may, if properly experienced, produce an expansion of vital action, and yet even these emotions, if felt

intemperately, exert a very contrary effect. The expression that "joy kills" has a basis in fact, for, as Haller says, in his *Psychology*, "Excessive and sudden joy often kills, by increasing the motion of the blood, and exciting a true apoplexy." It is said that Pope Leo X. died from the effect of extravagant joy at the triumph of his party against the French; and Dr. Good, in his *Study of Medicine*, cites the case of a clergyman who, at a time when his income was very limited, received the unexpected tidings that some property had been bequeathed to him. "He arrived in London in great agitation; and, entering his own door, dropped down in a fit of apoplexy, from which he never entirely recovered."

If such facts are true in regard to the pleasurable passions, there is much more danger of injurious results when the emotions are of a painful character. To quote Dr. Sweetser again:—

"The painful passions act immediately upon the nervous system, directly depressing, disordering, expanding, and sometimes even annihilating its energies. . . . Although the general effect of the painful emotions is to induce a contraction or concentration, and a depression of the actions of life, yet, in their exaggerated forms, they are sometimes followed by a transient excitement, reaction, or vital expansion, when their operation, becoming more diffused, is necessarily weakened in relation to any individual organ. Under such circumstances, the oppression of the heart and lungs is in a measure removed, and the circulation and respiration go on with more freedom. Hence it is that when anger and grief explode . . . their consequences are much less to be dreaded than when they are deep, still, and speechless, since here their force is most concentrated."

Thus, in extreme paroxysms of anger, the physical phenomena are most apparent. The face becomes distorted and repulsive, the eyes sparkling with brutal fury. All the vital actions are oppressed, and often are nearly

overwhelmed. The blood retreats from the surface; tremors and agitations appear in the limbs, or perhaps in the entire body, and there is frequently indication of excessive nervous affections, sometimes giving place to sobbing and hysteria, and sometimes to convulsions and spasms. The action of the heart is also affected, becoming feeble, laboured, irregular, and even painful. The effect upon the respiration is shown in the short, rapid, and difficult breathing, which produces a feeling of suffocation, a tightness that is felt in the whole chest, and that occasionally extends to the throat, choking, and otherwise interfering with the power of speech. If not noticed at the moment of anger, the influence of this passion almost invariably proceeds to the abdomen, as indicated by the subsequent distress appearing in the region of the stomach, this being due to the disturbance of the stomach, liver, and bowels.

Almost innumerable instances are known in which fainting has resulted from violent anger, and in many cases life itself has paid the price of this paroxysm of the emotions. According to John Hunter, the eminent physiologist, death from anger is as absolute as that caused by lightning. In such cases, the muscles remain flaccid and the blood dissolves in its vessels. As a result the body passes rapidly into putrefaction.

Dr. Hunter himself is one of the historical victims of anger. Though a man of extraordinary genius—as all medical men know—he was subject to violent passions which he was never able to control. When engaged one day in an unpleasant altercation with his colleagues, some of whom had peremptorily contradicted him, he became too angry to continue speaking, and, hurrying into an adjoining room, instantly fell dead. The direct cause of his death was, of course, the affection of the heart from which he had long been a sufferer, but there

can be no question but that the final stroke was super-induced by anger.

Tourtelle, the French physician, asserted that he had "seen two women perish—one in convulsions at the end of six hours, and the other suffocated in two days—from giving themselves up to transports of fury."

Anger destroys the appetite and interferes with the functions of digestion, and Dr. Beaumont, who was once able to look into the human stomach through the opening caused by a fistula, discovered that anger or other severe mental emotion, "would sometimes cause its inner, or mucous, coat to become morbidly red, dry, and irritable, occasioning at the same time a temporary fit of indigestion."

The unpleasant dryness of the throat caused by anger—a condition which occasions the frequent swallowing action of the muscles—is due to the inspissation of the saliva; and some authorities have even gone so far as to assert that such an exhibition of emotion may cause the fluid of the mouth to acquire poisonous qualities "capable of provoking convulsions, and even madness, in those bitten by a person so agitated."¹

It is well known that hæmorrhages from various parts of the body—the nose, lungs, and stomach—as well as inflammations of different organs, may be produced by severe attacks of anger; and Dr. Sweetser asserts that he himself has "now and then met with instances of erysipelatous inflammation about the face and neck, induced by paroxysms of passion."

Irritability and moroseness of temper, when long continued, may also cause inflammatory and nervous disorders, and it is well known to physicians and surgeons that the fretful and fractious patient recovers less promptly, and is more exposed to relapses, than he

¹ Broussais' *Psychology*.

who is possessed with a quiet resignation to existing conditions. Wounds that have healed have even been known to break out afresh as the effect of unfavourable mental conditions.

Fear, like anger, has its degrees; and its effect upon the health depends upon its intensity. When extreme, however, the results are often astonishing. Thus, in acute fear, the respiration becomes immediately and most strikingly affected. At the first impulse, a sudden inspiration occurs, owing to a spasmodic contraction of the diaphragm, and this is immediately followed by an incomplete respiration, cut short apparently by an internal spasm—either of the throat, windpipe, or lungs. The effect upon the respiration is to make the breath short, rapid, and tremulous. The voice trembles, and, because of the diminution of secretions of the mouth and throat, becomes thick and unnatural. At times, even speechlessness may follow.

Naturally the heart suffers from the effect of such an acute sensation. Being oppressed, or constricted, it flutters or palpitates, and in other respects is visibly agitated. Consequently, the pulse also becomes irregular. The viscera of the abdomen experience disagreeable effects from the sensation of fear, and these frequently show themselves in spasmodic contractions, or in a morbid increase of secretions. Occasionally vomiting, but more frequently a somewhat involuntary diarrhœa, occurs. The urine also, though increased in quantity, becomes pale and limpid, and there is an urgent if not absolutely irresistible desire to void it frequently. These latter symptoms, it may be added, are frequently shown in other forms of serious attack upon the nerve force.

In time of fear, the blood leaves the surface so perceptibly that the face becomes pallid, while the skin, sometimes in all parts of the body, grows cold

and rough, or, as we commonly say, like "goose-flesh." Frequently this apparent chill breaks forth in a cold sweat on the forehead, and often in other parts of the body as well. Even the hair of the head may become elevated, and the general tremor or shuddering, that attacks the limbs, proceeds to the teeth, producing a chattering sound very similar to that which is exhibited under conditions of extreme cold, or in a paroxysm of fever. As in the case of anger, fear may induce most painful and unnatural contortions of the countenance, with convulsive sobbing and, in the case of women especially, tears; or, under extremely violent emotions, hysteria. Even in men, however, the depressing effects of fear sometimes include the entire chest and upper part of the abdomen within their field of influence, and if the sense of constriction becomes too agonising, syncope and sometimes death itself may follow. Just as a sudden though brief attack of anger may arrest digestion and disarrange the entire nervous organism for a whole day, so fear exerts a most dangerous effect upon the nerves and muscles, sometimes even acting as a sudden cathartic.

If the expression, "frightened to death," is no idle jest therefore—and there is no lack of examples to prove that hundreds of persons have been literally frightened out of existence—this fear, when severe, but less pronounced, may exert a distinctly contrary effect. Thus, while convulsions, epilepsies, and even insanity, have resulted from this emotion, these, as well as many other affections, have been immediately suspended or entirely removed, by a strong expression of this feeling. It sometimes surprises us to note how quickly a toothache stops when we enter the dentist's rooms, but we seldom analyse the mental process carefully enough to determine that it is the fear of the greater pain of extraction

that makes the minor nervous affection less. What is true in regard to the toothache also applies to many other ills, including sea-sickness, hypochondria, &c.

The horror which we feel in the presence of insects, reptiles, and other creatures known to be entirely harmless, is but another form of fear, and its effect upon the physical organism is almost as distinctly pronounced. Thus, there is the same sudden paleness and coldness; the contraction of the skin and elevation of the hair; the chills and rigors of the body; the panting and oppression of heart and lungs. When greatly aggravated, the conditions of deadly fear—the convulsions, epilepsy, and even instant death—are realised. Thus, Broussais refers to the case of a woman who, on feeling a living frog that had been dropped into the bosom of her dress, was seized with profuse bleeding from the lungs, and survived but a few minutes.

Such antipathies may be innate, like the terror that so many individuals feel at the sight of mice; and yet grown persons as well as children have been thrown into convulsions, and have even derived serious nervous injury, by being subjected to the immediate influence of objects that have been a source of repugnance or horror to them.

Grief, whatever its cause, is essentially a mental pain; and it is inevitably productive of physical phenomena. In its simplest forms, or when produced by the loss of kindred, friends, property, or other things that are generally deemed desirable, it is usually subdued by the healing balm of time; but when, as often happens, it is complicated with some one of the malignant emotions of the heart—hatred, revenge, envy, jealousy, &c.—the mental pain is accentuated, and the deleterious effect is increased. As we cannot escape this suffering when we give way to the sentiments of envy or revenge, we

punish ourselves by our hatred far more than we injure the object of these vicious feelings.

When grief is acute, it is usually transient in character. When it becomes chronic, it develops into melancholia. In its acute stage its symptoms somewhat resemble those of anger, for all passions founded on pain are closely related as to their effect upon the bodily functions. For example, there is the same agonising feeling of impending suffocation; the sense of oppression and stricture at the heart and lungs. The entire chest feels as though tightly bound, and the demand for air to alleviate this oppression is indicated by the long-drawn or protracted inspirations. The greatest distress, however, is experienced in the heart, and, in moments of thrilling distress, this heart-agony becomes so great, that it is not uncommon for its victims to die—broken-hearted.

As in cases of anger, or fear, the influence of the emotion of grief also extends to the throat and mouth; it affects the circulation, weakening the pulse perceptibly, and, finally, proceeds to the organs of the abdomen, being experienced especially in the pit of the stomach. The appetite fails; the powers of digestion are impaired, or suspended, and the throat becomes so contracted that it is impossible for the victim to swallow food without frequent draughts of liquor to “wash down” every mouthful.

Those exhibitions of bodily anguish known as “sobbing,” or “crying,” represent one of the greatest safeguards in moments of grief. Thus, death from grief is said to be unknown in cases where the sorrow has been attended by copious weeping, for the tears relieve the oppression of the head and lungs, forming a sort of natural crisis to the paroxysm, just as sweating is the crisis to the paroxysm of fever.

Insanity and monomania, as well as many other nervous affections, not uncommonly follow in the wake of grief, just as they attend upon the emotions that we may term anxiety. In other words, worry also kills through its continued depressing effect upon the heart and other vital functions. Palsy, chronic inflammation, dyspepsia, are some of the various ills that may be induced by the protracted operation of the sentiments known as sorrow, anxiety, or worry, and from any of these disorders man may die.

As in fear, the depressing effect of sorrow or worry interferes with the restorative processes of nature. As Dr. Sweetser says:—

“When sorrow becomes settled and obstinate the whole economy experiences its baneful effects. Thus, the circulation languishes, nutrition becomes imperfect, perspiration is lessened, and the animal temperature is sustained with difficulty; the extremities being in a special manner liable to suffer from cold. The skin grows pale and contracted, the eye loses its wonted animation, deep lines—indicative of the distress within—mark the countenance, and the hair soon begins to whiten or fall out. The effect of the painful passions in depriving the hairs of their colouring matter, is many times most astonishing. Bichat states that he has known five or six instances where, under the oppression of grief, the hair has lost its colour in less than eight days. And he further adds that the hair of a person of his acquaintance became almost entirely white in the course of a single night, upon the receipt of melancholy intelligence. . . . The nervous system, subjected to the depressing influences to which I have referred (including the accompanying affliction of lost sleep), soon becomes shattered, and, in the end, all the energies, both of mind and body, sink under the afflictive burden.”

Although seldom so dangerous in its effects, the sense of humiliation or shame is scarcely less pronounced in its physical phenomena. While not frequently a source

of ill-health, being too transient an emotion to disturb the bodily functions so seriously, under its severe action headaches, indigestions, and other nervous agitations occur, and even insanity and death have succeeded as the result of greatly aggravated conditions. The records of insane asylums show that injured self-love, which is one form that shame assumes, has been the cause of many mental derangements, while murder and other crimes may readily be traced to such emotions. When the feelings of humiliation are exceptionally extreme, the mind suffers terrible anguish, and, of necessity, the physical health becomes seriously endangered. It is under such a mental strain that the crime of suicide is sometimes committed, but even when the victim does not deliberately take his own life to escape the necessity of facing the caustic comments of the world under such painful vicissitudes, the very shame itself may be productive of bodily derangements that will make death certain.

3. DEATH BY POISONING.

It is customary to classify poisons as irritant, corrosive, or neurotic, according to their effect upon the system. At the same time, certain poisons are so complicated in their action upon the human organism, that one seems to present the characteristics of another. Thus there are some irritant poisons that exert a corrosive effect, although many do not, and, under certain conditions, every corrosive poison may act as an irritant.

Most irritant poisons belong to the mineral kingdom—being both metallic and non-metallic—although the vegetable kingdom supplies a few, while some of the gases also come within the province of irritants. Neurotic poisons, according to Taylor, “act upon the nervous system. Either immediately, or some time after, the

poison has been swallowed, the patient suffers from headache, giddiness, numbness, paralysis, stupor, and, in some instances, convulsions." "But," as Griffiths says (*Police and Crime*, vol. ii. 159-60):—

"The symptoms of all kinds of poisons intermingle, and the irritants may produce the same as the neurotics, and some—those especially which are derived from the vegetable kingdom—have a compound action. But one and all are defined in legal medicine as substances which, when absorbed into the blood, are capable of seriously affecting health or of destroying life."

To again quote the same authority:—

"First among the irritants we may take sulphuric acid, or oil of vitriol, a poison often used in suicide, and in the form of vitriol-throwing to do injury without actually causing death. Nitric acid is the *aqua fortis* of the Middle Ages, often mentioned in the annals of poisoning. With nitric acid may be classed hydrochloric or muriatic acid, which was given by a servant at Taunton to her mistress in beer. Oxalic acid is a vegetable acid, generally very rapid in its action, and leaving, as a rule, little trace. Tartaric acid and acetic acid, although irritants in large quantities, are not commonly classed with poisons."

Cases of poisoning by phosphorus, an irritant poison, have been known for long in England, but are more common in France, the substance having generally been obtained from the tips of common lucifer matches. A girl at Norwich put some compound of phosphorus used for vermin-killing into the family teapot with murderous intent, but when hot water was poured upon the leaves the smell betrayed the poison. A woman put some phosphorus into soup she gave her husband, who began to eat it in the dark, when the luminosity of the liquid showed something was wrong.

Arsenic is the best known of the metallic irritants.

There are so many preparations of it, that it is easily obtained; it is not difficult to give, for it imparts no particular flavour to food. The symptoms vary; they are shown within eight hours, and sometimes not for five or six days. This poison may be administered in small quantities, and spread over some length of time, so as to constitute chronic poisoning.

Arsenic is sometimes called "the fool's poison," because it so generally betrays its presence in the human body, even after long periods have elapsed. The body of Alice Hewitt—poisoned by her daughter—was exhumed after eleven weeks, and 154 grains of solid arsenic were found in her intestines alone. Other still more remarkable cases are recorded—one in which the poison was found in children after eight years' burial; a second case is quoted where twelve years had elapsed, and a third fourteen years. Arsenic has also the inconvenient action (from the murderer's point of view) of preserving the body and resisting decomposition. This has been exhibited for months, nay, years, after interment. It was seen to a marvellous degree in the case of Pel's wife, and in the Guestling poisoning. And yet again in St. Celens (France), where ten bodies were exhumed and found well preserved. Zinc chloride is another powerful preservative; it retards putrefaction by combining with the tissues. Palmer's wife was exhumed after twelve months' burial, and all organs had been preserved by the antimony with which she had been poisoned. Chloride of lime had the same effect in the case of Harriet Lane.¹

The facility with which arsenic or some of its compounds can be purchased has no doubt multiplied its felonious use: this, and the plausible excuse so generally put forward when buying it, that it is to kill rats and

¹ For details of quoted cases see Griffiths, *Police and Crime*, 1899.

other vermin—an excuse as old as Chaucer. Lady Fowlis, when indicted for witchcraft and poisoning in 1590, was accused of giving “eight shillings money to a person for buying rateoun poison.”

Tartar emetic is a substance with an evil reputation in the chronicles of poisoning. Two famous cases are on record, although both are mysteries to this day—surrounded with such strong doubts that they should, perhaps, be removed from the records of crime.

Dr. Smith Ely Jelliffe, writing in the *Encyclopædia Americana*, admits that a strictly scientific definition of the word “poison” cannot be given.

“In general it is said,” he adds, “that a poison is any substance which brings about a change in the molecular composition of an organ, or organs, causing its functions to depart very distinctly from the normal. But what grade of molecular disturbance is necessary to make a substance a poison, and how far from the normal must be the functional alteration, it is impossible to say.

“It is believed that for practically all forms of poison a distinct alteration in the character of the cells of the body takes place, as well as a change in the chemical composition of the poisonous substance. . . . It is rarely that the reaction between the body-cell and the poison is purely of a physical nature, yet this very frequently happens in many poisons that act on the blood. By some of the poisons—the anilines, for example—the blood undergoes changes, not so much due to new chemical compounds formed as in the physical changes in the tension of the blood serum and the blood corpuscles, whereby the blood-colouring matters stream out into the plasma, and the oxygen-carrying function of the blood is lost. Similar types of poisoning result from some of the metals, and the poison of the cholera organism is thought to act in a like manner. In other poisons there is a direct union of the ions of the poison with some constituents in the cells of the body, making new chemical compounds, and thus interfering with the molecular activities of the cells.”

The following is a summary of some of the most common types of poisoning:—

Poisoning by the mineral acids—nitric, sulphuric, hydrochloric—is not uncommon. In these there is a marked caustic action, with intense burning pain when taken by the mouth. The lips are stained yellow, black, or white respectively, according to the poison taken. There is nausea, vomiting, and diarrhoea, with all the symptoms of an intense gastro-enteritis, with collapse, pale face, cold sweating extremities, small, feeble pulse, rapid respiration; and the patient dies in intense agony.

Poisoning by alkalies is infrequent. Occasionally sodium hydrate, or potassium hydrate, is swallowed. Lime is also taken by accident; so (rarely) is ammonia. The symptoms are much like those of poisoning by the mineral acids, except that there are no marked discolorations. The halogen compounds are very markedly poisonous as gases, notably chlorine, bromine, fluorine; and the iodides and bromides cause forms of chronic poisoning.

The heavy metals as such are not poisonous, but their soluble compounds are all poisonous. They vary widely, however, in strength. In order, from the strongest to the weakest, they are caustic or astringent. In all the symptoms are analogous; there is severe gastro-enteritis, with symptoms of collapse. According to the solubility or insolubility of the poison, the burning is more or less deep.

Arsenic and phosphorus are poisons that give very similar symptoms: acute gastro-enteritis, with nausea, vomiting, purging; then some grade of apparent recovery, to be followed after a few days with a recrudescence of the gastro-enteritis and the development of secondary blood-vessel changes, which may cause minute

hæmorrhages in any part of the body. Then follow fatty degeneration and death.

Practically all of the anæsthetics and hypnotics belong to the alcohol group, and produce allied symptoms.

Phenols form a distinct group, in which carbolic acid may be taken as a type. This causes gastro-enteritis, with severe pain, white sear of lips and throat, buzzing, dizziness, smoky to blackish urine, pale, bluish face, weak heart, quick breathing, coma, and sometimes convulsions.

Another large group of poisons, the anilines, include many of the more modern drugs, such as acetanilid. Closely allied are different aniline dyes; also phenacetin, antipyrin, &c. In these the characteristic signs of poisoning are somewhat similar to those seen in the phenol group, but in the more pronounced ones of this series the main changes occur in the blood. There is blueness of the skin and lips, difficulty in breathing, sometimes pinkish to purplish urine, rapid and feeble heart action.

Alkaloidal poisons are numerous. The commonest forms of poisoning from these—the most powerful poisons—are morphine (opium, laudanum, paregoric), strychnine (*nux vomica*), atropine (*belladonna*), cocaine (*coca*), aconitine (*aconite*), and nicotine (*tobacco*). In acute cases of opium poisoning the classical symptoms are drowsiness, coma, small pin-point pupils, loss of pain, slow breathing (6 to 8 to a minute), moist skin, dry mouth, rousing with more or less active consciousness, and quick relapse. Strychnine poisoning causes twitching of muscles, cramps, irregular muscular movements, convulsions at slightest jar or touch, fixation of muscles of breathing, with cyanosis. *Belladonna* poisoning shows wide-awake, restless consciousness, sometimes active, busy, delirium; dry mouth, skin hot and flushed, pupils widely

dilated and paralysed to light and accommodation; rapid, feeble heart, and rapid respiration.

Another group of poisons—the glycosides—is characterised by a great similarity in action. Many of these are used in medicines, and some were used on arrow-points by wild natives. This group contains digitalin (*digitalis*), strophanthin (*strophanthus*), convallarin (*lily-of-the-valley*), bryonin (*bryonia*), apocynin (*dogbane*), oleandrin (*oleander*), scillain (*squills*), &c. They are all heart poisons. They first quicken the heart, then slow and regulate it, hence their usefulness in many heart diseases; but in overdoses they paralyse the heart.

Toxic albumins form a group of special character, and all are very violent. Some are of vegetable and others of animal origin. The most important are abrin (in jequirity seeds), ricin (from the seed-coats of the castor-oil bean), phallin (in poisonous mushrooms), rattlesnake poison, cobra poison, heloderma, and the poison of lizards, &c.

4. DEATH BY FREEZING.

Let us now examine a few of the numerous cases that have been reported in which individuals have frozen to death—and almost died, but afterwards recovered to tell of their sensations. We have objective evidence in the former case; subjective in the latter; and needless to say, the latter is by far the more valuable. The objective indications of freezing are surely too well known to need re-statement—the whitening and deadening of the parts; the numbness and stupor which gradually creep over the body—all this can be observed by an outsider. But let us turn to the subjective or interior state, meanwhile, and see in what that consists. A few summarised cases will do for our present purposes:—

“The process of dying, arising from freezing and the consequent benumbed feelings and sleepy sensations, is undoubtedly painless. When a person feels exceedingly drowsy, he dislikes to be disturbed, and, when freezing, he seems to be oblivious to the great dangers that threaten him. This, as a natural consequence, arises from the weakness of the will—however that may be caused—and a disposition to quietly submit to the domineering actions of the feelings. Sleepiness caused by freezing is enervating; the brain ceases to be stimulated in the proper manner, and vague dreams, accompanied with strange illusions, succeed the active energies and thoughtfulness of the mind. In extreme cold, the physical system is outside of its sphere of normal healthy element, the same as it would be if thrust into water, in a well where gas would stifle it, or in an oven, where it would gradually roast. . . . Freezing may be denominated the ‘sleep of death,’ for a sleep, calm and peaceful, precedes the final dissolution, and the awakening can only be in that region towards which all are tending. Of course such a death, after the first tingling sensations have quietly passed away, must be painless. Few, however, seek that method to commit suicide. The first exposure to the cold is very disagreeable, and those intent on self-murder hesitate before they expose themselves to its initiatory influence—hence they oftener use the pistol, or poison, or jump into the water.”

Another, narrating the sensations while “dying,” thus describes them:—

“Thousands of coloured lights danced before her eyes; ¹ the roar of a thousand cannon was sounding in her ears, and her feet tingled as if a million needle-points were sticking into them as she walked. Then a feeling of drowsiness came over her. A delightful feeling of lassitude ensued—a freedom from all earthly care and woe. Her babe was warm and light as a feather in her arms. The air was redolent with the breath of spring. A delightful melody resounded in her ears. She sank to rest on downy pillows, with the many coloured lights dancing before her in resplendent beauty, and knew nothing more until she was brought to her senses.”

¹ It is related in the third person.

Still another writes:—

“The bitter cold does not chill and shake a person, as in damper climates. It stealthily creeps within all defences, and nips at the bone without warning. Riding along with busy thoughts, a quiet, pleasurable drowsiness takes possession of the body and mind, the senses grow indistinct, the thoughts wander, weird fancies come trooping about with fantastic forms, the memory fails, and, in a confused dream of wife and home, the soul steps out into oblivion without a pang or a regret.”

There are several distinguishing marks between *rigor mortis* and a body that has been frozen to death. In cadaveric rigidity the skin is soft and pliant; in the frozen body it is not. In cadaveric rigidity, when we move the limbs there is no sound; but in frozen bodies a crackling sound is emitted.

5. DEATH BY STARVATION.

The length of time it is possible to live without food varies greatly in warm and cold-blooded animals. Chossat found that in different warm-blooded animals death resulted when the body had lost about 40 per cent. of its normal weight. He found that in animals undergoing starvation the symptoms observed during the first half or two-thirds of the period are those of calmness and quietness; the temperature then becoming elevated, restlessness and agitation prevail; and when life is terminated by the rapid fall of the temperature, stupor supervenes. There can be no doubt that individuals can subsist without food far longer than is usually supposed—many cases of sixty-day fasts, and even of longer duration, being recorded from time to time in various medical works. These cases have been studied from the point of view of starvation pure and

simple; and, when the individual is normal at the time of commencing such a starving process, there can be no doubt that the effects noted would be such as are indicative of harmful results to the organism.

Starvation only occurs, as a matter of fact, after a much longer time than is generally supposed. A man may exist for two or even three months without food, under certain conditions; and, during the first part of that time, even receive benefit from the abstinence. That is while *fasting*, however, and not during the period of *starvation*. The two processes are very different, as one of us has elsewhere tried to show at considerable length. (See *Vitality, Fasting and Nutrition*, p. 564.) When fasting ends, starvation begins, and that is a very different thing. Then the tissues shrink, the body wastes, and the mind becomes impaired. The moral faculties also become blunted, there is good reason to believe; cases of cannibalism among civilised people would seem to indicate this. Dr. N. E. Davies, writing some years ago on this question in the *Popular Science Monthly*, said:—

“Reasoning by analogy, we find that, in many cases of bodily disease, the state of the mind is the first indicator of the mischief going on in the system. Take even such a simple thing as indigestion, which, as every one must know, is only a manifestation of a deranged stomach, and what do we find? That the lowness of spirits induced by the affection may vary from slight dejection and ill-humour to the most extreme melancholy, sometimes inducing even a disposition to suicide. The sufferer misconceives every act of friendship, and exaggerates slight ailments into heavy grievances. So in starvation, the power of reason seems paralysed, and the intellectual faculty dazed really before the functions of the body suffer, or even the wasting of its tissues becomes extreme. Such being the case, the unfortunate individual is not accountable for his actions, even if they be criminal in character, long before death puts an end to his sufferings.”

6. DEATH BY ASPHYXIA AND DROWNING.

In asphyxia there is more or less complete loss of consciousness, because of imperfect oxidation of the blood. The symptoms may be developed rapidly or slowly. In sudden occlusion of the air passages, such as is caused by a foreign body in the larynx, or compression of the throat, as in hanging, there is usually a quiet period of from twenty to thirty seconds, after which respiratory movements both of inspiration and of expiration follow. These gradually increase in frequency and depth until, in about a minute, powerful expiratory convulsions occur; convulsive movements of inspiration are also produced, but these are usually milder in character. A period of exhaustion sets in, the respiratory movements become slower and more irregular, and gradually cease. During this period the face has become pallid, and then deeply cyanosed and flushed, the lips blue to purple, and the body temperature, at first increased, gradually diminishes. The blood-pressure is at first increased, and then falls gradually to zero. Unconsciousness develops about a minute after the occlusion, although there is great individual variation; the sphincters relax and the urine and faeces are passed. There is a loss of muscle tone, and the reflexes are abolished. In asphyxia both lack of oxygen and increase of carbonic acid gas in the blood are important factors.

Among the most important phenomena that are to be observed are the following:—The cooling of the body is generally slower in all forms of death from asphyxia. Then in asphyxia the blood is always very fluid, and few clots are found in the heart or great vessels. Owing to this fluidity, hypostasis is well marked. The blood is generally very dark in colour. The next point is the

congested condition of the lungs. Small patches appear at the root of the lungs. Tardieu considers them distinctive of suffocation, but in this he is probably too dogmatic.

In *strangulation* we have the circulation to and from the brain impeded. The face is commonly pale and placid; prominent eyes are not uncommon. Protrusion of the tongue appears frequently; the hands are often clenched.

“Death by asphyxia begins at the lungs, almost simultaneously paralysing the muscles of the body. The victim is deprived of the power of action, while still retaining consciousness. Not even an outcry is possible, and death approaches inch by inch—relentlessly entangling the agonised victim in its skeins, from which there is no escape, unless timely help arrives before the last stage in the passive struggle. While still conscious, the brain, in its attempts to break the chains of death, pictures the past and present in vivid colours, flashing like lightning over the memory, which still has a conception that the end is coming.”

This picture-forming faculty of the mind at the moment of death is supposed to be most common in cases of *drowning*. The past will come up before the mind with marvellous rapidity and detail, at such times; and the latter would seem to know no limitations of time or space. This is a most significant fact, to which we shall recur in Part III. of the present work. Meanwhile, it may be said that in all such cases, of death from strangulation, asphyxia, &c., the blood becomes nearly *black*, by reason of its passing through the lungs several times without aeration. When death results from the taking of opium, and certain other drugs, it is said that consciousness of the entire body is lost before the senses or intellect become dulled; but this seems to us very doubtful.

7. DEATH FROM SHOCK.

It is asserted that, in many cases of this character, the patient may be brought back to life by careful and persistent treatment—on the line of “first aid to the injured.” Resuscitation may be effected, it is claimed, just as in cases of drowning, in many instances. Shock of this character may produce “death” in either one of three ways: First, by producing destructive tissue changes, when death is absolute; second, by producing sudden arrest of the respiratory and heart muscles through excitement of the nerve centres, when death is only apparent—in other words, animation is merely suspended; or, third, by a temporary exhaustion of nerve force—the result of a violent, sudden, and excessive expenditure of it. The subject may be aroused from this syncope if efforts at resuscitation are not too long delayed. In cases of this character, the oxygen treatment is sometimes very efficacious. Electricity or even cold water may be applied with great success in all cases of “shock.”

The symptoms of shock vary greatly according to the type of cause and the individuality of the patient. Sometimes the symptoms begin at once; under other circumstances the alleged results may be delayed for a long period. Surgical shock is, perhaps, one of the most severe. The symptoms of all forms of shock are very similar. The face usually becomes blanched and pale, the body becomes cold, and is covered with a clammy perspiration; the hands and feet usually become icy, the brain seems to be in a whirl, consciousness is lost, or much clouded. The pulse is usually quickened; the eyes sunken and listless.

All such cases bring before us very forcibly the possibility of bodily resuscitation. Various devices have

been employed to this end, some of which have been mentioned above; and there are yet others—artificial bellows, &c., and similar means—besides the well-known methods classed under “first aid to the injured.” Injections of certain saline solutions into the veins have sometimes been accompanied with remarkable results. Perhaps the most powerful of all these measures, however, is *cardiac massage*. It has been asserted that, by this means, a heart has been made to beat after having stopped for several minutes—thirty, and even longer, according to some reports! A long series of experiments should be conducted along these lines, and the results made public. So far as we know, no experiments have ever been made in which the efficacy of *suggestion*—hypnotic or other—has been tried, at the moment of death.

(We must except Poe’s tale, “The Case of M. Valdemar” —a work of pure fiction, as Poe afterwards admitted.)

8. DEATH BY ELECTRICITY AND LIGHTNING.

While it might almost be said that the body died first in cases of freezing, and that consciousness was only extinguished slowly at the end, precisely the reverse of this is present in all cases of electrocution, or death by electricity. In such cases, the consciousness is certainly obliterated at once, but the cell-life of the body as certainly persists for a long time after the electrocution takes place and the body ultimately putrefies, as in other cases. In instances of freezing, however, it is very different. Here the death of the body might be said to take place *first!* But these are questions that require much investigation in order to settle them satisfactorily.

It has been asserted that a large proportion of cases of electrocution might be resuscitated if the proper

measures were adopted at once. This may be very true in certain instances, but it is certainly not true in the great majority of cases, as electrocution is performed to-day. A most remarkable instance is reported, however, from Pittsfield, Mass., where, on 23rd October 1894, James E. Cutter, working in the testing-room of the Stanley Electrical Manufacturing Company, accidentally received 4600 volts of electricity, and was afterwards resuscitated by two fellow electricians, who treated him in the same manner as one would be treated who had become unconscious through drowning. At the end of seven minutes he recovered. Writing of the incident, he afterwards said:—

“For a brief instant there was a sensation as if I were being drawn downwards by the arms, and then everything became blank. For several minutes there was no sign of life. . . . Then slowly I began to regain consciousness and to make incoherent remarks about the accident. Half-an-hour afterward I could recall every incident before and after the seven minutes’ interval, which was a total and painless blank. The accident occurred about ten o’clock in the morning. For the remainder of the day I was quiet, but on the following day I was around as usual. I have experienced no ill effects other than the scars from the burns, one of which went to the bone.”

As is well known, one of the most important safeguards of the human body against the passage of electrical currents through it is its high degree of resistance. This degree of resistance, however, is subject to a considerable amount of variation. If the skin is dry, the resistance is from five to twenty times as great as when the skin is wet. From what is known of the amount of electrical current necessary to cause death in man, it is probable that 1600 volts of electromotive force of a continuous current is sufficient to bring

about this end, and that an alternating current of half this voltage would probably be fatal. In fact, the general deduction has been drawn from the experiments conducted in electrocution work at the Sing Sing prison, that no human body can withstand an alternating current of 1500 volts, and 300 has produced death, while for the continuous current it may be necessary to pass 3000 volts, in order to bring about fatal results.

The number of deaths from lightning is larger than would be ordinarily supposed. The injuries produced by it often simulate external violence. The clothes are frequently torn off the body, and part of the clothes or the bodies themselves thrown great distances. Again, we may find metallic things about the body fused, and any iron thing is rendered magnetic. Marks like prints of trees or foliage may occasionally be found on the body after it has been struck, as though photographed upon it. This is an undoubted fact. Many of these caprices of lightning are very striking. At one time a stroke of lightning set fire to a man, and he blazed like a sheaf of straw; at another it reduced a pair of hands to ashes, leaving the gloves intact; it fused the links of an iron chain as the fire of a forge would do; and, on the other hand, it has killed a huntsman without discharging the gun which he held in his hand; it has melted an earring without burning the skin; it has consumed a person's clothing without doing him the slightest injury, or perhaps only destroyed his shoes or his hat; it has gilded the pieces of silver in a pocket-book by electro-plating from one compartment to another without the owner being aware of it; it has demolished a wall six or eight feet thick in a moment, or burned a chateau a hundred years old, yet it has struck a powder factory without causing an explosion.

Dr. John Knott, writing in the *New York Medical Journal*, says:—

“The materialistic nineteenth century does not fail to find an explanation in what has since been recognised as *return shock*. Every substance capable of conducting the mysterious electrical fluid, on being placed in the vicinity of an electrified (“charged”) body—and not connected with the same by a conducting medium—becomes charged with electricity of the opposite kind, and to approximately the same potential or electromotive force. In accordance with the physical necessity which determines this process, a man may stand within a moderate distance of a thunder-cloud, which holds an enormous charge of, let us say, positive electricity. In such position, his body necessarily becomes charged with negative electricity, by the influence of what is known as *induction*. While the state of equilibrium is maintained, without any abrupt disturbance, he feels no ill effect or inconvenience whatever. But when that cloud discharges its electricity in an opposite direction, the inductive influence instantaneously ceases; the induced negative charge is (in the same instant) neutralised by drawing an equal quantity of positive from the “universal reservoir” of the earth. The shock corresponds in intensity to that producible by the discharge by the cloud itself, and passes through the nervous system with such effect that the individual drops dead instantaneously, and without a single trace of injury on or around his person.”

In cases of direct contact with the lightning flash, burns, more or less extensive and penetrating, have been noticeable; but as a rule there is nothing very remarkable about them. One of the most characteristic signs of the *post-mortem* conditions in cases of death by lightning is, that when the shock has been direct and very powerful, the blood fails to coagulate after the normal fashion. (After electrocution, imperfect coagulation of blood has been noticed, giving rise to the supposition that the subject is not really dead. Such, however, does not follow, as we have seen.)

9. DEATH BY SPONTANEOUS COMBUSTION.

Dr. Trall, in his *Hypnotic Encyclopædia*, vol. ii., pp. 179–80, says:—

“This is a condition of general combustibility of the body, produced by the use of alcoholic drinks. Examples of spontaneous combustion, as having occurred in persons long accustomed to the immoderate employment of spirituous liquors, are too well authenticated to be longer doubted. The condition of the body liable to this strange phenomenon may properly be called *alcoholic diathesis*. In a majority of the cases recorded, females advanced in life are the subjects of the malady. In some cases the self-consuming flame has arisen without any obvious exciting cause; but in others a fire, a lighted candle, the heat of a stove, or an electric spark, has ignited the inebriate body. It is a remarkable fact that the flame which decomposes and reduces every fragment of the bodily structure to ashes does not essentially injure the common furniture or bedding with which it comes in contact; and more marvellous still is the statement that water, instead of quenching the fire, seems rather to quicken it!”

Again, Dr. Joel Shew, in his *Family Physician*, pp. 717–18, says of this condition:—

“That the living body becomes at times, in consequence of long-continued intemperance in the use of alcoholic drinks, liable to combustion, easily excited and spontaneous, is abundantly proved. The condition, however, is a rare one. Some doubt the facts, but, as a French writer has observed, ‘it is not more surprising to meet with such incineration than a discharge of saccharine urine or an appearance of the bones softened to a state of jelly.’

“This condition of the system will appear more remarkable when it is remembered that in all other states, whether of health or disease, the body is with difficulty consumed by fire, even at a high temperature. . . .

“This phenomenon seems to have taken place for the most part in the night time, and when the sufferer has been alone. It has

usually been discovered either by the fetid, penetrating scent of sooty films, which, as we are told, have spread to a considerable distance ; or by the blue flame that hovers over the body ; or the unnatural heat, which, however, is not very great. The patient in all cases has likewise been found either dead or so far consumed that life appeared to be extinct ; and in no instance has recovery been known to take place after the appearance of this most singular of all pathological states."

There is practically no belief in spontaneous combustion in these days, but it is admitted that in certain cases the body may acquire preternatural combustibility. This is founded on the assumed fact that much of the body has been found consumed while surrounding objects are not much consumed. In nearly all well-authenticated cases there has been some source of fire near, probably setting the clothes on fire, usually when the sufferer was habitually drunk and so could not help himself.

It is of interest to note, in this connection, that a case in which such phenomena occurred after death recently came under our own observation. The patient was a child who had died of acute indigestion caused by eating a large quantity of chestnuts without properly masticating them. After a day spent in the chestnut grove the child returned home, and about three o'clock in the morning died in terrible convulsions. As this occurred in the country, the neighbours volunteered to prepare the body for burial, and it was while the work of making the shroud was in progress that it was discovered that the entire body was, to all appearances, on fire. The glow extended from the head to the feet, and could not be extinguished, although it finally died out, disappearing altogether. While the heat from the bluish flames that enveloped the body was quite perceptible, it was not sufficient to burn the body or even set the bed on fire ; and yet, when the corpse was removed from the

sheet on which it had been placed, it was found that the latter was scorched in such a manner that the outlines of the human figure could be plainly distinguished. In this case, it will be noted, alcohol played no part in the production of the phenomenon, but there can be no doubt that the chemical changes were similar in character to the cases previously cited.

Although we have the names of all persons concerned in this case, and it has been thoroughly authenticated, the identity of the family is withheld by request.

CHAPTER VII

OLD AGE: ITS SCIENTIFIC STUDY

THIS subject is of great interest as possibly throwing some light on the question of natural death. Certainly it is a question that should receive the closest attention from scientists. Of late years M. Metchnikoff, of Paris, has given it much thought, and we shall have occasion to mention his work immediately. First, however, a few preliminary remarks.

There can be no doubt that the average length of life of the human race should be far greater than it is now. Every animal is supposed to live at least five times as long as it takes to mature; this is the all but invariable rule in the animal world, and should hold good for man also. He matures about twenty, let us say. According to our rule, therefore, he should live to be a hundred, and that without growing decrepit or without being regarded as exceptionally old or long-lived! That *should* be his normal age limit. But, instead of this, what do we find? That the average duration of human life is a fraction over forty-two years; and, more than that, these forty-two years are filled with grievous diseases and illnesses of all sorts, instead of health and happiness. Something is assuredly wrong somewhere, and one of us has attempted to show at some length that the chief cause of all this trouble lies in the perverted food-habits of the people. But it is enough to say here that life is far shorter in duration than it should be, and that practically every

one dies prematurely. The great majority die either from some disease or from some "sudden death," which, as we have shown, is not really sudden death at all, but the sudden culmination of an unobserved diseased condition. Of course, all such persons do not die *naturally*, and it is probable that very few indeed do die what might be called a "natural death." (Physiology knows no reason why the body should *ever* wear out, provided the organs remain sound and health be maintained!) This may be doubted, but it is a fact. Thus, Dr. William A. Hammond stated that "there is no physiological reason at the present day why men should die." G. H. Lewes, in his *Physiology of Common Life*, also said: "If the repair were always identical with the waste, never varying in the slightest degree, life would then only be terminated by some accident, never by old age." Dr. Munro asserted that "the human body as a machine is perfect . . . it is apparently intended to go on for ever." Dr. Gregory, in his *Medical Conspectus*, wrote: "Such a machine as the human frame, unless accidentally depraved or injured by some external cause, would seem formed for perpetuity." Other authors could be quoted to like effect. Mr. Harry Gaze, indeed, devoted a whole book to this question, and tried to show why we need *never* die if we only made up our minds to stay alive!¹ The arguments against this position have been given elsewhere.²

At all events, it will be seen that the great majority of persons die prematurely. The greatest number of such premature deaths are from diseases of various kinds. Such causes of death are analysed and classified in a little book entitled *Premature Death*. Here we read that nine-tenths at least of all deaths are premature! (p. 5), and this is doubtless short of the truth. All accidental

¹ *How to Live Forever*.

² *Vitality, Fasting and Nutrition*, pp. 328-29.

deaths are, of course, also premature; so that the margin of cases of natural death is small indeed. It is amazing, when we consider this fact, that so little attention is paid to it either by doctors or the public. However, this is not the place to consider that question.

On page 14 of the book just quoted, the author makes the following assertion :—

“With the completion of manhood, diseases indicative of local degenerations of tissue begin to be predominant, and, with each successive stage of life, this predominance becomes more marked. In old age the degenerative changes, which at earlier periods of life are regarded as the signs of disease, now appear as the natural consequences of decay, and death becomes a *physiological*, not a pathological fact—as the termination of a natural life, not as the premature close of a life cut short by disease.”¹

Is this so? We believe the truth to be entirely otherwise. So far as we can see, there is no reason whatever for supposing that the degenerative changes that take place late in life are any more “physiological” than they are at its beginning. They are due to excesses in diet and other unhygienic methods of living, and the body should die as free from disease as it entered the world. Then why does the body die at all? The difficulty in conceiving a real cause for natural death has been due to the materialistic science of the past century; and, when the body is looked at from another standpoint than that of a mere bundle of matter and force, we shall be enabled

¹ Metchnikoff takes this view very strongly. He says, in part:—“It has often been said that old age is a kind of disease. . . . In fact the great resemblance between these states is incontestable. . . . The theory of old age and the hypotheses which are connected with it may be summarised in a few words: The senile degeneration of our organism is entirely similar to the lesions induced by certain maladies of a microbic origin. Old age, then, is an infectious chronic disease which is manifested by a degeneration, or an enfeebling of the nobler elements, and by an excessive activity of the macrophages.”—*Old Age*, by Elie Metchnikoff. *Smithsonian Report*, pp. 542–48.

to find out the cause of natural death easily enough. However, we reserve that discussion for a later period; at present we are engaged in a consideration of "old age" and its phenomena.

Metchnikoff holds that, if death were due to old age, it would be sought for and anxiously awaited (instead of being dreaded and feared), just as we long for the night's sleep after a day of hard and trying work. It is probable that this is the case. It is probable that nature intended just such a plan. The dread of death that is so universal merely shows us that, in practically all cases, death has been premature; it has come before it was wanted—before its appointed time. (There is every reason to believe, and every analogy points to the fact, that death should be welcomed, as sleep is welcomed, by those fatigued. Metchnikoff adduced some cases in support of his contention; and he is probably right in his central claim.)

Old age is invariably regarded as a period of decrepitude and mental imbecility. And, although this is, as a matter of fact, the all but invariable rule, there is no real reason why such should be the case. Hardly any of the wild animals show signs of decrepitude in a similar manner, and only some of the domestic animals do. The rule would seem to be that the closer we live to nature, the longer is death postponed, and the more painless and sudden it is. Those living as the majority do, and indulging to an unlimited extent in rich foods, dissipations of all sorts, and what are generally known as the "good things of this world," *do* degenerate prematurely and early lose their mental and moral fibre, no less than their physical bodies. Decay is the rule; uselessness is the general condition of the aged with most civilised nations—and even of some that are not civilised! The inhabitants of Tierra del Fuego, for example, kill their old women before they kill their dogs, when they are threatened with famine. When asked

why they do this, they reply: "Dogs catch seals, while old women do not!" Although civilised nations do not adhere to the doctrine of survival of the fittest so relentlessly, they nevertheless show by word and action very frequently that they wish the day would come when such "nuisances" shall be removed.

Now let us give a brief survey of what is known of old age and its causes, and some of the theories that have been advanced from time to time to explain its phenomena. Very few of these need be considered, as they are not either clear enough or comprehensive enough to deserve such discussion. A few of them, however, are very ingenious, and deserve careful consideration.

Certain authors have advanced what might be called a "psychological" theory of old age and death. One grows old and dies when there is no longer any incentive to live. As Dr. E. Teichmann expressed it: "They grow old because they are no longer occupied with life."¹ This theory would completely fail to account for the phenomena of old age, even if it succeeded in accounting for death. There are many pathological, degenerative phenomena connected with old age which must be taken into account in this connection—degenerations which are not apparently due to any psychic causes, but to purely physical conditions. Such a theory would by no means explain the facts.

"Numerous scientists affirm that old age finally results because it is impossible for an organism to repair the cellular losses by the formation of a sufficient number of new elements—that is to say, because of the exhaustion of the reproductive faculty.

"One of the scientists who has more especially concerned himself with general questions, Weismann, expresses himself on this subject in a very categorical manner. According to him,

¹ *Life and Death*, p. 145.

the senile degeneration that ends in death does not depend on the wearing away of the cells of our organism, but rather upon the fact that cellular proliferation, being limited, becomes insufficient to repair that loss. As old age appears in different species and different individuals at various ages, Weismann concludes that the number of generations that a cell is capable of producing differs in different cases. It is, however, impossible for him to explain why, in one example, cellular multiplication may stop at a certain figure, while in another it may go much further.

“The theory appears so plausible that no attempt has been made to support it by precise facts. We even see, in the most recent attempt at a theory of old age by Dr. Bühler, the thesis of the exhaustion of the reproductive power of the cells accepted and developed without sufficient discussion. It cannot be denied that it is during embryonic life that cells are produced with the greatest activity. Later on this proliferation becomes slower, but it nevertheless continues throughout the course of life. Bühler attributes the difficulty with which wounds heal in the aged precisely to the insufficiency of cellular production. He also thinks that the reproduction of the cells of the epidermis, which are to replace the desiccated parts of the skin, diminishes notably during old age. According to this author, it is theoretically easy to predict the moment when cellular multiplication of the epidermis must completely cease; as the desiccation and desquamation of the superficial parts continue without cessation, it becomes evident that it must finally result in the total disappearance of the epidermis. The same rule is applicable, according to Bühler, to the genital glands and muscles, and all sorts of other organs.”—*Old Age*, pp. 538–39.

Metchnikoff advances several arguments against this theory—none of which, to us, appear in any way conclusive. A much stronger argument against this original-stock-of-energy theory is to be found in such a case as this. A person has an attack of sickness, and almost dies. He comes as near as it is possible to dying, without actually doing so. Recovering, however, he lives on for half-a-century, in comparatively good health. Now, at

the time of the sickness, if that person had died, the reproductive power of his cells would have been lost for ever; and yet, simply by reason of the fact that he turned the critical point and recovered, his cells continue to reproduce for half-a-century longer! Surely, we must give up the notion that the potential energy of the cell is inherent at birth in such a case, and assume that some *new* stock of energy is imbibed from some external source, sometime later on in life? The idea that the diseased cell, all but dead, possessed the potential energy to reproduce for fifty years, while still in that condition, seems too absurd to need criticism.

Bichat says that:—

“In the death which is the effect of old age the whole of the functions cease, because they have been successively extinguished. The vital powers abandon each organ by degrees; digestion languishes, the secretions and absorptions are finished; the capillary circulation becomes embarrassed; lastly, the general circulation is suppressed. The heart is the *ultimum moriens*. Such, then, is the great difference which distinguishes the death of the old man from that which is the effect of a blow. In the one, the powers of life begin to be exhausted in all the parts, and cease at the heart; the body dies from the circumference, towards the centre; in the other, life becomes extinct at the heart, and afterwards in the parts; the phenomena of death are seen extending themselves from the centre to the circumference.”—*Recherches physiologiques sur la Vie et la Mort* (p. 143).

These conclusions were confirmed by a number of cases cited by Dr. John D. Malcolm in his *Physiology of Death from Traumatic Fever*.

Other writers have attacked this problem in a different manner. They, too, have contended that old age and death are due, in a sense, to the decrease of the vitality of the body, but have asked themselves the question: Why should this vitality become lessened with old age,

seeing that it is (supposedly) constantly being replaced by a fresh stock of vitality from the food which is eaten all the time? On the theory commonly held, the bodily energy is supposed to come from the food we eat, and that is constantly being supplied to the system—in old age, as in youth. Why, then, should these degenerative changes take place, and the vitality decrease? These authors have come to the conclusion that the vitality depends upon the *state* of the body—its *health*; and, so soon as the body becomes clogged and blocked, as the result of wrong food-habits and other causes, old age, premature decay, and death will result.

Two writers who have taken this view are Dr. Homer Bostwick, who published his *Inquiry into the Cause of Natural Death; or, Death from Old Age*, in 1851; and Dr. De Lacy Evans, M.R.C.S.E., who issued his book, *How to Prolong Life: An Inquiry into the Cause of Old Age and Natural Death*, about 1880. The similarity of the views of these two authors is very remarkable, but each apparently wrote in ignorance of the work of the other—one in America, the other in England. Yet their views are almost identical. Both authors contend that “induration and ossification are the causes of old age and natural death.” Both contend that these are the true *causes*, and not the *result*, of old age. Both these authors contend, further, that this induration and ossification are due to the excess of lime and other earthy salts that have accumulated within the system as life progressed; that old age advances just in proportion to the amount of this earthy matter in the system, and that old age is retarded just to the extent that it is kept out. But since all such substances can only be introduced into the system through the food and drink, they sought to find those foods which contained the minimum of such earthy matter, and these they found to be *fruits*. By living on fruits, then, they

were enabled to retard the progress of old age and natural death, both in themselves and in all others who undertook to follow their diet. Careful analysis of the various foods confirmed their theory, which was also supported by a number of experimental facts. They therefore concluded that this was man's natural diet—that best suited to his body; and that, by eating fruit, man could very largely retard the oncoming of old age and natural death.

These authors made the degree of the vitality depend upon the condition of the body—and hence upon the food. On the other hand, it must be remembered that the utilisation of the food, and its successful elimination, will depend upon the degree of vitality present—*i.e.* the vitality will depend upon the state of the body, and the state of the body will depend upon the degree of vitality. We are here, therefore, in a vicious circle. Nevertheless, we think that these authors have attacked the problem in the right way, and we shall have occasion to recur to their views later on, when we come to consider this question of the relation of health to vitality again. There are also many facts that support such a view. Let us consider some of these.

The most marked feature in old age is that a fibrinous, gelatinous, and earthy deposit has taken place in the system—the latter being chiefly composed of phosphate and carbonate of lime, with small quantities of sulphate of lime, magnesia, and traces of other earths. The accumulation of these solids in the system is doubtless one of the chief causes of ossification, premature old age, and natural death. In the *bones* this is most noticeable. The amount of animal matter in the bones decreases with age, while the amount of mineral matter increases. This is especially marked in the long bones and the bones of the head. They thus clearly show us that a gradual process of ossification is going on throughout life.

As age advances the *muscles* diminish in bulk, the fibres become rigid and less contractile, becoming paler and even yellowish in colour, and are not influenced by stimuli to the same extent as in youth. Tendons also become ossified to a certain extent, while there is a diminution of the fluid in the sheaths of the tendons. The brain increases in size, up to about forty years of age, when it reaches its maximum weight. After this period there is a gradual and slow diminution in weight of about one ounce in every ten years. According to Cazanvieilh, "the longitudinal diameter of the brain of an old man, compared with that of a young man, is six inches one line, French measure, for the former, and six inches four lines for the latter; whilst the transverse diameter is four inches ten lines in the old man, and five inches in the young man." The convolutions of the brain also become less distinct and prominent.

The *dura mater* is often found apparently collapsed or corrugated. It is thickened and indurated, and ossific deposits on the arachnoid surface are very common. The membrane is sometimes found to have an abnormal dryness; the arteries supplying the brain have, in old age, become thickened and lessened in calibre; the supply of blood thus becomes less and less, leading to the mental imbecility of the very aged. This gradual process of degeneration in the arteries, not only in the brain but throughout the body, is well recognised, and is perhaps one of the most important of all the changes that take place in old age. So important a symptom is it considered, that it has given rise to the old saying that "a man is as old as his arteries." The capillaries also become choked or blocked and clogged up, as the result of the earthy matter accumulated in the system.

These changes taking place in the arteries, greater pressure is thrown upon the *veins*, which dilate, their

coats becoming thinner, and they even become tortuous and varicose.

The gradual process of induration and hardening going on throughout the system is noticeable also in the *heart*—giving rise to various affections known to us under a variety of symptoms. The *lungs* gradually lose their elasticity, and increase in density. The *air-cells* and *bronchi* become dilated—hence emphysema and chronic bronchitis are so often seen in the aged.

The *salivary glands* become hardened, and decrease in bulk. The saliva is either secreted in large quantities, so that “dribbling” takes place, or in quantities so small that the mouth is hardly moistened. These changes are probably due in part also to lack of central inhibition.

In the *stomach* the gastric juice is secreted in a diluted form, and is deficient in pepsin; moreover, the muscular walls of the stomach gradually lose their wonted contractibility; the peristaltic motion becomes weak; chyme is imperfectly manufactured, and all the processes of digestion weakly performed.

The *liver* shows the effects of old age by its imperfect bile-forming qualities. Fatty matters are not thoroughly emulsified or absorbed by the lacteals—though this may be due to an alteration in the fluid secretion in the pancreas.

In the *intestines*, the small vessels which supply the follicles and various glands become indurated, or even clogged up, in old age. The walls of the intestines become opaque, and lose their contractibility, while the *villi* containing the lacteals undergo the same gradual alteration. It will be seen from the above how necessary it is that all food should be restricted in quantity and simplified in quality in old age! Almost all the *viscera*, and particularly those glands and organs connected with the sexual apparatus, show signs of old age. The walls and structures become harder in texture, and less pliable.

In the *eye*, in old age, there is diminished secretion of the aqueous fluid in the anterior chamber, the cornea becomes less prominent, the pupil becomes more dilated, from lessened nervous sensibility—hence distant sight and the indistinct and confused view of near objects in the aged. Cooper states that the retina, in old age, is found “thickened, opaque, spotted, buff-coloured, tough, and in some cases even ossified.” Quain called attention to the fact that the colour, density, and transparency of the lens presented marked differences in different periods of life. In old age it becomes flattened on both surfaces, and assumes a yellowish or amber tinge. It loses its transparency, and gradually increases in toughness and in specific gravity. Cataract is rarely found in the young, but frequently in the aged.

The *ear* is subject to the same gradual process of ossification. The cartilages of the external ear become hardened, or even ossified; the glands which secrete the ear-wax undergo the same alterations as are found in other glands. The secretion becomes less, and altered in quality. The *membrana tympani* becomes thickened and indurated; the ligaments connecting the ossicles (maleus, incus, and stapes) become hardened, their pliability is lessened; thus vibrations which are already imperfect, owing to induration of the *membrana tympani*, are improperly converted by the ossicles across the cavity of the tympanum, by means of the internal ear (the structures and fluids of which have undergone the same processes of consolidation), to the auditory nerve, the sensibility of which decreases with the senile changes of the brain. Hence the impaired and confused hearing so often observed in aged persons.

The whole membrane covering the *tongue* becomes thickened and hardened in old age; its surface becomes dry and furrowed, while the blood-vessels supplying the

papillæ are decreased in size; hence the sense of taste is diminished.

In old age the sense of *smell* is lessened, owing to the hardening of the membranes and internal cartilages; moreover, the fibres of the olfactory nerves lose their susceptibility.

The sense of *touch* throughout the body is greatly diminished: this for several reasons. The sensibility of the nerves is lowered, as well as the reactions of the centres. The epidermis becomes thickened and less sensitive. The capillaries supplying the papillæ are also lessened in calibre; the action of the various sebaceous glands is also diminished; the skin becomes dry, shrunken, and leather-like. It thus has a cracked and furrowed appearance, and has a tendency to pucker-up. Hence the wrinkles of old persons. In old age the skin contains more earthy salts than in youth.

As is well known, the *teeth* are almost invariably lost before age is far advanced—this being due partly to external causes, partly to the lessening and corruption of the blood supply, upon which the nutrition of the teeth depends. As a result they decay and fall out.

The *hair* is generally lost, and it usually becomes white. The cause of this for a long time puzzled physiologists; but it is now pretty conclusively shown that this blanching of the hair is due to the action of certain micro-organisms, which devour the colouring matter. Of course the question still remains, what is that condition of the body which renders possible the presence of these micro-organisms—which certainly do not exist so long as health is maintained? It would seem to us that *this* is more truly the cause of old age. However, we shall discuss this aspect of the problem a little further on. Metchnikoff's theory of the blanching of the hair fails to account for certain facts, however—such as the complete

whitening of the hair over-night, as the result of purely nervous shock.

In old age the stock of *vitality* is decreased, but whether this is due to the state of the blood, or of the tissues, or both; or whether the state of the blood and the tissues depends upon the amount of vitality; and whether this vitality can be replenished as life advances, and if so, how; or whether a certain fund of life is inherent in every living organism at birth—which no skill of man can add to—all these are questions which we cannot now discuss. They are treated at considerable length in *Vitality, Fasting and Nutrition*, pp. 225–303, to which we would refer the reader for further details.

The theory has been advanced that we grow old and die for the reason that the brain and nervous system become worn out because of the constant stimuli that have been poured upon them since they began their natural life. They are simply worn out, and refuse to function longer on that account.

There is doubtless a grain of truth in this theory, but it cannot be accepted as in any way an adequate explanation of the facts. For, were it true, it is obvious that those persons who experienced the greatest number of stimuli in their life-times would be the first to wear out, whereas we know as a matter of fact that nearly all persons die at about the same age, no matter how many or how powerful the stimuli were to which they had been subjected in their life-times. Indeed, statistics would seem to show that the busy man of the great city, the mental worker, lives far longer than the farmer and the man who lives merely a vegetable existence in the country. Such being the case, it is hard to see how this theory can be made to hold water.

Then, too, we have the “cometh up as a flower”

theory. When we regard the growth, blooming, and death of a summer flower—the shooting upward of the flower stalk of a poppy, for example, with its blossoms, its seeding, and the suddenly ensuing juiceless and dead rigidity, we contemplate phenomena not wholly unlike what takes place in the human organism, when regarded in the large, passing from infancy to maturity and old age.

What has taken place in the poppy stalk ?

One class of plant cells has developed, multiplied, and from the products which have issued from them have been produced the stalk proper and leaves. Immediately another class has, in like manner, given rise first to the bud, then to the gorgeous blossom with its stamens and pistils. Fertilisation follows in its timed order, and later another class of cells matures as seed.

It has been held that these latter cells in some manner sap and eviscerate, so to speak, the cells of every other tissue of the plant; and, thus sapping them of their life elements or germs, condense these latter in the seed, where they may long lie dormant, yet capable of producing another plant, and that the parent plant, thus sapped and eviscerated, dies naturally, its life being virtually taken away and carried forward to the seed for another year.

The primary object of all plant life, then, according to this theory, is the perpetuation of the species, and, that object once accomplished, there is no longer any “use” for the plant, which dies at once or soon after. This same idea has been applied to animal life, and even to human beings, and it has been contended that the primary object of living is to bring ever new specimens of the human race into being.

What a hollow mockery! An endless procession of beings with no other aim than to procreate, to perpetuate

the species—and to what end? That the offspring may in turn procreate, and thus the farce be kept up for ever! Can we conceive that such is the scheme of nature? Is it not more rational to suppose that the aim and end of living is to enjoy, and that only one function (doubtless an important one, but only one, nevertheless) is to perpetuate the race? Would this not seem to be borne out by the fact that the parents do not die, or apparently even shorten their lives in the slightest degree, by giving birth to children, whereas if this theory were true, that should be one of the cardinal and central features of it? The theory cannot be said to withstand the test of experience any more than the attacks of logic and common sense.

As we have said above, most authors are inclined to regard old age as a process of rapid decay and degeneration—*e.g.* Metchnikoff, quoted before. Some authors, however, are not at all disposed to take this stand. Dr. Charles S. Minot, *e.g.*, is inclined to take an entirely different view of the matter. So far from regarding old age as some sort of disease that is to be avoided, he contends that we are ageing far more *slowly* in old age than we do in youth, and that the rate of decay is in precisely inverse proportion to that generally held to be true. He produces a great mass of evidence in favour of this contention, for which the reader is referred to his excellent and interesting volume on the subject (*Age, Growth and Death*), but the following quotations may be accepted as exemplifying this author's theory:—

“Rejuvenation is accomplished chiefly by the segmentation of the ovum. . . . As we define senescence as an increase and differentiation of the protoplasm, so we must define rejuvenation as an increase of the nuclear material. . . . If it be true that growing old depends upon the increase of the protoplasm, and the proportional diminution of the nucleus, we can perhaps in the future

find some means by which the activity of the nucleus can be increased and the younger system of organisation thereby prolonged. . . . We can formulate the following laws of cytomorphosis :—

“First, cytomorphosis begins with an undifferentiated cell.

“Second, cytomorphosis is always in one direction, through progressive differentiation and degeneration towards the death of the cells.

“Third, cytomorphosis varies in degree characteristically for each tissue. . . .

“Finally, if my arguments before be correct, we may say that we have established the following four laws of Age :—

“First, rejuvenation depends on the increase of the nuclei.

“Second, senescence depends on the increase of the protoplasm and on the differentiation of the cells.

“Third, the rate of growth depends on the rate of senescence.

“Fourth, senescence is at its maximum in the very young stages, and the rate of senescence diminishes with age.

“As the corollary from these we have this,—natural death is the consequence of cellular differentiation.”

Indeed, as Dr. C. A. Stephens,¹ in pondering over these questions, wrote :—

“When we ask the question boldly: Why does the human body grow old, and at length cease from function?—putting the inquiry in the bio-physical sense, the answer seems to be that the personal life embodied in the organism is at length overcome and overmatched *by the totality of the resistance to life which it encounters*, from the embryonic stage onwards, more especially by the general telluric resistance, physical, chemical, molar, molecular, which the protoplasmic molecules of the organism meet with as long as they maintain the personal life. After adult age is reached, they lose ground in the struggle, and at last succumb. The downward curve of the somatic cell has begun.”

The physiological processes by which food is reduced, comminuted, corrected as to its chemical constituents,

¹ *Natural Salvation*, p. 78.

peptonised, hepatised, oxygenated, and, in a word, carried forward to higher and higher stages of chemical instability, fit for assimilation by the tissue cells—all these processes set up a heavy draught on the collective animal life of the body, and necessitate the putting forth of energies on the part of all the cells which cause an ever increasing deficit of potential, a growing debt from overwork, a chronic accumulation of the effects of fatigue, which, under present conditions, must sooner or later lead to a running down of the cells.

Under favourable conditions a cell may gain potential; but the severe, steady draught on cellular energy necessary to maintain organic nutrition, even on the best food at present procurable, bankrupts the collective energies of the cells within a century.

In one sense, therefore, it is our food which brings us to death's door—that is to say, the exhausting physiological processes necessary to prepare it for cell nutrition will in the end work the most perfect existent animal organism to death.¹

One of the most ingenious and well-worked-out theories of the causation of old age and natural death (and of their possible prevention) is that formulated by Mr. C. A. Stephens, in his book *Living Matter: its Cycle of Growth and Decline in Animal Organisms*. In this excellent little book the author has discussed the various theories of old age, and pretty effectually disposed of them. He then advances one of his own—postulating, at the same time, a possible course of life that would offset physical death—at least, for a very greatly extended period. Nor is the author a fanatic, as might be supposed. After showing the improbability of the current notion that we possess a given fund or stock of vitality at birth,

¹ See several lengthy discussions of this point in *Vitality, Fasting and Nutrition*.

which we simply "live out" in a greater or lesser time, according to the kind of life we lead, he goes on to show that there is really no direct evidence that living matter—as such, and *per se*—ever loses its power or vitality, but rather that its power of manifesting is interfered with as life progresses, for the reason that it is forced to 'occupy a relatively smaller proportion of the whole space of the vital economy, by reason of the clogging and congesting that goes on with the advance of years, and with the altered chemical and physical changes that occur in the organism. Each fragment of "biogen" (living matter) is as powerful as ever, in other words; only it is slowly forced out by the earthy components in the body and compelled to occupy less space. He says, in part:—

“. . . Life is never *qualitatively*, but only *quantitatively* diminished; or, in other words, vitality as a physical process never slackens from any variability of its originating force—that force being the universal sentience of matter, and as constant as gravitation and the weight of the earth—and hence death comes to a person, not from a decline of this initial vital power itself, but from those extrinsic obstacles which befall from the material environment and from imperfect modes of living. . . . It is not the sentient constant in 'biogen' that grows old in our ageing organisms, but the surcease of the biogen from the tissues on account of mechanical causes connected with growth and the product of growth. . . . A tissue is 'old' because there is little biogen in it, not so much because the biogen has grown intrinsically weak.”

Mr. Stephens then enumerates the various chemical and physical causes which constitute old age and death, and points out that all these causes, being understood, might be removed; and that there is no reason, therefore, why death should not be postponed almost indefinitely—looked at from the theoretical point of view.

We have elsewhere dealt with this theory, and will not now discuss it further. His theory of old age contains, assuredly, more than a grain of truth—in fact, is largely true. All the newer researches in cell activity and cell life go to show that *proportions* are changed, but that the *innate power of the proportions* remains practically constant. In other words, living matter is living matter everywhere and always, and its differences are in degree and not in kind. If less of it be present (owing to obstruction or other causes), less of it will be manifest; and if more of it be present, more of it will be manifest. That is the whole case in a nutshell.

We need hardly point out that this is a position which some writers maintained for a long time. In *Vitality, Fasting and Nutrition*, a number of reasons for thinking this to be the correct view of the case are given, as well as facts and analogies in support of such a conception. And we venture to think that many of the difficulties of biology would cease to exist if such a view of the facts were ever taken. It has always remained a standing mystery, *e.g.*, how an oak tree could spring from an acorn; how the power and potentiality of the immense tree could be contained within the small seed before us. And yet that is what we are asked to accept! And in a similar manner we are asked to believe that man, with all his intellect and varied powers—gained, as we know, by hard and persistent work—is potentially contained within the minute speck of protoplasm which must be studied by means of the most powerful microscope! Could any fact be more difficult of acceptance than this?

We venture to think that the whole difficulty would vanish were we to regard the facts from another view-point. Instead of regarding vitality and life as a function and product of matter, regard the material body as the instru-

ment merely for the constant transmission *through it* of life. The greater the organism in bulk, and the purer in composition, the more life flows through it; and the lesser in bulk and the more obstructed, the less life will flow through it. This is only what we should expect *a priori*, and is borne out by facts. On this view of the case, we should not have to believe that the oak tree was contained within the acorn; that the future man was contained within that minute speck of protoplasm, and similar absurdities against which the mind rebels as impossible on their very face. We should have to believe merely that, as growth took place, and the organism increased in size, more life manifested through it—only what we should expect; and that, in proportion to the clogging-up of the organism (and kindred physical and chemical defects) the passage through it of life became impossible. We venture to think that many of the knotty problems in biology might vanish, were such a view of the facts taken; were we to regard life as a *power* and the body as a mere engine for its transmission—a sort of organic burning-glass through which the life-rays of the universe are concentrated and centred. And, just as defects in or injury to the burning-glass would impede and interfere with the rays transmitted, just so would the condition of the organism—its freedom from disease, &c.—regulate the amount of life-force that might flow through it at any particular moment. But the decomposition of the body would no more prove the extinction of the life-force than would the breakage of the burning-glass prove the obliteration of the sun. In both cases the instrument for transmission (merely) has been destroyed; not the thing transmitted—the animating power behind and beyond. But to resume our theories of old age.

Few indeed are the men and women of full age—say

twenty-five—who have not yet contracted the malady that will kill them, according to that distinguished scientist and physician Dr. Felix Regnault. Normally, as contemporary investigators are beginning to find out, it takes twenty years for a fatal malady to kill a patient. It may take thirty years. The popular impression is that a man may die suddenly, or that he may only require a year to die in, or six months. To be sure, a man may be killed or a child may die in a few months at the age of one year. But ordinarily speaking, all deaths are very slow indeed, and about 95 per cent. of civilised adults are now stricken with a fatal disease. They do not know it. They may not suffer from it. In due time they will have their cases diagnosed as cancer, or as tuberculosis or diabetes, or what not. But so inveterate are current misconceptions of the nature of death that the origin of the fatal malady—in time—will be miscalculated by from ten to thirty years.

In the case of human beings, explains Dr. Regnault, writing in *The International* (London), death—barring accident—is nearly always caused by some specific malady. This malady is as likely as not to be cured—what is called “cured.” The “cure,” however, no matter how skilful the treatment or how slight the disease, has left a weakness behind it in some particular organ of the body. One of the organs is, if not prematurely worn out, at least so worn that its resisting powers are greatly diminished. All of us in this way when we have reached a certain age possess an organ that is much older than the rest of the physique. One day we shall die because of this organ. Even if we live to be very old indeed, we shall not die of “old age” but of weakness of the lungs, or of the kidneys or of the liver or of the brain. The individual does not die of senile decay, no matter if he live to be ninety

or a hundred. He dies of the decay of the lungs, or of the decay of the heart, or of the decay of the kidneys, or of the decay of some other organ. That organ has been dying for years. For if there be one truth more firmly established than others, it is this: no bodily organ can perish from disease in less than ten years. Sometimes it takes thirty years. Usually it requires twenty years.

How is it that one organ thus decays more quickly than the others? Physicians reply because it has suffered from the attacks of illnesses. A cure is never absolute. The organ never comes out of an illness in exactly the same condition as when it went in. Scarlet fever, for example, attacks a person. The kidneys have been thereby affected. For ten, twenty, or even thirty years more they may perform their functions excellently, but nevertheless they will have an earlier senility. The kidney cells slowly perish at a time when the other organs are still healthy. At the age of fifty or sixty the sick person is carried off. The same holds true of other and very unimportant illnesses. A man dies of heart-weakness. An old rheumatic attack will very easily be detected as the cause. It long seemed as though it had left no traces, but they show themselves only in the fatal illness. Another old man dies owing to the wearing out of the blood-vessels. If the blood-vessels age more rapidly than the rest of the body, it is because they have been weakened by an infectious disease or some form of poisoning.

Take the case of the man who dies of lung trouble. It is traceable to bronchitis or to slight tuberculosis in youth, which did not betray its presence but yet had weakened the organ. In all cases death is to be ascribed to an illness which had attacked the individual in his youth and weakened an organ, or to

some infection which had permanently remained in a latent condition. The bacteria which had caused the illness do not quit the organism when the illness is terminated. They await in the interior of the organ the opportunity for a fresh attack.

“Thus many men who are outwardly healthy carry the malicious enemy inside them. A fever, caught in youth, returns after twenty, thirty, or fifty years ; the bacillus, for example, of marsh-fever has been dormant the whole time, and yet in old age awakens to fresh and fatal activity.

“To these causes of the decay of single organs may be added those which are due to the folly of the individual himself. Drinkers ruin their livers, immoderate eaters overload their stomachs, smokers weaken their hearts ; life ceases on the day when these organs finally refuse further service. We do not die suddenly ; our existence perishes gradually with the weakening of the organs. To reach advanced old age, a man must have been healthy his whole life long.”

This theory has been criticised on the ground that it fails to take into account the fact that the body is constantly rebuilding its various parts, particularly its diseased or broken parts, and hence, any innate weakness would be eradicated long before it worked the havoc here suggested. Other reasons, too, might be urged against this theory ; but on the whole it is doubtless sound in its main contention, and is a valuable suggestion towards a correct understanding of the causes of death in a large number of cases.

Very different, again, are the views recently advanced by Dr. Arnold Lorand, of Carlsbad, who has just issued an English translation of his work, *Old Age Deferred*. According to this theory, old age and premature death depend, not upon the age of the arteries, as has been so often suggested, but upon the condition of the ductless glands. All vital phenomena, he says, are under the control of the action of these glands ; everything depends

upon their condition. Symptoms of old age appear after changes in these glands. The appearance, the condition of the tissues, all depend upon their condition. Depressing emotions are, perhaps, the most fatal and certain of all means of breaking down these organs, and insuring premature old age and death. To summarise this author's views in his own words:—

“The symptoms of old age are the result of breakdown of the tissues and organs which, owing to shrinking of the blood-vessels, are insufficiently supplied with blood, and, owing to the disappearance of nervous elements, are devoid of proper nervous control.

“Degeneration of the ductless glands and of the organs and tissues cannot be simultaneous, for the latter are under the control of the former. These glands govern the processes of metabolism and nutrition of the tissues, and by their incessant antitoxic action protect the organism from the numerous poisonous products, be they of exogenous origin, introduced with air or food, or endogenous, formed as waste products during vital processes. After degeneration of these glands the processes of metabolism in the tissues are diminished, and there is an increase of fibrous tissue at the expense of more highly differentiated structures.

“The fact that the changes in the tissues are secondary and take place only after primary changes in the ductless glands, is best proved by the circumstances that they can be produced, either experimentally by the extirpation of certain of the ductless glands, or spontaneously by the degeneration of these glands in disease.

“It is evident from the above considerations that all hygienic errors, be they errors of diet or any kind of excess, will bring about their own punishment; and that premature old age, or a shortened life, will be the result. In fact, it is mainly our own fault if we become senile at sixty or seventy, and die before ninety or a hundred.

“Not only old age, but the majority of diseases, are due to our own fault in undermining our natural immunity against infections, and subjecting our various organs to unreasonable overwork and exertion. We do not believe that the worst slave-driver of olden days subjected his slaves to such treatment as

we do our own organs, and especially our nerves. At last they must rebel, and disease, with early death or premature old age, will be the result.

“It is literally true, as the German proverb says: ‘Jeder ist seines Glückes Schmied’ (every man is the locksmith of his own happiness), and as a variation on this we would say: ‘Every man is the guardian of his own health.’”

Of recent years, Professor Metchnikoff has devoted considerable time and energy to this question of “old age,” and discusses the subject fairly and fully in his *Old Age*, mentioned above, in his *New Hygiene*, his *Nature of Man*, and his *Prolongation of Life*. His position throughout all his writings remains the same, and can best be summed up in his own words as follows:—

“ . . . I think I am justified in asserting that senile decay is mainly due to the destruction of the higher elements of the organism by macrophags. . . . Since the mechanism of senile atrophy is entirely similar to that of atrophies of microbic or toxic origin, it may be asked whether in old age there may not be some intervention of microbes or their poisons. . . . The principal phenomena of old age depend upon the indirect action of microbes that become collected in our digestive tube. . . . It is really intestinal microbes that are the cause of our senile atrophy. . . . Old age is an infectious chronic disease which is manifested by a degeneration, or an enfeebling of the nobler elements, and by the excessive activity of the macrophags. These modifications cause a disturbance of the equilibrium of the cells composing our body, and set up a struggle within our organism which ends in a precocious ageing and in premature death, contrary to nature.”

Accordingly, M. Metchnikoff seeks means to destroy these invading microbes. He thinks that he has found the remedy, in part at least, in the free use of lactic acid, which kills the organisms and renders their growth and presence impossible. Doubtless this method would dispose of the micro-organisms then in the intestinal

tube; but what if more are introduced? We must drink more of his soured milk, containing lactic acid! But is it not obvious that this is merely tinkering at effects, instead of going direct to the root and cause of the evil?¹ Why not render the soil such that no microbes can live in it, in the first place, and then no lactic acid treatment or other measures of a similar nature would be necessary? M. Metchnikoff is forced to admit that, if the bowel were perfectly healthy, there would and could be no auto-intoxication, and hence no degeneration of the nature indicated. Why not, then, aim at preserving the bowel in such a state of cleanliness and in such an antiseptic condition that no micro-organisms could possibly dwell therein? Should not *that* be our ideal?

M. Metchnikoff practically admits this in several passages in his works; but his method of preserving such a state is very different from one that would be recommended by any hygienic physician. He contends that we should never eat raw food, or food that has not been thoroughly cooked, as we are liable thereby to introduce germs into the intestinal canal! All water should be boiled; everything sterilised—every precaution taken to prevent the introduction into the body of micro-organisms, which he so greatly fears. He says nothing of the air, so we must assume that *that* is not sterilised! M. Metchnikoff believes that cancer is produced by micro-organisms, and asserts that he has

¹ Says Professor Charles Minot on this point:—"It is unquestionable that phagocytes do eat up fragments of cells and of tissues, and may even attack whole cells. But to me it seems probable that their rôle is entirely secondary. They do not cause the death of cells, but they feed presumably upon cells which are already dead or at least dying. Their activity is to be regarded, so far as the problem of the death of cells is concerned, not as indicating the cause of death, but as a phenomenon for the display of which the death of the cell offers an opportunity."—*Age, Growth and Death*, p. 74. (See Appendix F.)

eaten only cooked foods for many years, in an attempt to escape that terrible malady.

[In opposition to this view, I may state that there are many persons—whole colonies of them in California—who eat *nothing but* raw fruits and nuts, and who never boil their water, or cook their food at all—and *they* never suffer from any of these dread complaints, but are, on the contrary, exceptionally healthy and robust and long-lived. Professor Jaffa, who made a special study of these “fruitarians,” found them to be especially healthy and possessed of an abundance of energy.¹ And all of these men and women live far longer than the average, and are almost entirely free from the numerous diseases and complaints from which humanity suffers. How is this?

The answer is simple enough. As I have already pointed out in another place, it is not the germ that is to be dreaded, but that condition of the body which renders possible the presence and growth of that germ! If the body were healthy, no germs could live in such an organism, no matter how many were introduced—they would be instantly killed, and they could not exist therein for an instant. We need not bother about the germs; keep the body sound, well, strong, and full of energy, and nature will take care of the rest—including the germs! They are quite incapable of doing any harm in a healthy body. The sounder the body the less danger of infection, and the longer and the healthier the life. Now, as fruitarianism, or the practice of living upon fruits, is one of the best possible means of keeping the body in this desirable condition, it will readily be seen that, if we live on raw fruit, and those simple foods that tend to keep the body in the best possible health; and if we are careful, at the same time, not to eat *too*

¹ See his *Investigations among Fruitarians*, U.S. Dept. of Agr. Report.

much, we shall keep the intestinal canal free from all obnoxious microbes—for the simple reason that their growth and presence there would be an utter impossibility. No matter if we do introduce into it such micro-organisms with the food, the body would speedily dispose of them. The state of the body is everything; the number of microbes introduced of very small moment. Eat those foods, therefore, that keep the body in the best possible health, and do not worry in the least about the micro-organisms, that may or may not exist in the intestines. They will soon be disposed of. The food is the all-important factor; and fruit—man's natural food—should be eaten almost exclusively if we wish to avoid old age, premature death, and all the ills that exist before both these conditions. It will thus be seen that I have been forced to agree with Drs. Bostwick and Evans, previously mentioned, as this was their contention precisely. M. Metchnikoff has failed to make sufficient allowance for the germicidal and anti-septic properties of the body, *when maintained in the best of health by means of natural, uncooked foods*. He has studied the effects of these micro-organisms upon bodies badly nourished with cooked food, and food more or less diseased. Let him study bodies nourished and maintained by their natural food—fruits and nuts, in their uncooked, primitive form—and *then* report the results! There can be no doubt that M. Metchnikoff will have to materially alter his theories as to the causation of old age and natural death, and will be forced to the conclusion that, after all, these states are caused by the running down of the vital forces in consequence of the altered chemical condition of the body, and of its blockage by mal-assimilated food-material! These ideas will, however, be elaborated further on, in our discussion of the causes of natural death.—H. C.]

CHAPTER VIII

THE QUESTIONNAIRE ON DEATH—ANSWERS

HAVING failed to derive any satisfactory explanation of death from the literature upon the subject and from historic research, it occurred to us to sound the opinion of the scientific world at the present time, and endeavour to ascertain, if possible, the opinions of a number of eminent scientists, philosophers, and others entitled to a hearing upon this question. By doing so we hoped to arrive at some more definite conclusion as to the real nature of this mysterious process, so fancifully and so inaccurately described by the majority of writers in the past. It is true that various speculations have been advanced from time to time by writers upon this subject, some of which are certainly ingenious and well worthy of the most serious consideration. Yet, objections to the theories may be found in almost every case. We shall return to this presently. Certain it is that the scientific world as a whole has arrived at no definite conception of the process, and the attitude of the majority of men might perhaps be expressed in the following significant extract. Professor Joseph Le Conte, writing in Balfour Stewart's *Conservation of Energy*, says:—

“ . . . But death? Can we detect anything returned to the forces of nature by simple death? What is the nature of the difference between the living organism and a dead organism? We can detect none, physical or chemical. All the physical and chemical forces withdrawn from the common fund of nature and embodied in the living organism seem to be still embodied in the

dead, until little by little it is returned by decomposition. Yet the difference is immense, is inconceivably great! What is the nature of this difference expressed in the formula of material science? What is it that is gone, and whither is it gone? There is something here which science cannot understand. Yet it is just that loss which takes place in death and before decomposition, which is in the highest sense vital force" (pp. 200-1).

In order to arrive, if possible, at some definite conclusion in the matter, therefore, we devised and sent to a number of men whose opinion would be well worth hearing, a circular letter asking the following question:—

“WHAT DO YOU CONSIDER TO BE THE REAL NATURE OF DEATH? (*We mean by this, of course, natural death; and not death due to disease, accident, or other causes of a like nature.*)”

We received a number of most interesting answers to this question from men and women of various types of mind—some of which we give below. Not the least interesting and significant fact elicited by our inquiry, however, is that it showed an almost complete lack of previous thought on the subject! It is astonishing to find the complete indifference that is manifested, not only by the public but also by scientists, on this subject of death. Eloquent testimony of this is evidenced by the fact that so little has been written about the subject; and in talking to any one about it one soon finds that he displays the completest indifference to the whole question! [Things of *real worth*, such as the mental life of the ant or the crab, fill psychological and scientific literature; but such a thing as death, which involves the whole human race more intimately than anything else possibly can—since all must die—is regarded as hardly worthy of serious discussion!] Professor F. C. S. Schiller showed the complete lack of interest of the public in the question of immortality in his statistical inquiry con-

ducted some years ago, the results of which were printed in the *Proceedings of the Society for Psychological Research*, vol. xviii. pp. 416-53. A similar indifference as to the subject of death was pointed out and insisted upon by Mr. Joseph Jacobs in his little booklet *The Dying of Death*. Perhaps we can best illustrate this lack of interest in the subject by the following letter, which we quote *verbatim*, omitting the name in order to save the feelings of the writer. Suffice it to say that the author of this letter is a well-known—in fact quite a famous—physician, to whom we had written, asking him to state his views as to the nature of death. If any one ought to take an active and intense interest in this subject, surely that man ought to be the physician, and yet this is what he wrote in answer to our question:—

DEAR SIR,—. . . I do not take the slightest interest in either the physiological or psychological aspects of the death question. Metchnikoff, however, has considerable to say on the subject. I have no theories as to the cause of natural death, nor, in fact, on any other subject.—Yours very truly, — —

Metchnikoff and others have insisted over and over again that old age is a pathological process, and that death is also due to certain obscure physiological and pathological causes and processes. All sickness bears the very closest resemblance to these processes, therefore, and will frequently terminate in death if not properly treated. And yet here is a man who professes “not the slightest interest” in any of these vital questions! Is this not tantamount to admitting that, although his practice may bring him in a good living, he has not the slightest intellectual interest in any of the philosophical questions that underlie his work and render it of use and benefit to the world?

We regret to say that this same attitude has been taken by other men who, one would think, should take a special interest in this question, bearing, as it does, upon the work that forms their most important life-study. The following letter is an example of this:—

From Professor James H. Hyslop, Ph.D., LL.D., New York, U.S.A.

MY DEAR MR. CARRINGTON,—In reply to your inquiry about my opinion of death, I can only say that I have no theory or conception of it whatever. I have never bothered my head about its nature for five minutes. I really do not know, and do not care, what it is. The cessation of life is all I know or believe about it.—
Very sincerely,
JAMES H. HYSLOP.

It is remarkable that such a stand should be taken by this investigator, since the whole question of psychic research hinges about the point of death, and whether life persists after it or not. Inasmuch as Dr. Hyslop believes in the persistence of consciousness after death—or “the spiritistic hypothesis”—it is certainly an inaccuracy on his part to say or infer that the “cessation of life” is the chief factor of death. Further, a man who devotes his whole life to the study of psychic problems should certainly, of all others, be most vitally and fundamentally interested in this question, since much depends upon the interpretation given to the phenomenon called death. We prefer to think that this letter represents the hastily expressed view of this authority rather than his carefully-worded opinion of “the real nature” of the process.

A letter of somewhat similar type, though more cautious, is that of Dr. James J. Putnam, the well-known neurologist, whose letter follows:—

From Dr. James J. Putnam, Boston, Mass.

MY DEAR SIR,—I have no special ideas to express upon the subject of death.—Yours truly,
JAMES J. PUTNAM.

One curious fact elicited by our circular letter is that so many men expressed their complete ignorance of the subject, and, what is still more curious, stated that they had, so far, never had time to think seriously upon it! One sample letter of this kind may be of interest:—

From Nikola Tesla, New York, U.S.A.

DEAR SIR,—Replying to your favour of the 16th inst., I agree with you that the subject is most interesting. But to express myself in regard to it would require a concentration of thought which, in the midst of my present labours, is impossible for me.

Regretting my inability, and thanking you for your courtesy, I remain, Very truly yours,
N. TESLA.

Astonishment at the lack of interest in this question is expressed by one or two of our correspondents who have thought and written upon these subjects. Thus, Professor Schiller writes:—

From Professor F. C. S. Schiller, Oxford, England.

CORPUS CHRISTI COLLEGE, OXFORD.

DEAR SIR,—In reply to your inquiry about death, I can only repeat the commonplace, that, Death is a mystery. Two aspects of this mystery have, however, always excited my astonishment,—the one physiological, the other psychological.

The physiological mystery consists in the fact that the body, being a machine which has somehow learned to repair itself, should not continue to do so indefinitely. The psychological mystery consists in the fact that people manage to think so little about death, and to care so little about what happens to them in that crisis. For the rest, I may refer those desirous of speculating upon the subject to *Riddles of the Sphinx* (Ch. xi.), *Humanism* (Ch. xiii.–xv.), and *Studies of Humanism* (Ch. xvii.).—I remain,
yours truly,

F. C. S. SCHILLER, M.A., D.Sc.,
Fellow and Tutor, Corpus Christi College, Oxford.

QUESTIONNAIRE ON DEATH—ANSWERS 163

One or two of our correspondents were rather more naïve in their expressions of ignorance as to the cause of natural death ; one writer, for instance, expressing himself as follows :—

From Horace Fletcher, Esq., New York, U.S.A.

DEAR SIR,—The real nature of death is as obscure to me as is the real nature of life itself.

I am enjoying life immensely, and more immensely the more I learn to get pleasure of the constructive sort out of it.

If the span which is now revealed to us is all there is of it for our present consciousness, I am enormously glad I have inherited it, and I shall esteem it all clear profit in advance of losing consciousness—a sort of “thanking you in advance,” with a return stamp attached for autograph reply.

If there is persistence of this same consciousness beyond the curtain called death, I feel quite certain that it will be evolutionary in character. I am sure to be more comfortable as gas or ether than when compelled to wear fashionable clothing.

For my best pleasure of thinking I accept the common idealism which gives human souls persistence of existence, and to the souls who gave me this blessed life I delight to attribute all of the direction of my energies which I know would give them pleasure were they still here to express it.

However ; sufficient unto the day is the opportunity thereof, and to make the most of passing opportunities, to do good and gain pleasure thereby, is my most important business of the moment.—Optimistically yours until death and forever thereafter,

HORACE FLETCHER.

Apparent hopelessness of ever finding a rational solution of this problem is expressed in the following letter from an eminent Dutch physician :—

From Frederick van Eeden, M.D., Holland.

DEAR SIR,—As you ask me to answer your question as a scientific man, you will excuse me for being rather scrupulous and

precise in my answer. Nobody can *say* what something *is*. We can only express a fact in different terms. A scientific answer cannot be given before we agree entirely upon the meaning and significance of all the terms of a question. What do you mean by "the real nature of death"? And how can I say *what* I consider this to *be*? Death is a very well known fact. Has it something which you call its "*real nature*" and which cannot be expressed in terms more familiar, standing for better known facts, so that we feel that the thing itself is now clearer to us, is now *explained*?

You will get many answers which seem to the point. But these answers will all be more or less poetical, fanciful, and metaphorical. Death will be called a Birth, an Extinction, a Sleep, a Transition. All this is more or less metaphor. Now metaphorical language is poetical language, and not strictly scientific. The great poets have said more true and beautiful things about death than any of us can do now. But it is Science you want, and Science can give you only the bare observations, and can tell you nothing about what you call their "*real nature*" and what I should probably call their significance.

Yet it is possible to give you a somewhat more satisfactory reply by saying, that the well known fact, Death, can also be expressed in these terms: *a profound and simultaneous change leading to disintegration, in all the directly perceptible elements of what we used to call a living entity* (man, animal, plant, or part of plant). This is only a definition, but it excludes many prevalent errors. To say that this change is a *total* disintegration would be more than exact science can allow, because we cannot have a clear and complete knowledge of the former integrity. But most important of all, a correct definition can only speak of the *directly* (*i.e. sensorially*) perceptible elements. The extreme limitation of our perceptive (sensorial) powers makes it highly probable that the unperceptible part (commonly called the SOUL) of *every* living entity far excels its perceptible part (the body). And that this larger part may remain untouched by the said apparent disintegration is a possibility, even a probability, acceptable to what I consider a sound scientific judgment.—I am, dear Sir, yours very truly,

F. VAN EEDEN.

In spite of Dr. van Eeden's extreme accuracy of statement, we cannot feel that he has supplied us with an exact definition of death. Dr. van Eeden, it will be observed, limits the "profound and simultaneous change" to the *directly perceptible* parts or elements of the body. But we think that there is no evidence whatever that death may not be due to the action of some purely imperceptible parts, or to some non-material elements altogether. It may be due to the disturbance of the body's vital energy; to modifications or chemical changes in one particular point or spot of the cerebral cortex, which would not involve the whole body, but which might be called a purely "local" action. Dr. van Eeden says that this change takes place in "what we used to call a living entity," which infers that this entity or body is now dead. Unless we completely change our conception of death, however, we cannot agree that this is in any way a definition, since, it will be observed, it practically states that death occurs in a dead body, whereas it occurs in a living body, and the change is supposedly the *cause* of death. We cannot see, therefore, that Dr. van Eeden has supplied us with a definition of death that can be said to fulfil all of the fundamental requirements necessary for a satisfactory explanation.

The following letter is from Professor Charles S. Minot:—

HARVARD MEDICAL SCHOOL,
BOSTON, MASS.,
Jan. 31, 1910.

MY DEAR SIR,—I have received your circular of Jan. 25th. My views on the subject of death, so far as they can be formulated, are recorded in my work, *Age, Growth and Death*,¹ published by

¹ Quotations from this book will be found elsewhere in this volume.

Putnam's, in New York. You will find in this book all the information I can give you.—Yours truly,

CHARLES S. MINOT.

Dr. Minot's theory of death should be recorded in this place, as he is an author who has given long and serious attention to this question of death. Writing in *Age, Growth and Death*, pp. 214, 215, he says:—

“Death is not a universal accompaniment of life. In many of the lower organisms death does not occur, so far as we at present know, as a natural and necessary result of life. Death with them is purely the result of an accident, some external cause. Our existing science leads us, therefore, to the conception that natural death has been acquired during the process of evolution of living organisms. Why should it have been acquired? You will, I think, readily answer this question, if you hold that the views which I have been bringing before you have been well defended, by saying that it is due to differentiation, that when the cells acquire the additional faculty of passing beyond the simple stage to the more complicated organisation, they lose some of their vitality, some of their power of growth, some of their possibilities of perpetuation; and as the organisation in the process of evolution becomes higher and higher, the necessity for change becomes more and more imperative. But it involves the end. Differentiation leads, as its inevitable conclusion, to death. Death is the price we are obliged to pay for our organisation, for the differentiation which exists in us. Is it too high a price? To that organisation we are indebted for the great array of faculties with which we are endowed. To it we are indebted for the means of appreciating the sort of world, the kind of universe, in which we are placed. . . . It does not seem to me too much for us to pay. We accept the price. . . . Death of the whole comes, as we now know, whenever some essential part of the body gives way—sometimes one, sometimes another; perhaps the brain, perhaps the heart, perhaps one of the other internal organs may be the first in which the change of cytomorphosis goes so far that it can no longer perform its share of work, and, failing, brings about the failure of

the whole. This is the scientific view of death. It leaves death with all its mystery, with all its sacredness; we are not in the least able to the present time to say what life is—still less, perhaps, what death is. We say of certain things—they are alive; of certain others—they are dead; but what the difference may be, what is essential to those two states, science is utterly unable to tell us at the present time. It is a phenomenon with which we are so familiar that perhaps we do not think enough about it.”

In the following letter from Professor Max Dessoir, some points of great interest are raised. As, however, Professor Dessoir treats the question from the philosophical and psychological points of view, rather than from the biological standpoint, it is evident that his letter requires no extended criticism in this place. It reads as follows:—

BERLIN, W. GOLTZSTR. 31,
Feb. 17, 1910.

MY DEAR MR. CARRINGTON,—If I understand your question as to the nature of death to mean the signification of that event, I should, as a philosopher, reply as follows:—

I see in death a universal and sublime law. The thought that men and animals cannot continue in their life-form—as known to us—is to me unbearable; and the certainty that no one is an exception to the law is at least gratifying. The meaning of death lies also in this: that all the organic forms of being, not excepting the highest, bear upon them the seal of their own doom! And this has also a far wider meaning. With every man who dies goes, not only his personality, but also the world which he has imagined, and which only he possesses—a world of thoughtful ideals—memories, creative conceptions, and so forth. Every death means, therefore, the death of that man’s inner reality. So many men die: so many worlds are thus annihilated!

Another question is whether immortality exists under change of form, or whether death changes the appearance, but leaves the being of man untouched. If the being and appearance are as closely related as is certainly the case with man, he will continue

to imagine a continuation of personal identity in that form. It is, to him, a scientific probability. . . .

Still one more thought. We know that one of the things taught by hypnotism and psychopathology is this: In some cases when in this condition, a larger personality is exhibited. One need only remember Janet's Felida X., or Miss Beauchamp, &c. Which of these personalities shall exist after death? This same question holds good for normal man—though in a lesser degree. We all have passed through many changes—have been young and old, gay and sad, good and bad, heroic and cowardly. And of all these characteristics, shall only those particular ones live further which exist at the accidental moment of death? Immortality in its highest sense includes the contents of all these moments; and yet we cannot conceive this to be the case. . . . Yours sincerely,

MAX DESSOIR.

The following letter is representative of the theologian's point of view:—

From Rev. James F. Driscoll, D.D., New York, U.S.A.

DEAR SIR,—The notion of natural death as set forth in Catholic theology and in the traditional Christian philosophy is very simple. Death consists in the separation of the soul from the body, which separation is aptly termed "dissolution." The soul is held to be a spiritual substance, capable of existing independently of the body, though naturally fitted to be united with it, after the resurrection, in some form of new life compatible with personal identity. I have never been confronted with any facts or reasons which seemed to call for any mode of conceiving of, or formulating, the phenomenon called death in any other than this simple notion, which is the one held by the vast majority of Christians. Neither have I ever attempted to analyse scientifically the processes that may be involved in this separation of the soul and body, or to picture to myself just how it takes place. Some light on this aspect of the problem, I trust, may be derived from your forthcoming book.—Sincerely yours,

JAMES F. DRISCOLL.

This represents, of course, the traditional conception

of death, but cannot be taken as a final, scientific explanation, for the reason (1) that it assumes the existence of the soul, which cannot be granted by the scientific man; and (2) it does not tell us anything of the actual details of this supposed "separation." In other words, it *states* the case, from that particular point of view, without attempting to *solve* it. We cannot, therefore, say that this is in any sense an explanation of death; but Dr. Driscoll is frank in stating that his letter is not intended to be such.

The following communication from Count Solovovo exemplifies the strictly scientific attitude toward this question; while it emphasises, at the same time, the only rational way of solving the problem. He says:—

From Count Perovsky-Petrovo-Solovovo, St. Petersburg, Russia.

I believe it most probable that *Death* is the end of everything throughout the whole realm of Nature. I believe that everything tends to support this conclusion; everyday experience, scientific experiment, and observation, and last—not least—plain common sense. And, before all, I am convinced of the utter inability of religion to grapple satisfactorily with the problem. And if, in spite of all that, there is still a lingering doubt in my mind that this negative conclusion, though overwhelmingly probable, may yet be not absolutely certain, I owe this shadow of a doubt to certain alleged facts of psychical research, so-called, only and exclusively.

PEROVSKY-PETROVO-SOLOVOVO.

SERGIEVSKIA 24, ST. PETERSBURG,
August 1908.

Compare with these expressions, the following communication, which represents the attitude of the mystic. It will be observed that Mr. Purinton assumes the existence of a soul, and also the reality of reincarnation

—neither of which doctrines can be accepted as valid until scientifically proved. It further fails to supply us with any of the psycho-physiological explanations necessary for a clear understanding of this important crisis. However, his letter is of great interest, and, should the existence of a soul be proved, would be well worthy of serious consideration from the philosophic point of view.

From Edward Earle Purinton, Esq., New York City, U.S.A.

Death is the periodic withdrawal of the soul from a body grown too earthy for the soul to use. Every soul passes through as many births, lives, and deaths as are necessary for complete earth experience. But as experience involves encrustation, the process of learning is also the process of dying.

Animals die a "natural" death, at about the same age in the same species, because animals have but one dominant trait to express—strength in the lion, wisdom in the serpent, gentleness in the dove, &c. But for man, ideally at least, there is no such thing as natural death. Because man, possessing all the traits of the lower animals, would require as many lives as they all, in order to express fully. I think that when man knows himself, and dares be himself, death will appear a slight episode, or perhaps a forgotten myth, along the radiant cycle of immortality. And the method will then be as *scientific* as this prophecy now looks visionary.

EDWARD EARLE PURINTON.

Very different, again, is the theory of death advanced by Dr. J. Butler Burke, in the communication that follows:—

From Dr. John Butler Burke, Cambridge, England.

The Nature of Death.

To understand what death is, it would be necessary to know what life is, for it is obviously—to all appearances, at least—the cessation of life in the individual organism. I say, "to all appearances, at least," because we have no evidence whatever that the unknown principle which infuses, as it were, the organism so

as to give rise to vital actions, is not something which survives the dissolution of the organic form, and the garments in which it may have been clad.

This self-willing and self-conscious entity is generally awakened in the course of the development of the organism by which it comes into harmony with the world around it. But it does not follow that with the disintegration of the organism the self-conscious principle is also dissolved, although that might be in the majority of cases, when the mind and will have not developed complete self-control and mastery over the body. The question is, of course, one of fundamental interest and importance psychologically.

Amongst men and women of great strength of will, intellectual power and force of character, this feeling—for after all it is but a feeling—that the mind is as independent of the body as it is of the external world, seems to be very common indeed. Tennyson, if I remember rightly, in *The Holy Grail* and *The Ancient Sage*, talks of feelings such as these :—

“ In moments when he feels he cannot die,
And know himself no vision to himself ; ”

and again when :

“ The mortal limit of the self was loosed,
And passed into the nameless as a cloud
Melts into Heaven.”

He speaks elsewhere of “ the clearest of the clearest, the surest of the surest, utterly beyond words, when death seemed an almost laughable impossibility.” His friend, the late Sir James Knowles, records many other similar instances in *The Nineteenth Century*, January, 1893.

It is, in fact, a very common experience among intellectual people, and an inclination of a vigorous mind combined with a correspondingly low vitality, showing, perhaps, a discord between mind and matter.

The most vivid description of it is by Goethe, in “ Wilhelm Meister’s Apprenticeship ” in *The Confessions of a Beautiful Soul* :—

“ During many sleepless nights, especially, I had some feelings

so remarkable that I cannot describe them clearly. It was as if my soul were thinking unaccompanied by the body. It looked on the body as something apart from itself, much as we look on a dress. It pictured to itself, with the most extraordinary vividness, past times and events, and felt what would be their results. All these times have passed away; what follows will pass too; the body will rend like a garment, but I—that well known I—I am.”

And again, “The grave awakens no terror in me; I have an eternal life.”

It may be said, and it is said, that this is all imagination—a waking dream, a trance. But it is the opinion of some of the most profound philosophers that it is not a waking sleep, but the very awakening of the soul itself. Eminent metaphysicians, from Descartes onwards, tell us that there is nothing more real than the consciousness of such a state as this, and that whoso has thus grasped the reality of his own being and truths, realising in himself a conscious, self-determined unit, knows that not only I Am, but, having reached this height, I Am, and must Forever Be.

JOHN BUTLER BURKE.

Very contrary to the views just expressed are those of Professor Haeckel, illustrated in the following communication or letter from him, in reply to the circular request. He answers as follows:—

From Professor Ernst Haeckel, Jena, Germany.

JENA, 16, 8, 1908.

DEAR SIR,—You find my view of *Death* in the 5th chapter of my book *Lebenswunder* (1904)—*The Wonders of Life*.—Respectfully,

ERNST HAECKEL.

Referring to the chapter on “Death” in Professor Haeckel’s *Wonders of Life*, we extract the following as representative of his views:—

“The inquiry into the nature of organic life which we instituted in the second chapter has shown us that it is, in the ultimate

analysis, a chemical process. The 'miracle of life' is in essence nothing but the metabolism of the living matter, or of the plasm. . . . If death is the cessation of life, we must mean by that the cessation of the alternation between the upbuild and the dissolution of the molecules of protoplasm ; and as each of the molecules of protoplasm must break up again shortly after its formation, we have, in death, to deal only with the definite cessation of reconstruction in the destroyed plasma-molecules. Hence, a living thing is not finally dead—that is to say, absolutely incompetent to discharge any further vital function—until the whole of its plasma molecules are destroyed. . . . Normal death takes place in all organisms when the limit of the hereditary term of life is reached. . . . As Kassowitz has lately pointed out, the senility of individuals consists in the inevitable increase in the decay of protoplasm, and the metaplastic parts of the body which this produces. Each metaplastm in the body favours the inactive break-up of protoplasm, and so also the formation of new metaplastms. The death of the cell follows, because the chemical energy of the plasm gradually falls off from a certain height—the acme of life. The plasm loses more and more the power to replace, by regeneration, the losses it sustains by the vital functions."

It will be seen that, in its ultimate analysis, this definition of death furnishes us with no better idea of the process than might be supplied by the words "exhaustion of vital function." This question has been discussed elsewhere, and it can be shown that, from one point of view, it fails to explain the phenomena of death entirely, since we come into a "vicious circle," so to say. The body degenerates because of its loss of vital power, and loss of vital power takes place because the body degenerates! It is obvious that no final definition of death can be obtained from arguments such as these.

It is true that Haeckel elsewhere defines death as "physiological degeneration, due to chemical changes."

This furnishes us with a little clearer idea of the causes of this process; but it does not tell us why it is that chemical changes of the character postulated should take place; and no direct evidence is furnished that such changes do in fact take place. The body of the old man is constantly being replaced by fresh material, and may be said to be in one sense as new as the body of the babe—since both are formed from new material—viz. the food supply. Yet in the one case the food will build the body of the youth, and in the other the body of the old man. So long as science fails to recognise any vital force, or any constructive or destructive tendency in the body other than the energy supposed to be derived from food combustion, it is certain that no definite conclusion can be arrived at by way of explanation of these phenomena.

It would be impossible to conceive a greater dissimilarity of views than those just expressed by Professor Haeckel, and those that follow—expressed also by a physician—as to the “real nature of death.” In his communication our correspondent says:—

From Hippolyte Baraduc, M.D.

PARIS, FRANCE.

DEAR SIR,—I refer you to the work which I wrote upon the death of my dear ones. The world knows nothing about death, does not prepare for it, and every one is subject to it. It is a phenomenon against which one is powerless, which allows the passage of the spirit in the geometrical, stellar, or globular form, as all the ancient mystics declared. It is sad that Christians do not know better the point towards which it is necessary to move. Their religion, so beautiful upon earth, is insufficient for the sum of the hereafter in the superior planes.—With regards,

BARADUC.

This letter of Dr. Baraduc merely refers us, it will be observed, to his book *Mes Morts*. The experiments contained in that work will be found discussed in our section "On Photographing the Soul." Apart from the external evidence which the photographs afford, there is, it will be observed, no attempt at scientific explanation of the nature of death, but merely comment upon one or two of the problems associated with it. As such, we must, therefore, altogether disregard it as an explanation of the cause of natural death.

Of a very different character is the communication from Dr. Paul Carus, editor of *The Open Court*, *The Monist*, &c. In replying to our letter on death, Dr. Carus writes:—

LA SALLE, ILL., Nov. 6, 1908.

DEAR SIR,—Having returned from Europe, I find your courteous letter, and will say in reply that, according to my definition of "death," it is simply "the ceasing of the functions of life." As to further explanations of the nature of death and its significance, I must refer you to passages in my books, among which I would especially recommend those which you find in *Homilies of Science*. For instance, the chapters "The Price of Eternal Youth," "Religion and Immortality," "Spiritism and Immortality," &c.

This letter may reach you too late, but I will answer your question anyhow, in case you would like to know my views on the subject.—Very truly yours,
PAUL CARUS.

Referring to the passages in Dr. Carus's *Homilies of Science*, mentioned by him, we extract therefrom the following, as samples of his attitude toward this question:—

"Death is a natural phenomenon, not less than birth; and the agonies of death are generally less painful than the throes of birth. The problem of death is closely interwoven with the problem of

birth, so that you cannot disentangle the one without unravelling the other. . . . Death, then, is a necessity ; but serious though the idea of death must make our thoughts, it is not terrible ; awful though it may be, it must not overawe us. Death is like the northern sunset : the evening twilight indicates the rise of the new morn. The nocturnal darkness of the end of life is the harbinger of a new day, clothed in eternal youth. So closely interwoven is death with immortality. . . . Death is no mere dissolution into all-existence. Certain features of our soul-life are preserved in their individuality. Copernicus still lives in Kepler, and Kepler in Newton ; and to-day Copernicus lives in every one of us who has freed himself from the error of a geocentric concept of the world. The progress of humanity is nothing but an accumulation of the most precious treasures we have—it is the hoarding up of human souls. . . . Although a ghost-immortality of disembodied spirits is impossible, man's existence is not a fleeting phenomenon of an ephemeral nature. His soul-life is not of yesterday, and does not vanish into nothingness to-morrow. His ideas, as well as his actions, are facts that continue to be factors in the future development of his race. The life of a single individual is not a separate and single event that begins with his birth, and disappears again with his death. It is the product of a long evolution of many thousands of generations. Their works and thoughts live in the present generation, and our soul-life or thought, accompanied with the same kind of feelings, will continue to exist in the future. Those who think, who act, and who feel, like ourselves, possess our souls, and in them we shall continue to live, move, and have our being."

It will be obvious to the critic that, from the physiological point of view, the above extracts furnish us no clue as to the nature of natural death ; but perhaps they are not intended to do so. Dr. Carus's argument is psychological and philosophical ; and although this cannot be considered any adequate description of death, still, let us consider the problem from this other standpoint. One would think from the first two paragraphs that

Dr. Carus's conception of the persistence of consciousness, or "immortality of the soul," amounts to this: That our thoughts and actions, inasmuch as they are part of ourselves, persist in the thoughts and memories of others! We ourselves, as individuals, have sunk into nothingness, passed into oblivion. We continue to exist merely as memories in the lives of others.

Such, then, is Dr. Carus's conception of "immortality." It is almost a farcical definition of the term, because in the first place immortality, as it is usually conceived, involves persistence of individual consciousness, and, so far as we ourselves are concerned, any sort of persistence without memory and consciousness of self, would be tantamount to annihilation. From the point of view of the individual who dies, therefore, such a definition of immortality is a mere begging of the question, and it does not appear to us that Dr. Carus's position is in any way strengthened by his contention that we exist in the thoughts and memories of others who live after us. To them, we exist as mental concepts only, and we occupy the same relative position to their thinking selves as would any other memory. We would be merely an abstraction, and would no more form part of their mental life, or live in them, than would any other mental concept—a memory of a past achievement, a battle, the picture of some living person. Identity involves a *thinking subject*. The thoughts are its products, and we can no more implant one identity on another than we can cause two solid substances to occupy the same space. The fact that we or our deeds linger in the memory of those still living no more argues that we live, than does the memory of a conflagration prove that the fire is still burning.

The two following letters, from Drs. Bozzano and Venzani, respectively, indicate the position of the scientist-

philosopher—one who has duly weighed the facts and interpretations of psychical research. It will be observed that both these authors practically agree in their view of the case—that a future life is only to be demonstrated by means of psychical investigation, and that, were it not for these facts, we should have to conclude in favour of materialism.

It must be said, however, that both of these letters merely raise a *presumption* in favour of immortality, as we have said before, and cannot be said to *prove* it. That can only come from facts. Further, neither of them gives us any conception of the “real nature of death;” they merely state the views of their authors as to the probable existence of the soul after the death of the body. Nevertheless, the letters are of great interest as illustrating the views of scientific men who have been duly impressed with the facts of psychical research.

From Dr. Ernesto Bozzano, Genoa, Italy.

What do you consider to be the real nature of death?

Qualora, dopo le profonde indagini isto-fisiologiche cui venne sottoposto il cervello sullo scorcio del secolo passato, non fosse occorso l'avvento degli studi metapsichici, ben difficilmente si sarebbe evitata la conclusione che la crisi della morte per gli organismi animali significava l'arresto funzionale degli organismi stessi, con cessazione della vita e conseguente annientamento di quella sintesi di stati di coscienza che si denomina lo personale o anima; tutto ciò malgrado che una conclusione siffatta conducesse a una proposizione filosoficamente assurda, quella che l'evoluzione dell' Universo e della Vita si palesino destituiti di finalità.

Non più così dopo l'avvento delle nuove ricerche, in virtù delle quali vennero posti in evidenza aspetti nuovi dell' lo subcosciente in guisa da lasciare intravedere la possibilità di risolvere sperimentalmente in senso affermativo il grandioso problema dell' esistenza e

sopravvivenza dell' anima ; che ove ciò si realizzasse, la crisi della morte potrebbe ragguagliarsi a un'i *crisi di sviluppo* in cui avrebbe termine la fase dell' esistenza terrena, e principio quella spirituale dell' anima, per la quale le facoltà supernormali della subcoscienza costituirebbero altrettanti sensi novelli adattati a novelle condizioni di ambiente ; il che, filosoficamente parlando, varebbe a conciliare i portati della Scienza con gli imperativi categorici della Ragione, non potendo quest' ultima concepire Vita ed Universo destituiti di finalit .

ERNESTO BOZZANO.

Translation :—

If, after the profound histo-physiological investigations to which the brain was subjected at the ending of the past century, there had not occurred the advent of metapsychical studies, it would have been very difficult to avoid the conclusion that the crisis of death for the animal organism signified the functional arrest of the organ itself with cessation of life, and the consequent annihilation of that synthesis of conscious states which is called the personal Ego, or the soul. All this in spite of the fact that such a conclusion leads to the proposition philosophically absurd, which is, that the evolution of the Universe and of Life are declared deprived of finality.

Since the advent of the new researches it is no longer so. By virtue of these there are placed in evidence new aspects of the sub-conscious Ego, in a way allowing to be seen the possibility of resolving experimentally, in the affirmative sense, the great problem of the existence and survival of the soul ; that where that should be true, the crisis of death might be compared to an unfolding, in which the earthly existence would have an end, and the spiritual one of the soul a beginning, for which the supernormal faculties of the subconscious would constitute so many new senses, adapted to the new conditions of the ambient. Which, philosophically speaking, would go to conciliate the findings of Science with the Categorical Imperative of Reason, the latter being unable to conceive of Life and the Universe deprived of finality.

ERNESTO BOZZANO.

From Dr. Joseph Venzano, Genoa, Italy.

What do you consider to be the real nature of death?

Le più recenti indagini nel campo della psicologia e della metapsichica hanno dimostrato l'esistenza di facoltà latenti nella sub-coscienza che emergono in circostanze peculiari e che per la loro supernormalità e in virtù di quella legge di finalit  che regola tutte le co-se create sarebbe assurdo ritenere dovessero colla morte andar perdute in un colle scorie del corpo. Tali facolt  porterebbero a considerare l'organismo vivente quale temporanea sede di un'entit  spirituale in via di ulteriore e progressiva perfezione.

La morte pertanto—dovendo il concetto di essa necessariamente scaturire da quello della vita—non sarebbe che un proscioglimento dall' involuero materiale di uno spirito tendente e sempre pi  elevati destini.

Dott. GIUSEPPE VENZANO.

Translation :—

The most recent investigations in the fields of psychology and metapsychics have demonstrated the existence of faculties latent in the subconsciousness that emerge under peculiar circumstances, and that by their supernormality, and in virtue of that law of finality that rules all created things, it would be absurd to retain [preserve?] should they in death be lost with the dross of the body. Such faculties would lead one to consider the living organism as the temporary seat of a spiritual entity in the way of ultimate and progressive perfection.

Death, then—the concept of this having necessarily to spring from Life—would be but a freeing from the material shell of a spirit tending always to a higher destiny.

DOCTOR GIUSEPPE VENZANO.

The following letter from Mrs. Laura I. Finch, while of exceptional interest and representing, as it does, the philosophico-mystical point of view in an excellent and forceful manner, cannot be held to explain death from the psycho-physiological standpoint, which is the stand-

point assumed in this book, and is the aspect of death upon which we wished to elicit further information. Ultimately, and looked at from a sort of cosmological point of view, Mrs. Finch's attitude might be largely true. But for our present purposes and from our present standpoint, we cannot regard this letter as throwing much light upon the real nature and causes of death. We print it, however, as one containing speculations of a remarkably ingenious character, excellently expressed:—

From Mrs. Laura I. Finch, Zürich, Switzerland (late Editor of "The Annals of Psychological Science," &c.).

What is the real nature of death?

The real nature of death should, in its highest sense, be a consummation, the termination of a cycle, the last act of the journeying of the soul out of the Absolute back into the Absolute.

Just as disease and accident may be looked upon as incidents which the soul lays hold of in order to free itself from the instrument incapable of fulfilling its behests or of serving further as a means of progress, so death from "natural" causes may likewise be considered as a sign that the soul is still immature, and in need of a new vehicle of ever-increasingly finer vibrations, until, ultimately, the same soul has through its various manifestations acquired a knowledge of nature's secrets, is no longer either the victim or the slave or even the master, but is *one* with nature, able to identify itself with all that is. In this, the highest form of the manifestation of spirit, the body—under the control of an enfranchised and perfect soul—should be of such a fine and perfect nature—at last in harmony with the Spirit of the Universe, that death, as we now understand it, *cannot*, simply cannot, exist for it.

To the Perfect Understanding death is a paradox, an impossibility, just as a deathless body would be an impossibility, a paradox, to the immature soul.

Disease, accident, old age, and moral weakness—the tottering steps of the soul in its infancy. And even "natural" death, as

understood to-day, is the soul's mute confession of ignorance, of failure; the revelation of its degree of evolution.

The soul which has come into the full possession of its inheritance, Knowledge, such a soul should certainly be able to leave and resuscitate the body at will, and maintain the body in perfect health and vitality, just as long as it was deemed necessary, for cosmic causes, to postpone the final act of consummation. Age can have no further meaning for such a soul, for time and space are data of temporary, human invention, and can exercise no dominion over the liberated. And free, then, indeed, is the soul—*free* in the highest sense of the word: standing aloft on the dazzling summits of manifestation, and at one, even now, with the Divine. It *comprehends*, and therefore knows, no limitations; its centre is Itself, the Essence of all that is; its compass is the Universe, the Absolute, both that which is manifested and that which is unmanifested.

And the ultimate passing out of such a tenant from the body could not be called "death"—lacking as it would all the customary attributes of death. It should be an event, deliberately chosen by the omniscient soul long since come into the full recognition of its relationship—its oneness—with the Divine All; an event accurately predicted beforehand, a passing out without illness, without feebleness, without suffering, without even any momentary loss of consciousness; a passing out of the realms of manifestation and personality; a passing into the very heart of the Universe, into the "Arms of God," into the Essence of Life, into the Absolute.

That is my conception of what was meant to be the *real* nature of death.

LAURA I. FINCH.

Our next correspondent writes us as follows:—

*From Miss E. Katherine Bates (Author of "Seen and Unseen,"
"Do the Dead Depart?" &c.).*

Death has always appeared to me to be simply the process through which the real Ego throws off or sheds the outer animal body of lower rates of vibration; and functions thenceforth in

the inner or spirit body of a more attenuated form of matter, functioning at higher rates of vibration.

This inner body (the spirit body, as St. Paul calls it) is presumably already existing in our physical bodies, and is the medium of such phenomena as are provided by the appearance of the Double, where this is of a tangible and not of a merely subjective and purely mental nature.

This inner body of finer matter, at higher vibrating rates, doubtless is the one that leaves the outer physical body during deep sleep, and is drawn towards those spheres to which it is affinitive, but whence it must return to the animal body, under strict conditions of Law, until the moment of entire release from the physical prison-house arrives.

To my conception, therefore, death is, *as a purely scientific fact*, that which the poets have always discerned it to be, *i.e.* the twin-brother of sleep.

Sleep lets the prisoner out on "parole," whereas death is the judge who grants him a complete and final release from his captivity in the flesh. He will then be able to remain permanently with his friends on the other side, in place of paying them short visits during the sleep of the body, visits which must often prove as tantalising as they are delightful. . . .

I am asked for my opinion, and not for evidential facts on this great subject. There are many facts, however (upon their own plane of existence) which bear out these conceptions. The fact of the spirit leaving its outer physical body under conditions of trance or of ordinary sleep, and being able to retain the consciousness of experiences gained and knowledge conveyed, under these circumstances, is a fact to which increasing numbers of sensitives can testify.

When the racial sensitiveness to higher vibrations has reached a point where these experiences shall have become sufficiently numerous to form a majority, or even a very strong minority, it can no longer be ignored.

As we learn to bring back these experiences of our sleeping hours, so we shall be able to provide more and more evidence, strictly scientific and capable of being dealt with on the present plane of vibration.

Then death will truly "lose its sting," as the grave has already lost its victory—for all but the most obstinate and elementary materialists.

That sting, however, can never be removed until *facts* have convinced us that death is no longer to be considered as an entrance into *hitherto unknown countries*, but the making permanent and substantial those conditions of life with which we are already familiar, but of which we are now only conscious in fleeting moments, few and far between.

"Men counted him a dreamer—Dreams
Are but the light of clearer skies
Too dazzling for our naked eyes ;
And when we catch their fleeting beams,
We turn aside, and call them—DREAMS."

—E. KATHERINE BATES.

This letter opens up a number of possibilities ; of that there can be no doubt. It further insists upon the fundamental point that only by evidence, by scientific *facts*, can the great question of survival of consciousness ever be solved. This we shall argue at considerable length in Parts II. and III. While this definition cannot be said to make plain to us the actual causation of death, as it does not indicate the *cause* of the withdrawal of the body "possessing higher rates of vibration"; yet it is doubtless very near the truth—if anything at all in man survives death. The vibratory theory of death is set forth at some length in Mr. Carrington's chapter on the causation of death. From every point of view, Miss Bates' letter is certainly worthy of the most respectful consideration.

Of a somewhat similar character is Dr. Walter Leaf's communication, quoted below. It will be observed that Dr. Leaf accepts as fundamental a "spiritual energy," and even a "world of spirit," and defines death as "the dissociation of spiritual energy and matter." This may be

very true, but really goes little further than the older definition, "the departure of life from the body." It will be noticed, also, that Dr. Leaf accepts a spiritual world as proved, which we cannot do, looking at the matter as scientists, inasmuch as we must first prove it. But further, we do not desire to know only the *fact* of the separation of the life principle from the body (which is more or less common knowledge), but the *nature* and the *causes* of it. This, it will be observed, we fail to find fully explained in the following statement:—

From Walter Leaf, Litt.D., London, England.

DEAR SIR,—I have had your circular letter on death before me for some little time, and have been rather puzzled to know exactly what answer you expect. The limitation to "natural" death seems to exclude any consideration of death in itself, or how it should be regarded by the individual, and to confine the subject to the causes and nature of senile decay. If this is the intention, I certainly have not the physiological knowledge which would justify me in answering. I fancy, however, that you may not wish thus to limit your purview, and desire rather my views as to the reason of the necessity of death in the scheme of the universe, though in that case I do not see why death by disease, &c., should be excluded. I therefore have endeavoured to compress my views upon this point into your limits, rather at the expense of clearness, and in any case without any of the explanations and reserves which such a statement requires.—I am, dear Sir, yours faithfully,

WALTER LEAF.

Our phenomenal world is due to the interaction of two worlds of higher dimensions—Spirit and Matter.

"Laws of nature" represent so much as we can observe of regularity in this interaction.

It is a law of nature that a limited amount of spiritual energy associates itself with a limited amount of matter. The association we call Life, the dissolution of it Death.

It is a law of nature that this association can exist only for a limited time.

Why this should be we cannot say ; presumably it is a necessary condition for the fulfilment of that spiritual purpose which we call Evolution. A time may come when the condition will no longer be necessary.

The quantum of spirit associated with a quantum of matter thereby becomes circumscribed, and loses some of its spiritual relations, descending to a "personality." It is perhaps necessary that it should after a time be re-absorbed into universal spirit in order to renew itself. Thus death would be the analogue of sleep.

An extension of Dr. Leaf's view, from the standpoint of a physiologist, is contained in the following communication from Dr. Rabagliati, which is, we believe, as near to an exact definition of death as any of the communications received by us. Dr. Rabagliati is a believer in the existence of a life or vital force, and defended this view in his introduction to Mr. Carrington's *Vitality, Fasting and Nutrition*. His definition of death, as submitted to us, is as follows:—

*From Dr. A. Rabagliati, M.A., M.D., F.R.C.S., &c., &c.,
Bradford, England.*

Viewing this universe as the effect of a universal cosmic energy, emanating from an infinite source, which energy therefore consists of an infinite series or forms or species, I define natural human death as follows:—

Natural human death is the departure from the human body of anthropino-bio-dynamic. Animal bodies are procreated, each sort by its own form of bio-dynamic, to act as fit dwelling places for animal life. Bio-dynamic itself is a species of the universal cosmic energy. When it leaves the body, death ensues. The immediate cause of human natural death is nearly always such a choking up or blocking of the human house of life by excessive exercise of tropho-dynamic, *i.e.* poly-siteism, kako-siteism, and pollaki-siteism,

and poly-potism, kako-potism, and pollaki-potism, that anthropino-bio-dynamic is compelled to leave the body, as it is no longer a fit house for life.

Explanation.—At death all forms of cosmic energy, except hydrodynamic (or the power of material substance), chemico-dynamic (or the chemical power), and katharto-dynamic (or the cleansing power), mostly exerted through the action of micro-organisms, leave the human body. Were this not so, the body would not only die, but vanish, as in fact it does after a long period of time, however our love for the departed may induce us to try to prevent it.

A. RABAGLIATI.

BRADFORD, ENG., 7th August 1908.

The following communication from Prof. E. B. Wilson, author of *The Cell*, &c., is the typical and clear-cut point of view of the biologist. It states the case in a terse and concise manner:—

DEPARTMENT OF ZOOLOGY,
COLUMBIA UNIVERSITY, NEW YORK,
28th February 1910.

DEAR SIR,—I must apologise for not replying sooner to your note of Jan. 25th. I should not care to attempt a definition of death for publication. Biologically, death is to be regarded as the cessation of the life processes. The definition of death, therefore, presupposes a definition of the life processes; and the latter is too complicated a matter to be stated briefly.—Very truly yours,

EDMUND B. WILSON.

The views expressed by the following writers—not in answer to our circular letter, but in their various writings to which we have referred—may be printed consecutively, since they represent, more or less, the same point of view.

Dr. Brouardel, in his *Death and Sudden Death* (p. 292), defines death as follows:—

“Death supervenes when poisons manufactured in the system, or unwholesome food that has been ingested, can no longer be ade-

quately removed by the kidneys. . . . The individual is, therefore, poisoned, either by his food, or by poisons which are generated within his own body, *i.e.* auto-intoxication."

Dr. J. H. Kellogg defines death thus:—

✓ "The cause of old age and natural death is the accumulation of waste matters in the body."

Dr. R. T. Trall, in his *Physiology*, p. 203, favoured the idea that death ensues when—

"The solids are so disproportioned to the fluids that the nutritive processes can no longer be carried on."

Dr. Rosenbach contends that—

⊗ "Death . . . is that condition of organised matter in which all processes of causation have come to such a state of rest that they can no longer be put in motion, since the grouping of the atoms in the molecule has become so firm that the liberation of living force would be associated with a destruction of the molecule" (*Physician versus Bacteriologist*, pp. 82-3).

Sir Benjamin Ward Richardson, in his *Diseases of Modern Life*, pp. 103-4, sums up the causes of death as follows:—

"I have learned that the gradual transformation of the vital organs of the body from advanced age is due to a change in the colloidal matter which forms the organic basis of all living tissues. In its active state this substance is combined with water, by which its activity and flexibility is maintained in whatever organ it is present—brain, nerve, muscle, eye-ball, cartilage, membrane. In course of time, this combination with water is lessened, whereupon the vital tissues become thickened, or, to use the technical term, 'pectous,' by attraction of cohesion, the organic particles are welded more closely together, until, at length, the nervous matter loses its mobility, and the physical inertia is complete."

One of us has summed up all these proposed causes of death in the single word, *blockage*.

We regard some of these theories of death as accurately representing *proximate* causes of death, but not the inner, ultimate cause, so to speak. Further, we must insist that death from all these causes would really be death from disease, since natural death can hardly be defined as due to any of these factors, as we have shown elsewhere. Natural death should result without any of the morbid accumulations or functionings which have been postulated by these authors. We believe that the life force ceases to operate in the body because of its blockage in one or another of the ways described by these authors; but this blockage is really an indirect and not a direct cause; and further, as we have said, we could hardly define death due to such causes as natural death. Waiving that, however, we must insist upon this fundamental point: that the separation of the life from the body, which may be said to constitute natural death (judged from an external standpoint), depends upon certain bodily and mental conditions, but these conditions are not the direct cause of the severance of the body and the life-energy, but only the indirect cause. The *direct* cause is the process of disconnection, and only by defining the inmost nature of *that*, can one actually define the "real nature" of death.

CHAPTER IX

MY OWN THEORY OF THE NATURE OF DEATH

BY HERWARD CARRINGTON

NOT until one begins to look up the literature on "death" does one discover how scanty it is; not until one begins to read upon the subject does one discover how little is really known about it! For my own part, I may say that I took every means known to me to make my reading as complete as possible, before attempting to write a book upon such an abstruse question, and I think I may fairly claim to have read everything of importance that has been written upon the subject from the scientific point of view. But little of any real value was to be found, with the exception of about two books and an equal number of magazine articles! The encyclopædias were equally useless. The *Encyclopædia Americana* contained a couple of pages on the subject—mostly devoted to sudden death, and its various symptoms; and a very brief note was found in one or two other encyclopædias; but not one word did the *Encyclopædia Britannica* contain! When such an authority refrains from even mentioning the subject, it is hardly to be wondered at that lesser works should contain little or nothing upon the matter.

And yet it is astonishing, when we come to consider it, that so little is known, and so little interest is taken in this most momentous question. Medical men have the opportunity of studying thousands upon thousands of death-beds during the course of the year, but practically

nothing of interest is ever said concerning these scenes. This cannot be due to over nicety of sentiment on their part, for repeated experiences of the kind tend to deaden the sense of the awful and the marvellous, as we all know. Nor can it be that they do not pay strict and close attention to what is going on before them. Many physicians have doubtless watched the process of dying with the utmost care. The only rational interpretation of this silence is, that no man has had the desire to come forward and attempt to explain the facts and the phenomena that he is constantly observing. The *facts* are seen often enough; but any explanation of the facts is quite impossible! That would certainly seem to be the only interpretation of this remarkable and prolonged silence.

But, seeing that death is taking place all around us, every day of our lives, and that no man can escape it—no matter how well or how long he may live—is it not advisable to try and explain that which has puzzled philosophers and physiologists so long? I think every one would like to see the question solved; but no one has had the initiative to come forward and attempt to solve it! As both Mr. Meader and myself believe that we have some grain of truth to offer to the world, however, upon this question, we do not hesitate to broach it, and offer our explanation of the facts—for what it may be worth. Speaking for myself, I may say that, since I prefer the Truth to all else in this world, I feel that I have nothing to lose by coming forward in this manner, and saying that I believe I have discovered the cause of natural death—and, incidentally, *some* of the phenomena, at least, of life.

My chief reason for collaborating in the writing of this volume was to ascertain how much was known of the causes of natural death, to summarise what had been said on this subject, and to advance what is, I believe,

a new theory of natural death and its causation. Any theory of death must fill a number of requirements, in order to be really explanatory. It must reach to the very heart of the problem, and explain not only the surface phenomena, but the very essence of the process we see before us. Further, if the theory be sound, it must explain *all* the facts, both physiological and psychological; and must also be capable of explaining sudden death, death due to accident, disease, mental causes, &c., equally with death from old age. I might indeed contend, and justly, that I am not called upon to extend my theory to exceptional and odd cases—not to cases of death due to accident, to sudden death, or to disease, since I am only attempting to define *natural* death; but if my theory be found to fit into, and explain, all these phenomena equally well, that is surely so much the better, and is a more or less conclusive proof that the theory is correct. All that can be demanded of any theory is that it explains all the facts, in a simple and satisfactory manner, and I think I may claim that the theory does this. Mr. Meader and myself differ somewhat on this question of the cause of natural death, and for this reason we have thought it better that each should elaborate his own idea in a separate place. In this way we can both express our ideas unimpeded. The reader also has the advantage of having two suggestions instead of one, and may thus have a double theory of the causation of death laid before him.

Let us first of all consider "natural" death. We have been led up to this, and have had most of the misunderstandings cleared away by our discussion of the problem of "old age." There we saw that it was not so much the germs that are to be dreaded, as the condition of the body that rendered their presence and growth possible; and we can at least form a conception of what

that is. Decay, degenerative changes, &c., are all pathological and abnormal states, due to the food and other habits of the people, and none of these would be present in normal, healthy old age. But death is commonly supposed to be *due* to these very causes, and to result because of them; and science knows no reason why death should ever occur so long as these changes did not take place. Then are we intended to live for ever? Certainly not! How, then, can natural death take place? That is the problem to be solved, and I think it can be solved easily enough if we consent to lay aside present-day materialistic physiology and its teachings, and look for something in man which is a little more hidden, which cannot be discovered by the aid of the scalpel, but which is, in very truth, the life principle itself.

It has often been said that we cannot know what death is until we know something of the nature of life, and that is very probably true. Death has also been defined, times without number, as "the cessation of life." But what is the use of that definition when we have not the slightest idea of what life is? Surely we are in a vicious circle here: death is the cessation of life, and life is the opposite of death! How can we ever reach any satisfactory explanation, so long as we are content to beat about the bush in that fashion?

In order to define death (natural death), therefore, it will first of all be necessary to give a definition of *life*. I need not, indeed, give a definition of its essence—its very innermost nature—so long as I can give a satisfactory definition of its phenomena, its connection with the organism, and the character of its manifestations through it. If "life" were once understood, we might be enabled to see in what its negation consisted. We can conceive the opposite of a thing we know, but not the opposite of a thing we do not. Roughly, then, let me attempt a definition of the phenomenon of life.

As a matter of fact, I have already defined life in my *Vitality, Fasting and Nutrition*, p. 334, and I need only re-state the position I there took. I said: "And what is life? That, of course, is unknown. But I venture to think that we shall not go far wrong should we conceive it—on its physical side—for of its essence we are quite ignorant—as a species of *vibration*."¹ I then attempted to show how this conception might account for the bodily heat noted, and how it was in accordance with the theory of vitality advanced. Here I shall endeavour to extend the idea in another direction. By it we shall, I think, be enabled to account for death.

If the manifestation of life is actually a species of vibration, and life manifests at a certain rate, and at that rate only (or within certain narrow limits), it will be seen that, in order to render impossible the manifestation of life, it would only be necessary to raise or lower the rate of vibration above or below the limits designed by nature as possible for the manifestation of life, in order to render this manifestation impossible. If the rate of vibration be above a certain speed, life (or its physical base or body) would be shattered, and its manifestation become impossible. On the other hand, if the rate of vibration were to fall below the minimum limit set by nature, then life would lose its hold of the organism, and drift away, no longer able to manifest through that body. Such,

¹ It may be objected that, in thus defining life as a species of vibration, I have not explained it in full. As I have repeatedly said, I have not attempted to do so. All I intend accomplishing here is a definition of the manifestation of life, and a statement of the possible conditions under which it might or might not manifest. That is all that is attempted, in the case of any other energy or quality. For instance, we do not define the essence of light (so to speak) when we say that it is vibration at a certain rate; nor heat, *ditto*. But we know what we mean by the terms very well, and there is never any demand made to define "light" or "heat" more accurately. I feel that it is the same with life. We are dealing with *phenomena* still, and not with *noumena*. My present idea is merely advanced, to be tested, like any other hypothesis.

in rough outline, is the theory. Now let us apply it in detail to the facts.

First, let us consider what "natural death" would mean on this theory. Assuming that a certain rate of vibration (of the nervous tissue, or of some ethereal medium acting upon nervous tissue) represents the ideal of health, we might suppose that all rates of vibration above or below this would represent, more or less, manifestations of abnormality or disease—mental or physical. A *slight* lessening of the rate of vibration would indicate a lessened amount of vitality—sluggishness, enervation, depletion, and all that goes with these states. On the other hand, an elevation of the rate of vibration would induce undue excitement, excessive stimulation, abnormal passions and emotions, feverish conditions, *et hoc genus omne*. I need not here go into the medical details of this theory, and of its applicability to disease: possibly I shall do so on another occasion. At present I only wish to indicate its applicability and explanatory power, so far as the phenomena of life and of death are concerned. But any medical man will see its applicability and potentialities, if true.

Now, we may suppose that this rate of vibration would be influenced in two ways—by the condition of the body, and by the state of the mind. If the body be choked up with *débris*, and clogged so that life cannot manifest through it, then the rate of vibration will be so lowered that only a very little life, or life of a low order, can become manifest.¹ If, on the other hand, the mind be unduly excited; if it be stimulated

¹ This might also account for the phenomena of evolution. Professor F. C. S. Schiller wrote some years ago, in fact (*Riddles of the Sphinx*, p. 294): "If the material encasement be coarse and simple, as in the lower organisms, it permits only a little intelligence to permeate through it; if it is delicate and complex, it leaves more pores and exits, as it were, for the manifestations of consciousness." I venture to think this is quite in line with my theory.

and raised to a pitch of great emotional or intellectual activity, this would doubtless correspond to an increased rate of vibratory action; and, thus increasing the activity of the organism through which it manifests, by reason of its raising the rate of vibration of its nerve centres, it would produce disastrous consequences in that organism. A *slight* raising or lowering of this rate of vibration would thus produce disease of one character or of another; and when the rate of vibration exceeds a certain limit, then life would be no longer possible at all—at least in that body.

Now, applying this theory to the problem before us, I think we have a satisfactory explanation of natural death, as well as of all the sudden deaths—deaths due to accident, disease, &c. Let us see if this is not the case.

Take, first, a supposedly typical case of “natural” death. As the result of years of living contrary to the laws of nature (more or less),¹ the body has become enfeebled, the vitality low, the powers sluggish, the chemical composition of the body altered, and the tissues more or less clogged with débris and mal-assimilated food material. Once this process of blockage and decay has begun, it proceeds more or less rapidly, according to the condition of the organism. Thus, I conceive that it would be impossible for any person in perfect health to die: but no one is in perfect health! This process of blockage, then, goes on from day to day, until there comes a time when life cannot set the vital machinery in motion. Thus we have the state which

¹ No one can live *absolutely* according to the laws of nature. That would be an ideal condition—which does not exist as an actuality. However closely we may obey the laws of nature, therefore, so far as they are known to us, we are perverting them every day of our lives to a great or an infinitesimal degree. For this reason, death ultimately comes to us.

I defined as death in my *Vitality, Fasting and Nutrition*, pp. 330-1, viz.: "That condition of the organism which renders no longer possible the transmission or manifestation of vital force through it—which condition is probably a poisoned state of the nervous system—due, in turn, to the whole system becoming poisoned by toxic material absorbed from the blood."

I now think I see a step further than I did when I wrote that passage. I now think I see *how* it is that life is prevented from manifesting through the body. *It is because the rate of vibration at which life can manifest cannot be reached.* In such a body, the minimum rate of vibration at which life can become manifest to us cannot be attained. Its nervous mechanism cannot be set in motion. I should thus, therefore, define natural death, or death from old age:

IT IS THE INABILITY OF THE LIFE FORCE TO RAISE
TO THE REQUISITE RATE OF VIBRATION THE
NERVOUS TISSUE UPON WHICH IT ACTS—ITS
MANIFESTATION THUS BEING RENDERED IM-
POSSIBLE.

We have here, I think, a complete and satisfactory definition of natural death—offered, I believe, for the first time.

I am well aware of the fact that present-day science does not recognise any such separate life force as I have postulated; but, on the contrary, asserts that life is the very *product* of the functioning of the body. Some years ago this was held (in the crudest form) to be true of mind also; but this is now universally given up, and I feel assured that the present position with regard to life and vitality will shortly have to be given up also. There is no proof whatever that the present conception or interpretation of the facts is correct; all that science

has shown in this particular field is that a certain amount of organic tissue change, and a certain amount of life (so to speak) are present at the same time; and it has been by no means proved that one *creates* the other. All that is proved is *coincidence*; not *causation*. Orthodox science claims that the destruction of a certain amount of *matter* (organic) brings into being a certain amount of *life*: Dr. Rabagliati and myself, on the contrary, hold that the manifestation or expenditure of a certain amount of life wastes or displaces a certain amount of organic matter (which is made good by a proportionately small or large amount of food-material). We can take all the facts of physiological science and interpret them in a different manner. Just as one school of psychologists asserts that the waste of the substance of the brain does not actually produce the thought, but is only coincidental with it (or is even caused by it); so we contend that *all* the vital wastes of the body may be looked at from the same standpoint; and that, instead of the food causing the bodily energy, vital energy wastes the bodily tissues by acting upon them; and this loss is invariably made good by a proportionate amount of food. I argued this position at great length in my *Vitality, Fasting and Nutrition*, pp. 225-303, and Dr. Rabagliati also strongly insisted upon this possible alternate interpretation of the observed facts, in his masterly and excellent Introduction to my book; and I shall only refer the reader to the text for an elaboration of that idea. Here I need only say (and on this I insist), that this idea of a separate life force is quite *possible*, and is a tenable position and theory, is in accord with all the known facts of experimental physiology, and also enables us to explain many facts which on the ordinary theory we cannot explain. For these reasons, I accept this theory

as substantially correct, and shall proceed with the argument as if it were true.) See Appendices B and C.)

Dr. Charles S. Minot, indeed, when discussing this difficult question, expressed himself as follows :—

“No mechanical explanation or theory of conscious automatism suffices, but a vital force is the only reasonable hypothesis ; the nature of that force is, for the present, an entire mystery, and before we can expect to discover it, we must settle what are the phenomena to be explained by it.”

And thirty years later Dr. Minot was still able to say :—

“So little have we gained since 1879 in our comprehension of the basic phenomena of living things, that were I to re-write the abstract in accordance with present knowledge, I should not change it essentially. The vitalistic hypothesis still seems to me scientifically the best” (*Age, Growth and Death*, p. 267).

It may be added that there is a slow but distinct tendency among biologists to revert to some vitalistic hypothesis for an explanation of living matter and its phenomena. (See, *e.g.*, Wilson, *The Cell*, pp. 394, 417, 434, &c.) And I may point out, that if this alternative explanation of the facts is a possible one, it throws an entirely new light on many ill-understood historical phenomena. Take, for instance, the cases of “raising the dead.” I think we shall find that many of these cases assume an entirely new aspect when considered from this standpoint, and having in mind the theory advanced. Thus, Sir Benjamin Ward Richardson, in his *Ministry of Health*, writes as follows :—

“What, then, we should abstractly call ‘vitality’ is universal, and in persistent operation in inanimate matter constituted to be animated. What we call life is the manifestation of this persistent and all-pervading principle of nature in properly organised sub-

stance. What we call death, or devitalisation, is the reduction of matter to the sway of other forces, which do not destroy it, but which change its mode of motion from the concrete to the diffuse, and, after a time, render it altogether incapable of manifesting vital action until it be recast in vital mould. We are at this moment ignorant of the time when vitality ceases to act on matter that has been vitalised. Presuming that an organism can be arrested in its living in such a manner that its parts shall not be injured to the extent of actual destruction of tissue or to change of organic form, the vital wave seems ever ready to pour into the body again so soon as the conditions for its action are re-established. Thus, in some of my experiments for suspending the conditions essential for the visible manifestation of life in cold-blooded animals, I have succeeded in re-establishing the condition under which the vital vibrations will influence after a lapse, not of hours, but even of days; and, for my part, I know no limitation to such re-manifestation."

The extreme suggestiveness of these remarks need hardly be pointed out, bearing as they do upon the possible interpretation of historic cases of raising the dead. So long as no part of the organic structure is impaired, or rendered useless, there seems to be no valid reason why the bodily vitality and life should not be forced back into the body by some one, who perhaps understands the law of such vital re-adjustment. On the theory that vitality is a separate force which can exist apart from the bodily structure, this could easily be conceived; and it could even be conceived on the materialistic hypothesis—that vital energy is a mere resultant of the total bodily functions. On that theory life is a product, as it were, of such functionings, and is merely arrested or ceases to be, because the organs which brought life into being cease their activity. Once these organs could be re-stimulated into action, life should re-manifest, by all the laws known to us, or, at least, there is no valid objection, to our thinking,

to its doing so. *Why* life does not thus re-manifest in bodies whose structure is unimpaired is really a mystery, but it is probably due to the fact that the *adjustment* between the life force and the body is impaired, and in some way interfered with beyond recall. There are many cases on record in which a man has, *e.g.*, read a telegram and dropped dead instantaneously. Surely the bodily conditions before and after such a catastrophe must differ almost infinitesimally; and yet there is all the difference in the world between that man's condition before and after such a stupendous event! What has taken place? What physiological reason is there for thinking that life cannot be made to re-manifest in such a body? It has always appeared to me that, were the laws of life—its manifestation and vital connection with the body—more thoroughly understood, cases of "raising the dead" might be far more plentiful than they are at present, and they would no longer be considered "miraculous" by the public at large. Surely this must be because the nervous system is involved, and it is because of the shock that death takes place? The total insufficiency of the current theories of life and of death is never more plainly illustrated than in cases of this character. On the materialistic theory, why should stoppage of the heart, or its emptying of blood, cause sudden death? And how comes it about that cardiac massage can restore the heart-beat and life, several minutes after a heart has stopped beating, when the man would normally be pronounced quite dead? On the theory outlined above, it seems to me all such facts are readily explained. Cardiac massage, *e.g.*, would restore a certain vibratory action to the system, which would render possible the re-manifestation of life through it. In the case of the heart-failure, the rate of the life-vibration would be either raised or lowered so suddenly

and so tremendously, that its manifestation would no longer be possible. Just as light would suddenly jump into invisibility were we suddenly to increase its rate of vibration, and remain invisible indefinitely so long as we retained that rate, just so would life instantly become invisible and intangible, and would cease to function on this plane, where it is visible or sensible to us.

Having defined natural death, let us see if this theory applies to all the other known facts, and explains them in a satisfactory manner. I think we shall find that it does. I should begin with death from mental causes.

To take a typical case, a man reads a telegram, and drops dead. In such a case, I have only to suppose that the rate of vibration was raised to such a pitch, in consequence of the mental emotion and excitement, that life shattered itself, as it were, and destroyed its physical basis for life-manifestation. Death from excessive heat or excessive cold would be caused by the gradual raising or lowering respectively of the vibratory action of life. Death from sudden physical shock, jar, electric current, lightning, &c., would raise the vibration of life to such a pitch that it would become extinct immediately. Just as light would cease to be light (for us) as soon as the rate of its vibrations passes a certain number per second, so would life vanish (for us) as soon as the rate of its vibrations passed its proportionately fixed and set limit. In both cases there would be apparent annihilation, but in both cases the vibrations would continue to persist unseen, unsensed, and unknown to us. Life might then persist, after the physical destruction of the body; and, in fact, *must* so persist, unless we are prepared to defend the doctrine of immediate annihilation of energy and the complete upsetting of the laws of evolution, progression, continuity, and the conservation of energy.

The bearing of all this on psychical research need only be pointed out in this place.

Coming now to death from diseases of various kinds, we find the same theory equally applicable here, as before. In all such cases life would be unable to manifest, for the reason that it would be unable to raise the rate of bodily vibration to the requisite pitch, in order to manifest through it. The condition would be very much the same as in all cases of natural death, but death would come more suddenly, more painfully, and would cut off a number of years from that person's life. But, beyond some differences in detail, the same cause would apply equally in both cases, and would explain them both equally well.

Now let us turn to the most difficult of all—cases of *sudden* death. Take a case of rupture of the heart. Personally, I could never see why (apart from the shock to the nervous mechanism) rupture of the heart, and even its complete emptying of blood, should induce sudden death. The nerves throughout the body are still nourished with blood, and would be for some minutes after the heart was ruptured. Why, then, should this cause sudden death?¹

I think all cases of sudden death might be explained as easily and as fully. The sudden raising or lowering of the vibration of life, because of the suddenly induced mental or physical change, would necessitate the raising or the lowering of the vibration of the nervous mechanism

¹ In looking through works on sudden death, one cannot help but be struck by the total lack of inquiry into the real cause of such deaths. The author is invariably content to state that death has resulted from a rupture of the cardiac muscle, *e.g.*, or from *angina pectoris*. But when we stop to ask *how* can either of these conditions actually cause death, we find no answer whatever—not even an attempt at an answer! We are told that death does take place suddenly because of these accidents, and that is all. Certainly we cannot be blamed for attempting to formulate a hypothesis which will explain these facts, and look at this matter, not from the mere standpoint of an outsider, helpless; but as one attempting to understand the very innermost essence of the phenomenon he sees.

accordingly; and, if this were to pass beyond a certain rate in either direction it would mean annihilation—so far as we are concerned—until the rate of vibration could again be lowered or raised sufficiently to allow the re-manifestation of life. In some cases this might be possible. Massage might effect this result, for one thing; hypnotic suggestion or spontaneous trance might bring this to pass, for another—when the vibration had been too high previously—this enabling us to perceive the *rationale* of Miss Molly Fancher's remark, *e.g.*, that "only the trances and spasms saved my life."¹ Electricity might stimulate into action nerves whose vibration had been a trifle too slow to allow of the manifestation of life; other stimulants might act in a similar manner. Only in those cases in which the shock and the rate of change had been so great, that (1) either the structure of the body had been destroyed; or (2) the medium of re-manifestation had been shattered, would re-manifestation and re-vivification become impossible. In such cases life would be severed from the body for good and all.

This theory of life and its connection with the organism also enables us to explain several puzzling facts which have always been stumbling-blocks in physiology, and still are. I refer to *sleep* and to *insanity*. Let us first take sleep. The innermost nature of this process is a mystery to orthodox science; but it becomes intelligible to us on the theory outlined above. We should suppose, from all analogy, that the vibration of life would get shaken and jarred out of its perfect *rhythm* as the result of the day's excitement and activities; and that it would be necessary to induce some state of the body in which these vibrations of life could be again equalised, ready for the next day's activities; and if this period of rest and re-adjustment was not allowed, then the vibra-

¹ *Molly Fancher*, by Judge A. N. Dailly, p. 22.

tions would become more and more disturbed, more and more inharmonious and unrhythmic, until the connection of the life force with the organism would be totally mal-adjusted, and insanity and death ensue. *Sleep* would be, therefore, a time of rest necessary for the *re-balancing* and *re-adjustment of the vibrations of life*.

We have just said that continued loss of sleep will induce insanity more readily and more quickly than almost any other cause. It is asserted that ten days is, as a rule, the greatest length of time that any human organism can exist without sleep. *Why* should so short a period prove so disastrous? Science cannot answer; but I think the answer is found easily enough if the theory just outlined were true. For, in this case, we can see that the longer that sleep is suspended or postponed, the more will the vibrations of life be upset, unequalised, and rendered more inharmonious. We have the analogy of *music* to guide us here. We know that we have harmony and all the sweet strains of music so long as the vibrations are *equal*; but so soon as they become *unequal* in time-interval, then we have discord, or merely *noise*. And it would be the same with the human mind. The continued de-equalisation of the vibrations of life would tend to induce more and more mental mal-adjustment to the body; and hence an unbalancing of the mind. *Insanity*, therefore, might be defined as *a condition of the mind resulting from the mal-adjustment and unequalising of the vibration of life*. It would result from the disharmonious *connection* of the mind and the body—a fact upon which Andrew Jackson Davis insisted years ago in his *Mental Disorders*.¹ This would enable us to see why it is that, in the majority

¹ He says: "Disturbances, therefore, originate neither in the matter of the body, nor primarily in the principles of the soul, but among the *links*, or rather, in the sensitive connections by which both body and soul are compelled to live together . . ." (pp. 147-8).

of cases, persons insane to us here might be perfectly sane so soon as they died (*i.e.* so soon as they became "spirits," and this connection consequently no longer existed). It would also enable us to understand the beneficial effects of *music* on the insane—which is now receiving so much attention—and the *rationale* of the various "rest-cures" for mentally sick patients. This unequalising and unbalancing of the vibration of life would enable us to account for all such facts very easily, and would show us why it is that no *physical* disturbance is to be found (*post-mortem*) in a large number of insane patients. We shall have to go beyond materialistic science to explain many cases of this character.

CHAPTER X

MY OWN THEORY OF THE NATURE OF DEATH

BY JOHN R. MEADER

THE theories that men advance to explain the simple phenomena of life sometimes appeal to us as absurd, when, as a matter of fact, our objections to such ideas may be the result of our own unfamiliarity with the mode of investigation, or processes of reasoning, through which they have been derived. Thus, when we carry our most dogmatic assertions to the last analysis, we are very apt to discover that our belief that *this* theory is false, and *that* theory true, is an assumption based upon no better evidence than a mere line of perspective; and this fact applies to the vaunted wisdom of the scientist, and the doctrinal presentments of the theologian, quite as appropriately as it does to the personal opinions of the individual, who—in accordance with a common, though erroneous, idea—has no legitimate authority to theorise upon very important subjects. As President Faunce, of Brown University, said in his Commencement address, June 1908 :—

“There is no better definition of dogmatism than that long ago given by the humorist—it is ‘grown-up puppyism.’ It is youthful presumption ripening into mature intolerance. We are thoroughly familiar with this in religion, but we often fail to realise that it is quite as common in other realms. Have we not often seen a similar sectarianism in science, in philosophy, in politics? It is precisely the youngest and least established sciences . . . that are

most tempted to assume finality. The extraordinary vitality of the Christian Science movement of to-day has come about mainly because of the unwillingness of medicine and theology even to examine the indisputable facts of mental therapeutics. Psychology is to-day showing a similar aversion to all facts which have been brought to light by the Society for Psychological Research. Dogmatism is not the monopoly of any sect, or creed, or scientific theory. It is the attitude of the mind that has lost its receptivity and candour, and has hardened into premature finality."

My reference to this mental attitude of dogmatic stupidity is neither a challenge to the scientist nor an attack upon the intelligence of the theologian, but is merely introduced as a warning note, that those who do not agree with my particular theory regarding the cause of natural death may not be too ready to brand it as impossible and absurd. To the dogmatic scientist and the mentally-constricted theologian such a precaution may be useless, for when men are unwilling to examine alleged facts—however well authenticated they may be—simply because they might possibly tend to overthrow some already-conceived opinion—it is practically impossible to appeal to their sense of reason. How often during the past hundred years have revolutionary theories been dismissed with ridicule by scientists, merely because they were contrary to the laws of the indestructibility of matter and force, or the conservation of energy and matter! Accepted as demonstrated facts, it was generally conceded that these principles must be true, and an elaborate system of scientific speculation based upon these conditions of cause and effect was constructed with these laws as a foundation. And yet, if Gustave Le Bon's experiments are to be accepted—and it seems impossible that even the most dogmatic scientist should decline to accept them—matter is so far from being indestructible and eternal, that, under certain

conditions, it dissociates and vanishes without return. If this be true, modern science will have to pass through another period of reconstruction.

Although science and theology agree in opposing every new phase of thought that promises to be at all revolutionary in its effect, this is about the only point in which they are in full accord. Science, for example, denies the possibility of the soul's existence, merely because it has been unable to discover the soul by means of its instruments of investigation; and it ridicules the idea of an intelligent Creator for the reason that it has been unable to put its finger upon any particular point in the universe and say, "There He is." Haeckel, in *The Riddle of the Universe*, facetiously defined God as a "gaseous vertebrate," and yet he seriously asks us to accept, not only the etheric hypothesis, but the statement that he has weighed this unseen medium of energy, and has found that an amount equal in bulk to the dimensions of this planet is equivalent in weight to about 250 lbs. avoirdupois!

As every student of science will admit, the atom, which was once regarded as the ultimate particle of matter, is itself unperceivable by any scientific instrument that has yet been devised. To say that the atom is composed of still smaller particles known as "electrons" is, therefore, a proposition that appeals solely to the imagination, and must be accepted on faith alone. In other words, such a hypothesis goes beyond the province of demonstrable science, and enters the realm of pure metaphysical speculation.

Dr. Rabagliati, in his introduction to *Vitality, Fasting and Nutrition*, by Mr. Carrington, gives due consideration to this aspect of the question.

"Does the scientist," he asks, "mean to imply that 'purely metaphysical speculations' are any less metaphysical in the mouth

of the scientist thinking to prove their truth through experiments, than in the mouth of the philosopher thinking to prove them by reasoning? The scientist is on very dangerous ground if he does think this. He would realise this better if he would reflect more about it and about the results of his experiments, for it is not his experiments that are important so much as the conclusions, always metaphysical, which he draws from them. It is not so much facts and experiments which sway and modify us, as the interpretation of the same—and the interpretation always is and must be metaphysical.”

That is to say, a belief in the existence of a soul that, however intangible it may seem to us, may be, at the same time, composed of very tangible material, is in no respect a greater strain upon the intellect than the theory that the absolutely imperceptible atom is composed of material of infinitely less apprehensible substance; and yet science, which accepts the latter hypothesis, utterly denies to us the right to believe in the former.

Therefore, when we say that thought is a force, or energy, as real in its operation as the force that we know as electricity, or as the absolutely unknown law of gravitation, most scientists will accuse us of the crime of exploiting an entirely irrational theory. It is true that materialistic science has long affirmed that “thought is a function of the brain”; and this idea had been so generally accepted that, as Professor James has said, “only a few belated scholastics, or possibly some crack-brained theosophist or psychical researcher can be found holding back, and still talking as if mental phenomena might exist as independent variables in the world.” If this is, or has been, the established scientific view, however, there is considerable logical reason for the belief that this theory, like several of the so-called “laws” of science, is in danger of serious modification, for many of the most progressive physiologists are now reaching the

conclusion that the brain is nothing more than an instrument; that it is not in itself the source or producer of thought, but is merely the organ through which the mind operates.

If we are to admit that this newer view of our mental processes is in accordance with fact, we not only remove one of the most serious objections to the existence of the soul, but we provide a basis for a hypothesis that will explain all the phenomena by which so-called erratic thinkers have sought to verify their theories of the close union existing between the force denoted as "thought" and the physical condition of the body.

Dr. Paul Dubois, of the University of Berne, may be mentioned as one of the scientists who have arrived at this conclusion, for while he is in no respect a dogmatic religionist, he admits that we must recognise "the reciprocal influence which the spirit and the body, the moral and the physical, exert upon each other." Continuing his argument, he says:—

"The physique of man is the entire body, comprising in it the brain with its thousands of cells and fibres, with the organs of feeling, these delicate antennæ which put it in communication with the outside world. This body exists; we can see it, can touch it. We have no doubts of its reality, its materialism, in spite of the specious reasoning of some philosophers who have pushed idealism to the extreme. To say that the physical has an influence over the moral is, then, to affirm that the state of our body can modify our ideas, our sentiments, the condition of our soul. Inversely, if we admit the influence of the mind over the body, that is declaring that the mental representations which we make, the feelings which animate us, can influence the body and modify the functions of its organs" (*Influence of the Mind on the Body*, pp. 4, 5).¹

¹ One case known to us is of extreme interest, since it illustrates the possible hold upon life possessed by the human spirit, so long as consciousness and will are active. A patient lying in bed in a hospital was

As we have already seen in a previous chapter ("The Mental Causes of Death"), all the apparent phenomena of the mind's action upon the physical organism adequately support this theory. That diseases due to the imagination are not necessarily imaginary diseases, but, as Dr. A. T. Schofield asserts,¹ "may produce various functional and even organic disturbances," there can be no doubt. Then, Dr. Moll succeeded both in counteracting the effects of purgatives by suggestion, and in producing this action of the bowels by suggesting that a cathartic had been taken, when none had actually been given. Dr. Krafft-Ebing² also describes a case in which a patient "was much injured and offended by the culpable act of a medical student, who, when she was in a hypnotic condition, laid a pair of scissors upon her chest, telling her that they were red-hot, and thus created a serious wound, which took three months to heal."

As these experiments are in no way exceptional, they tend to explain the so-called miraculous cures that have been reported in all ages, as well as to make the well-authenticated cases of "stigmata," so generally regarded as miraculous, appear in the light of perfectly natural

fast sinking into a moribund condition. Consciousness was fast slipping away, and it was quite certain to the attendant physicians and nurses that if the patient were not revived by some artificial stimulus, and some mental stimulus at that, she would soon become unconscious, and within the half-hour would be dead. The patients in the remaining beds of the ward were warned not to be alarmed whatever occurred, and four nurses quietly posted themselves at the four corners of the patient's bed. At a given signal, just as this patient was losing hold of life and passing into an unconscious state, the four nurses simultaneously shrieked at the tops of their voices, and forcibly wheeled the patient's bed out into the centre of the ward. The result was a start or shock to the consciousness of the patient. The impetus was all that was required to revive in our patient consciousness and an interest in life. From that moment she improved, and within two months was discharged from the hospital cured.

¹ *Nerves in Disorder*, p. 6.

² *Hypnotism*, p. 129.

phenomena; for while it is true that many scientists, like Virchow, have thought that there were but two possible explanations of such a physical condition—that if it was not the result of “fraud,” it must have been a “miracle”—Dr. Moll has shown, in the case of Louise Lateau, of Bois d’Haine, near Mons, France, that, when she directed her whole attention “continually to the wounds of Christ,” the “anatomical lesions resulted from this strain of attention, as in other cases from external suggestion.”

While it has been demonstrated that hypnotic suggestion is capable of exerting a most pronounced physical effect upon the bodily organism, there are as many cases—even excluding that of the “stigmata”—that prove that every mental process has a corresponding action upon the physique, even when that suggestion is apparently automatically produced. To illustrate, it is only necessary to refer again to the many cases recorded in the section of this work on “The Mental Causes of Death,” or to cite Dr. Hack Tuke’s well-known case where an infant was poisoned, and died, as the result of the effect of anger upon the mother’s milk.

It may be thought by some that I have devoted far too much attention to this preliminary argument in support of my own theory of the nature of death; but when I state that I am personally convinced that *natural death is a habit* to which man has become addicted through countless centuries of anticipatory suggestion, the necessity of leading up to such a theory by somewhat slow argumentative stages may become apparent. To understand this theory, it is first necessary to realise that our present scientific conceptions of the phenomena of life are in no respect infallible; that they change, like our views upon other questions, as our horizon widens and we become better acquainted with the laws governing

our being. It is also requisite that we should know that the mind is not only independent of the brain, operating through it as an instrument, just as the sense of sight makes use of the organ known as the eye, but we must also understand that there is so close a bond between the mental and the physical elements of the human organism, that each exerts a demonstrable effect upon the other. With so much determined, it becomes possible to present the arguments for such a theory with less danger of making it appear as the product of irrational, if not absolutely erratic, reasoning.

Of course, I do not mean to imply that all death is purely a matter of habit. Death from disease, or from accident, would occur under any conditions; nor do I wish the reader to infer that the habit of dying is one from which we can break ourselves at any time. Such assertions would be a test of sanity to which I should not care to subject myself. But I do admit that, in my opinion, the physical body possesses the means of lengthening life within its own organism, and to this extent I am supported by some eminent medical authorities. For example, Dr. William A. Hammond admits that "there is no physiological reason why man should die," and to this Dr. Thomas J. Allen agrees, adding: "The human body is not like a machine which must wear out by constant disintegration, for it is self-renewing." It is to this fact that Harry Gaze refers, in his book *How to Live Forever*, when he says:—

"As natural activity does not wear away the body, but simply brings a change, so man is not made old by normal changes. . . . The centenarian and the little child are both continually building the body from equally new food and material. The mental conditions, however, are very different, and determine the great difference that is manifested. The centenarian thinks that his body is one hundred years old, while the child believes his body to be but a few

years old. Neither is correct. The human body cannot exist for centuries, or even for years. The body of the centenarian, which seems to be very old, in reality is new. . . . The fact that the body is incessantly changing demonstrates that old age is not caused by the passing of years, but by a lack of proper adjustment."

As we well know—for this is a scientific fact and not a mere theory—the changes in the material of which the human body is composed continue ceaselessly. The body that we have to-day is in no sense the same body that we are to possess a few years from this time. Every day the process of the rejection of waste and the renewal of tissue continues, and it is only logical to assume that the various phenomena which we call "old age," and the final disintegration that attends upon natural death, could, even at this time, be long postponed if we could succeed in effecting a perfect balance between the process of elimination and that of renewal of tissue. Moreover, as every logical argument seems to indicate, the destructive element that produces physical decay may be traced directly or indirectly to the mind.

It has been objected to this theory that, while it explains death, as viewed and found in the human race, it does not explain the death of animals, insects, and plants. Are we to suppose that they too possess mind enough to bring about their own extinction? Or is it not rather the result of some organic and natural cause—inevitable, and consequent upon some purely physical, as distinct from psychical, cause?

It must not be thought that I have been unmindful of this objection; or that I intend to disregard it. It is a serious objection to the theory, and indeed, were it not for the considerations I propose below, might be said to disprove it, and the whole theory might thus be held up to ridicule. But there is an answer to this objection,

which renders it quite ineffective, and which, I think, conclusively disposes of the argument. It is this:—

If this objection is to have due weight, it must be shown that the modes of death are the *same* in the two cases; and what evidence is there of this? Need we suppose that the nature of the death of plants and the lower animals is necessarily like that of man? If this objection is to have due force, it must be shown that the kind of life is also similar in the two cases—for death has most often been defined—as we have seen—as the cessation of life. And if the life, or the principle of life, be different in the two cases, what evidence is there that the process of death is the same? Perhaps the question may be raised—whether the life *is* so different in the two cases; but on this point I am glad to be able to quote so eminent an authority as Professor C. Lloyd Morgan, the eminent English biologist, who, writing in his *Habit and Instinct*, says:—

“It is probable that, throughout the vegetable kingdom, evolution is merely in the organic phase. If there is consciousness associated with the life of plants, there is no evidence of its being a factor in the process of development. It is not what we have termed before effective consciousness. The lowest animals fall under the same category; but where is the line to be drawn in the animal kingdom, between those in which consciousness, if present, is inoperative, and those in which it is effective, who can say with any certainty? . . . We must be particular to note *the subservient position which mental evolution holds in the life of animals . . .*” (pp. 263, 333).

It will be seen that Professor Morgan is careful to emphasise the comparative unimportance of consciousness, as a factor of evolution in the vegetable and lower animal world, and its great influence in the higher animal realm. Consciousness, that is, actively tends

to shape the destiny of the higher animals, while it has but little effect in the lower planes of activity. Nevertheless, we have only to threaten certain insects with death, to bring about a complete cessation of their vital functions. This would seem to indicate that there is probably more directly psychic life than is commonly supposed. It also serves to indicate the tremendous power of the mind, even in such lowly forms of life, to cause death. The type of life, and the manner in which the life was formed, is different in the two cases. And if the kind or character of life is different, it is probable—nay, certain—that the mode of *death* would be different also; for, as we have seen, death has always been defined as the cessation of life. And, if the manner of upbuilding life be different in the two cases, it is probable, and this amounts almost to a certainty, that the method of its destruction or withdrawal would be different also—that is, *the manner of death would be different in the two cases*. The psychic life, which plays so important a part in the evolution of man, and so large a part of his life, while here, must surely play an important part in his death also. The life of plants and the lower animals would probably die in an entirely different manner;¹ that factor which had proved so important in the upbuilding and destruction of man—consciousness—would probably be almost a negligible quantity in the case of the lower forms of life. Their death would be largely a matter of physical conditions and surroundings; while man's death would depend largely for its fulfilment—as does his evolution and condition while here—upon his *mind*—the form and content of his conscious and subconscious life.

¹ “The death of organisms is capable of teaching us something as to their life; their mode of dying is typical of their mode of living. The more highly developed an organism has become, the more has specialisa-

If Weismann's theory were correct,¹ and the first animal organism possessed the qualities of physical immortality, it would be easy to imagine how the present element of mortality came into the world, and by what means it has been transmitted to the present time, for it is not necessary to go back on the law of heredity to discover a comprehensive explanation of the phenomena which we call "death."

In the valuable little book from which I have already quoted, Professor Dubois considers this phase of heredity. "By the fact of heredity and of atavism," he says, "we are born already influenced in a certain direction; we enter this world more or less well endowed. This is a heritage which we are obliged to accept."

While Professor Dubois introduces this statement to explain the different manifestation of brain development in various individuals, it may be applied with equal force to the disintegrating effect of the mental fear, or expectation of death. We know, from many authorities, that the emotion of worry exerts just such a depressing influence upon the bodily organism, and that, if the habit of worrying be continued, or the emotion of anxiety becomes chronic, death is the natural and, I might add, the inevitable result. We know, too, that

tion been brought about in the functions of its several parts, and (in almost the same proportion) the more has the *all* become welded into a *whole*. The greater the degree of interdependence existing between the actions of its several parts, the more is the well-being of the entire organism interfered with by damage occurring to any one of these special parts. Through the intervention, for the most part, of the nervous system and vascular system, this individuality of the entire organism is carried to the most marked extent in the highest vertebrata, so that the life of one of these creatures—regarded as a whole, or sum-total of phenomena—differs almost as widely as it is possible from that of some of the lowest animals on the one hand, and from the plants on the other. *Their mode of death also is quite different.* And as with life, so with death; we are perhaps too apt to form our notions concerning each from what we see taking place in man himself and in the higher living things."—Bastian, *The Beginnings of Life*, vol. i., p. 108.

¹ See Chapter I., "The Scientific Aspect of Life and Death."

fear, anger, and humiliation will kill as certainly, in extreme conditions, as the most deadly poison; and, if these facts be true, in what respect is it irrational to suppose that the knowledge of the absolute certainty of death which we have inherited from countless generations of ancestors who have died, when added to our own experience, should produce the depressing conditions that would make the continuance of life beyond the customary period of existence practically impossible?

There can be no doubt that mental characteristics of all kinds are transmitted from generation to generation by heredity. Ribot, in his *Heredity*, brings together a great mass of material upon this subject, and has shown us that not only our instincts and bodily traits are hereditary, but that such complicated psychological characteristics as touch, sight, hearing, smell and taste, memory, imagination, intellectual ability, sentiment, passions, will, national character—such as those of the Jews, Gypsies, &c.—morbid psychological characteristics,—such as tendency to hallucination, suicide, homicide, hypochondria, mania, dementia, general paralysis, &c.—all these are hereditary.

If such traits and characteristics can be transmitted, surely it is but reasonable to believe that the instinct of death might be transmitted also—the anticipation or expectation of it particularly, as this is supplemented by constant suggestions from without during the life of the individual, and hence would form part of his environment and education. Further, in order to form any intelligent conception of the *modus operandi* of heredity, one must always assume that the purely psychological characteristics are associated with, if not dependent upon, bodily structure of peculiarities of a certain type, so that we would inherit, as it were, a physiological instinct for death, just as we should the psychological attitude towards it.

That the food we eat, the air we breathe, and our obedience to all other hygienic laws, are matters that have an important bearing in perfecting the adjustment of physical conditions is a fact that requires no re-assertion; and yet, while the violation of natural laws might be quite sufficient to cause death, our obedience to such laws does not alone enable us to lengthen life far beyond the customary span. Thus the animal, who does not reason as we do, and who probably has little if any idea of the imminence of death, dies of old age, owing to the gradual cessation of the normal functions of the organism due to improper adjustment of both body and mind. Dr. Graham, in the *Science of Human Life*, explains this by saying that "the vital constitution itself wears out," or that "the ultimate powers of the living organs, on which their replenishing and renovating capabilities depend, are, under the most favourable circumstances, gradually expended and finally exhausted."

Admitting all this to be true—admitting, even that the vital constitution does "wear out"—is there any reason to presume that, in the case of man at least, it is not the action of the mind that is one of the direct causes of this deterioration of the bodily functions? It is apparent from the fact that the body possesses the faculty of renewing itself continually—casting off all useless tissue and supplying new tissue to take its place—that man was not constructed to go to pieces after such a brief period of life. In fact, as Dr. Gregory, in his *Medical Conspectus*, wrote: "Such a machine as the human frame, unless accidentally depraved, or injured by some external cause, would seem formed for perpetuity." If there is some element that makes this frame wear out, therefore, it is only logical that we should look for it somewhere else than in the actual physical organism itself, and, realising as we do, the

effect of thought processes upon the body, to what point would it be more reasonable to turn in search of this disintegrating influence than to the mind? We have seen that it is possible for an individual to worry himself to death. It has been proved that other emotions slay. By what law of logical reasoning are we forbidden to presume that a fear of death that has become innate in man through countless manifestations of the law of heredity should not be able to produce death—irrespective of other causes—at the approximately appointed time? Is it not entirely reasonable to believe that old age and death are actually “founded on misconceptions due to ignorance of the simple laws of being;” that the secret of immortal youth is not to be found in any patent nostrum or hidden spring, but that it can come alone through our *conscious* co-operation with these natural changes? In other words, to refer to Gaze once more, “consciously to perpetuate existence is to manifest fresh vitality by the constant conception and realisation of new ideas of growth.”

Although somewhat less radical in some respects, Professor Dubois' doctrine is always pregnant with this same truth—that a healthy mind is most conducive to the health of the body. He, too, appreciates the danger of permitting the thought-force to assert its depressing effect upon the human organism. Thus, he says:—

“When we have arrived at the age of reason, personal education begins, and our greatest task is to retain command over ourselves. It is necessary, above all, for one to believe in his good health, and his power to resist morally as well as physically. As soon as a man believes himself to be ill, he is so. He is not only so in imagination—he becomes so really, physically.

“All those which have been justly called the unhappy passions—fear, inquietude, discouragement, anger—lower the nervous tension and, as all organs work under the influence of the

nervous system, they can all suffer from the rebound of our moral feebleness.

“We must take literally the popular expression to improve bad blood, or, on the contrary, to improve good blood. When one is gay, contented; when one is able to believe fully in his good health, the circulation improves, the nutritious exchanges are accelerated, and the human machine works harmoniously. On the contrary, when one doubts his strength, it diminishes, and all the organs manifest functional trouble, as in an electric circuit where all the lamps burn badly because the current has lost its force.”

We must admit, if our own personal experiences have been of any service to us in teaching us the lessons of life, that these facts are absolutely true. Even in the matter of personal or material success, the introduction of the disquieting elements of fear—discouragement, or lack of confidence in ourselves or our purpose—is certain to nullify our efforts as completely as though it was our physical organism that had refused to respond to the demands upon it. Inquietude, anxiety, and all other “unhappy passions”—as Dubois calls them—produce a correspondingly similar effect. If we want to enjoy the blessings of health and happiness—the joys of living, in fact—we must keep the mind in the right humour, for it is just as impossible to derive healthy thoughts from a diseased, abnormal, or otherwise unhealthy mind, as it is to produce a harmonious operation of the physical organism when most of the mechanism is out of order. Thus Dr. Sweetser says:—

“The mind is never agitated by any strong emotion without a sensible change immediately ensuing in some one or more of the vital phenomena, and which, according to its nature, or the circumstances under which it occurs, may be either morbid or sanative in its effects, in the same manner as in the action of strictly physical agents—the various medicaments, for example.

Mental emotions, when curative, operate mostly, it is to be supposed, on that principle generally admitted in medical science called revulsion; that is, by calling forth new and ascendant actions in the animal economy, they repress or destroy the distempered ones already existing. It is no more strange, then, that the passions should, through their influence on our physical organisation, be capable of engendering or subduing morbid phenomena, than that agents, essentially material in their nature, should possess such powers."

As the reader will undoubtedly note, this is a remarkably clear and comprehensive explanation of the process by which it is possible for the mind to act in breaking down the balance of adjustment upon which the health of the body and the duration of life depend. In a perfectly healthy body this equilibrium between the vivifying and the destructive forces would naturally attain perfection, but how many of us know what it means to enjoy really *perfect* health? Many writers admit that perfect health at the present day, among civilised nations, is probably nowhere to be found, and while this condition is undoubtedly due to the fact that we, as a race, are addicted to most unwise habits of living, it is wrong to surmise that our disobedience to the laws of life is the only influence that operates upon this balance of the vital forces. If we eat too much and exercise too little; if we select the wrong kinds of food, and consume it in an improper manner; if we neglect our sleep, or live in conditions of filth—all these circumstances will have a deteriorating effect upon the tissues. But, even admitting that we attain to an ideal mode of living, so far as physical conditions are concerned, all this will be of no avail in the lengthening of life, unless a corresponding equilibrium of the mental balance is also maintained. That is to say, the mental processes exert sufficient influence upon the body to nullify the effect of an

merely physical habits, however estimable they may be in themselves. It is this circumstance that explains the fact that so many persons live to—what seems to us—an exceptional age in spite of habits that would ordinarily be expected to shorten life materially. But this is the secret of their longevity: although they may abuse the physical organism, they maintain the quietude and cheerful qualities of the mind, and the stability of this mental balance offsets, to a large degree at least, the disintegrating action which their bad physical habits would otherwise exhibit in the operation of the bodily functions.

Fresh evidence in support of this theory has recently been forthcoming. In his *Philosophy of Long Life*, M. Jean Finot devotes a number of pages to a consideration of the problem: "Will as a means of prolonging life." He says in part:—

"The forces of the mind, well utilised, may render us most important services from the point of view of the prolongation of life, as we have demonstrated elsewhere. It is suggestion ill-employed which undoubtedly shortens it. Arrived at a certain age, we drug ourselves with the idea of the approaching end. We lose faith in our powers, and they abandon us. Under the pretext of the weight of age upon our shoulders we take on sedentary habits. We cease to busy ourselves actively with our occupations. Little by little our blood, vitiated by idleness, together with our ill-renewed tissues, opens the door to all kinds of diseases. Premature old age attacks us, and we succumb sooner than we need in consequence of a harmful auto-suggestion.

"Let us try to live by auto-suggestion instead of dying by it. . . . Evil suggestions surround us on all sides. . . . Just as the hypochondriac begins to beam with happiness by continually repeating that he is gay, so persons obsessed by the thought of old age and death will think calmly of their approach. The unreasoning fear of them, by demoralising their consciousness, only quickens their destroying march. Man, arrived at a certain age, or even at a

certain mental state, undergoes a sort of auto-suggestion of death. He then believes himself to have reached the end of his days, and feeds as much on the fear of death as on daily foods. From this moment onwards death fascinates him. He hears its call with terror everywhere and always. The philosophic and salutary consciousness of a hereafter gives place to a cowardly and nervous fear of separation from life. The victim feeds upon this fear, intoxicates himself with it, and dies of it!"

While these facts are true—and can be demonstrated to be true—and while it is difficult to comprehend why anybody should object to this theory as a plausible explanation of the phenomena of so-called natural death, I still believe that the presentation of these ideas will be of advantage to the world, whether my ultimate conclusions are finally accepted or rejected. While most theories that men have devised to explain the phenomena of life and death appeal to the intellect alone, this theory which I have attempted to elucidate cannot fail to exert a far deeper effect, if any of its basic principles are accepted. Thus, if we believe that the "unhappy passions" or emotions are both physically and mentally injurious to us, it is but natural to suppose that we should endeavour to bring them under better control. If we agree that quietude of mind, cheerfulness of thought, and the attitude of love and charity towards all mankind will have a tendency to improve our physical health, increase our happiness, and, finally, add to the number of our days, the mere recognition of the existence of these laws of life would inevitably tend to inspire the ambition to obey them. In other words, whereas other theories are purely intellectual in their aspect—speculative conceptions of conditions that could have little, if any, effect upon the actual life, whether they were or were not true—the principles that I have suggested constitute a practical law of sane living, which, if adopted, would not only

add materially to the comfort and pleasure of this existence, but could not fail to bring our mental processes to that degree of adjustment which would best fit us to enter upon the experiences of a life beyond the grave, whatever such conditions might be.

CHAPTER XI

ON THE POSSIBLE UNIFICATION OF OUR THEORIES

To any one who has read through the theories of death that we have advanced, it will be obvious that, although they are widely divergent in certain respects, they yet approach one another very closely in other ways—and that, were each of us willing to make certain concessions to the other, it might be possible to unify these theories, and so bring into harmony the two aspects of the problem—which, it will be seen, we have attacked from opposite sides—one from the physical or physiological, the other from the psychological, point of view. Now, it has generally been found possible, in the history of psychology, to form some monistic conception of the facts, which opposite schools have been in the habit of discussing from their respective standpoints. One school, for example, would discuss mental facts in purely psychological language; the other school would discuss these same facts in physiological language; but, after all, it has generally been found possible to unify the divergent views, and to find that, upon closer analysis, they were really arguing about the same facts after all. Both beheld the same shield, to use an old analogy, but were looking at opposite sides. It may be the same here!

It will be evident to any one reading Mr. Meader's theory of death, that he considers the mind all-powerful, and that which is capable of inducing natural death alone, and practically unaided by any other physiological

causes. Mr. Carrington, on the contrary, while allowing a place for mental causes of death, considers them, it would appear, of secondary importance. In this connection we desire to discuss only *natural* death, or death from old age; since the authors are in virtual agreement as to the cause of death from accident, shock, disease, or other causes of a like nature. It remains for us, therefore, to consider merely the question of "natural" death.

Let us first of all remind the reader of Mr. Carrington's definition of death, as put forward in his chapter on the theory of its causation. It is: "The inability of the life force to raise to the requisite rate of vibration the nervous tissue upon which it acts—its manifestation thus being rendered impossible."

While this may be the true definition of the physical aspect of death, as it were—that is, of the inability actively to manifest life into the material world—it only states the primary *cause* of this inability. Mr. Carrington stated that this might be due either (1) to the condition of the body, or (2) the state of the mind. Mr. Meader has called attention to the interesting fact that, no matter how well at present, physically, the body may be, or how great care be taken of it, there comes a time, nevertheless, when natural death takes place, in spite of all our efforts to preserve it—that is, although we may, by careful living, and by following the laws of hygiene, extend our lives from fifty to one hundred years, there comes a time, nevertheless, when all must die.

Now, if we could conceive (what is no great strain upon the imagination) that the depressed mental states—the expectancy of death and other psychological attitudes, acquired or hereditary—would correspond to a greatly lowered rate of the vibration of life, it might be possible to unify our theories. For, it will be seen, by depressed mental conditions—by anticipation, worry, fear, expect-

tancy of death, &c.—(all largely subconscious, perhaps) we lower thereby the rate of this vibration—until it is no longer possible for life to become manifest. It is not maintained at the *minimum* standard required by nature for the preservation of life; mental stimuli, in the form of hope, faith, anticipation, and the assurance of continued living, &c., would stimulate into activity a greater fund of the reserve of life, and would render its continuation possible; and, if these stimuli were not forthcoming, life would flutter out and become extinct.

One objection—a very practical one—will be raised to this theory. It is this: That no matter what man may do or think, he does ultimately die as a matter of fact. This would be due to a combination of two causes. In the first place, he would have inherited the psychological tendencies and characteristics which rendered his subconscious anticipation of death necessary. On the other hand, the physiological alterations going on in his body would render difficult the continued existence of life within it. Perfect health, as before pointed out, is an *ideal* condition, not an *actual* one; and every one is in a more or less diseased state throughout his life—and especially is this the case in old age. On any theory, life has to manifest through and be coloured by a material body—upon the characteristics of which it would depend largely for its manifestation. The fact, therefore, that perfect health is *ideal*, and more or less diseased states of the body universal, would indicate, in part at least, why it is that death is universal. If the vibratory theory of the activity of life be true; and if, further, it be true that mental states can modify this energy known to us as life, lowering its tone and rate because of the lessened activity of the mind, it might be possible to conceive a unification of the theories advanced: one that would enable us to see how death is induced on

the one hand, and how it may be largely postponed (as is often the case) by *will* power and other mental states on the other. It is to be hoped that, in years to come, this question will receive the attention it deserves, when some definite results may be forthcoming—founded upon extended observation and experimental evidence; and then it may be that we shall find our conclusions verified— or, on the other hand, supplanted by a theory that may be better and more inclusive than either of ours, or any other so far advanced.

CHAPTER XII

GENERAL CONCLUSIONS

THE twentieth century, says Professor Fournier D'Albe,¹ "is too busy to occupy itself much with the problems presented by death and what follows it. The man of the world makes his will, insures his life, and dismisses his own death with the scantiest forms of politeness. The churches, once chiefly interested in the ultimate fate of the soul after death, now devote the bulk of their energies to moral instruction and social amelioration. Death is all but dead as an overshadowing doom and an all-absorbing subject of controversy.

"The spectacle of 2,000,000,000 human beings rushing to their doom, with no definite knowledge of what that doom may be, and yet taking life as it comes, happily and merrily enough as a rule, seems strange and almost unaccountable. The spectacle somewhat resembles that inside a prison during the Reign of Terror, when prisoners passed their time in animated and even gay converse, not knowing who would be called out next to be trundled to the scaffold.

"Every year some 40,000,000 human corpses are consigned to the earth. A million tons of human flesh and blood and bone are discarded as of no further service to humanity, to be gradually transformed into other substances and perhaps other forms of life. Meanwhile the human race, in its myriad forms, lives and thrives. . . . The individual perishes, the species survives. . . ."

As Professor F. C. S. Schiller² (of Oxford) also says:—

¹ *New Light on Immortality*, pp. 1-3.

² *Humanism, and other Essays*, pp. 284-86.

“Death is a topic on which philosophers have been astonishingly common-place. . . . Spinoza was right in maintaining that there is no subject concerning which the sage thinks less than about death, which, nevertheless, is a great pity, for the sage is surely wrong. There is no subject concerning which he, if he is an idealist and has the courage of his opinion, *ought* to think more, and *ought* to have more interesting things to say.

“In partial proof of which let me attempt to arouse him to reflection by pronouncing some old paradoxes about death which will, I think, be germane to our subject:—

“(1) No man ever yet perished without annihilating also the world in which he lived.

“(2) No man ever yet saw another die; but, if he had, he would have witnessed his own annihilation. . . .

“(3) To die is to cut off our connection with our friends; but do they cut us, or we them, or both, or neither?”

As regards (1), reference is here made to the world of his experience, or, as we might perhaps say with still more accuracy, the objective world, in so far as it was assumed to explain his experience: (2) is true because we can never see another's *self*; what we see is the death of the *body*, which is merely a phenomenon—is *our own* world of experience. Death is not the same thing for him who experiences it and for him who witnesses it.

Indeed the subject of death is as little studied as it is fascinating and all but insoluble. For, on its psychological side, it presents the great problems of immortality and the persistence of consciousness beyond the grave. And on its physiological side it presents also (as we have seen) phenomena of the greatest interest. Myers defined death as the “irrevocable self-projection of the spirit,”¹ and attempted to show the link of connection with certain psychic phenomena in this life. Doubtless life presents this psychological side, and to this we shall address ourselves

¹ *Human Personality*, vol. ii., p. 524.

in Part III. It also presents a purely physiological side and offers problems for solution which cannot be solved in any such offhand manner as many physiologists would lead us to believe.¹ Indeed, the very moment of death is altogether uncertain—so much so, in fact, that Schultze and Virchow (1870) coined the term “necrobiosis” to designate the transition stage between life and death. Often there is no definite time at which life ceases and death begins; but there is a gradual passage from normal life to complete death, which frequently begins to be noticeable during the course of some disease. Death is developed out of life.

And if this be true, might not the reverse be true also? Might not life be developed out of death? Truly death is a tragedy to those who are left; but is it also a tragedy to the one who has solved the great mystery? If “every cloud has a silver lining” might we not take it for granted that this one has too; and that, beyond “the valley of the shadow,” there is surely a hill-top upon which the golden rays of the sun fall with ever-quickenning glow? Such would assuredly be the outcome of a cheerful and healthy philosophy! As Stevenson said in his *Aes Triplex*—and we cannot do better than conclude in his stirring words:—

¹ Thus: “Death . . . is simply the destruction of protoplasm, which would, of course, destroy its properties” (*The Living World*, by H. W. Conn, p. 32). Apart from accident, however, we see no reason for this “destruction,” so calmly supposed. Why should it take place? Again, Loeb (*The Dynamics of Living Matter*, p. 223) says: “In man and the higher mammalians death seems to be caused directly or indirectly through micro-organisms or other injuries to vital organs.” Surely this can hardly be considered a definition of natural death, which, according to his own earlier statements, does take place. And, in opposition to this view, Professor Wesley Mills (*Animal Physiology*, p. 669) says: “Few animals perish from simple decay leading to a gradual slowing of the vital machinery down to zero, so to speak; but when death is not due to violence, as it frequently is, it arises from some essential part getting out of gear, either directly or indirectly.”

“ All literature, from Job and Omar Khayyám to Thomas Carlyle or Walt Whitman, is but an attempt to look upon the human state with such largeness of view as shall enable us to rise from the definition of the living to the Definition of Life. And our sages give us about the best satisfaction in their power when they say that it is a vapour, or a show, or made out of the same stuff with dreams. Philosophy, in its more rigid sense, has been at the same work for ages ; and after a myriad bald heads have wagged over the problem, and after a pile of words have been heaped one upon another into dry and cloudy volumes without end, philosophy has the honour of laying before us, with modest pride, her contribution toward the subject, that life is a Permanent Possibility of Sensation. Truly a fine result! A man may very well love beef, or hunting, or a woman ; but surely, surely, not a Permanent Possibility of Sensation ! . . .

“ Even if death catch people like an open pitfall and in mid-career, laying out vast projects and planning monstrous foundations flushed with hope, and their mouths full of boastful language ; should they be at once tripped and silenced, is there not something brave and spirited in such a termination ? and does not life go down with a better grace, foaming in full-body over a precipice, than miserably straggling to an end in sandy deltas ? When the Greeks made their fine saying that those whom the gods love die young, I cannot help believing that they had this sort of death also in their eye. For surely, at whatever age it overtakes a man, this is to die young. Death has not been suffered to take so much as an illusion from his heart. In the hot-fit of life, a-tiptoe on the highest point of being, he passes at a bound onto the other side. The noise of the mallet and chisel are scarcely quenched, the trumpets are hardly done blowing, when, trailing with him clouds of glory, this happy-starred, full-blooded spirit shoots into the spiritual world.”

PART II
HISTORICAL

CHAPTER I

MAN'S THEORIES ABOUT IMMORTALITY

THE problem of the perpetuity of existence is one that has been a strong dynamic force in stimulating and shaping the thought of man from the moment that he arose sufficiently from the plane of barbarism to be able to commence to exercise his mental qualities in this direction. In the earlier days of his existence he may have been satisfied with the life that the objective senses knew; but when the character of the great mystery of the origin and destiny of life began to dawn upon him, the element of dissatisfaction invariably took possession of his thoughts. Instinctively he felt that, as he must have come from something, it was quite reasonable to suppose that he was the object of the solicitude of the Invisible Power that had created him, and that it was the purpose of that Power to convey him through the experiences of this world to some higher plane, where life would flow on more smoothly, or even in an unbroken round of bliss.

It is to such longings for the preservation of the "Ego" that we owe the origin of our religious faiths and systems, for, as Max Müller says, "without such a belief religion is like an arch resting on one pillar."¹ In the course of his intellectual development there comes a time when man, to some extent, rises above the necessity of a belief

¹ *Chips from a German Workshop*, i. 45.

in immortality; but there can be no doubt but that such a theory of negation is a mental conception that cannot be attained except through the process of reason. That is to say, while it is possible for man to argue himself into a belief in almost anything, he is quite as capable of persuading himself that he believes in nothing—either nothing here or nothing in the hereafter; whereas the question, if it is left to the instinct or to the desires of the human soul, inevitably resolves itself into a cry for protection from the annihilation of the grave. As M. Soldi, the eminent archæologist, has shown, the rudimentary drawings on the practically shapeless monuments that represent our earliest record of man's physical existence clearly interpret a belief in a survival of conscious existence; and even the savage tribes, far though they may be from the pale of civilisation, refuse to admit that the human personality that distinguishes one man from another is destroyed by death. Though the body must perish, that something within the body that stands for individual identity still lives on in the faiths and traditions of almost every land and from the furthest days of antiquity. Naturally, some of these notions are exceedingly crude, and some, perhaps, are extremely materialistic. Behind even the darkest and most obscure ideas, however, the star of hope is shining. Behind the most primitive superstitions there is always the theory that death is not the end of conscious being.

So far as we have been enabled to ascertain, ancestor worship was one of the first systematic religious ideas that the human mind was able to formulate. Prior to the acceptance of this system, religion, where it existed at all, was extremely gross in its sentiments. In the beginning it had undoubtedly consisted in the worship of fetiches, and the semi-superstitious notions that followed these cruder manifestations of man's innate dependence

upon a superior power mark the first appearance of the theory of survival among primitive people.

Among savage tribes the idea prevailed that the soul, while in one sense independent of the human body, could not entirely depart from it; and it was due to this notion that both the custom of preserving the body of the dead and the practice of eating it originated. If the corpse was preserved the soul would not be required to abandon it entirely, and could re-enter its envelope on the day of resurrection; while the theory of eating the dead was based upon the belief that this assimilation of the flesh by the relatives of the departed was the best sepulchre that could be provided.

Repellent as these notions may seem, it must be admitted that belief in the survival also led to other criminal customs that are even more horrible to contemplate, for the terrible practice of cannibalism, as well as the slaughter of the aged and infirm, was a ceremonial crime that had its origin in this wrong conception of the future life.

It is a long step from the savage beliefs in cannibalism and the lowest form of metempsychosis to the more civilised worship of ancestors to which the Chinese race still adheres; for, while one represented the grossest sentiment of barbarism, the latter introduced the family institution, a social system that was destined to become one of the leading civilisations of antiquity.

While it is true that Confucius did not explicitly teach the doctrine of the immortality of the soul, his avoidance of this subject does not imply a lack of belief in survival, for there is no record of any time when the Chinese have not believed that, at the moment of death, each person "returned to his family." Even Confucius taught that the spirits of the good were permitted to revisit their former habitations on earth, or such other places as

might be prepared by their descendants who desired to pay them homage and receive their benedictions. From this idea came the duty of performing sacred rites in such places, the penalty of any neglect of this service being the loss, to those living, of the supreme felicity flowing from the homage of their own descendants when they, too, had departed. While the survival of the Chinese is in one respect an impersonal immortality, it being a blending of the individual spirit in a kind of collective family-soul, the union of this soul with its descendants is so close that it may almost be said to owe its very existence to the continuance of the homage paid to it.

Among the Egyptians we find the idea of immortality assuming a more definite shape, for they clearly recognised both a dwelling-place of the dead and an actual judgment, with its separation of the just and the unjust. Osiris was to sit as judge, and, all hearts having been weighed in his scales of justice, the wicked were sent to the regions of darkness, while the elect were admitted to a participation in the blissful existence enjoyed by the god of light. Bound up with this very clear idea of immortality were many esoteric doctrines regarding the nature of the soul, as well as beliefs that made the preservation of the body so necessary to the proper continuance of the soul life, that vast tombs were built and the remains of the dead were embalmed, undoubtedly with the intention of making them last forever.

If it is not easy to find an affirmation of the doctrine of the survival in the books of the Old Testament, it appears in the esoteric books of the Hebrews, and in no uncertain tone. In fact, there can be no question as to the Jewish acceptance of this idea, for while Moses concealed the knowledge that he must have derived from the Egyptians, there is good reason to believe that

it was preached to the initiates. In speaking of this reserve upon the part of the illustrious legislator, Bishop Warburton held that this very silence was an indication of his divine mission. "Moses," he said, "being sustained in his legislation and government by immediate divine authority, had not the same necessity that other teachers have for a recourse to threatenings and punishments drawn from the future world, in order to enforce obedience."

Professor Ernst Stahelin, in *The Foundations of Our Faith*, argues along similar lines:—

"Moses and Confucius did not expressly teach the immortality of the soul; nay, they seemed purposely to avoid entering upon the subject; *they simply took it for granted*. Thus Moses spoke of the tree of life in Paradise, of which if the man took he should live forever, and called God the God of Abraham, Isaac, and Jacob, thus implying their continued existence, since God could not be a God of the dead, but only of the living; and Confucius, while in some respects avoiding all mention of future things, nevertheless enjoined honours to be paid to departed spirits (thus assuming their life after death) as one of the chief duties of a religious man."

Another evidence that the Jews believed in immortality may be drawn from the laws which Moses promulgated against necromancy, or the invocation of the dead. This magic art was very generally practised by the Canaanites, and, notwithstanding these laws, prevailed among the Jews at the time of King Saul (1 Sam. xxviii.), or even later (Ps. cvi. 28, &c.).

Job, the Maccabees, and several other biblical books, present a striking exception to this rule of silence regarding the future life which so generally prevails throughout the Old Testament. To illustrate, in Job (xix. 25–27) we may read:—

“For I know that my Redeemer liveth, and in the last day I shall rise out of the earth, and I shall be clothed again with my skin, and in my flesh shall I see God: whom I myself shall see and my eyes shall behold, and not another; this my hope is laid up in my bosom.”

This, as well as many other passages that might be quoted if necessary, show very clearly that the ancient Hebrews not only believed in the survival of the soul, but in a literal bodily resurrection as well, while the *Cabala* and the *Zohar*, the two books that summarise the doctrines taught to the initiates, make it impossible to doubt that the idea of immortality was early adopted by the Jewish people.

All the Hindu sects have a distinct leaning towards the mystic or metaphysical view of life. There are so many different expressions of opinion among Hindu philosophers, however, that it is impossible to select any single theory as one that can be presented as a standard of comparison with other religions. In every instance, however, some sort of survival is recognised, and, in most cases, both the theory of the transmigration of souls and the doctrine of the desirability of a life of purely meditative asceticism are presented.

“To the modern Hindu mind, the soul is a complex creation, made up of a number of fluid-like, invisible elements centred about an immaterial principle. Each of these elements corresponds to a particular faculty of the soul, and may, therefore, be considered as relatively independent of the others. The element is more subtle and attenuated in proportion as the corresponding faculty is higher and more characteristic of man. At death the astral body, accompanied by the superior elements, detaches itself from the physical body, which is now deprived of vitality; it thus preserves a complete individuality, which, according as it is good or bad, determines which place it shall henceforth inhabit as the consequence of its terrestrial existence” (Elbé, vi. 73, 74).

The more abstract conceptions of Nirvana and Moksha have been largely superseded by these and other more modern theories.

Although our knowledge regarding the teachings of the Magi of Chaldea is very incomplete, the portions that have been recovered are quite sufficient to establish the fact that the Chaldeans not only accepted the idea of survival, but that their interpretation of this theory was more rational than the notions displayed by most other ancient nations. The Egyptians, for example, were utterly unable to escape from the idolatrous notions that obtrude themselves into almost every phase of their religious system, whereas the Chaldeans lost all idea of idolatry in their construction of a religion of pure ideals and lofty conceptions. The ancient Chaldeans believed in the survival of the soul, even accepting the idea of a bodily resurrection. As Pausanias says (Book IV. c. xxii.), the Magi always taught that those who had lived pure and just lives would go to the bright realm of Ormuzd, while the wicked would pass into the region of darkness. This doctrine, which was taught by Zoroaster, is still held by the modern Parsees. Their position respecting the soul and its destiny was thus explained by Edward Barucha, a Parsee priest in Bombay, in a communication to the Religious Congress:—

“The undying spiritual element was created before the body, and both were united at birth and are parted at death. The soul, which comes from the spirit world, is possessed of various senses and faculties; it enters the new-born body, out of which it will return at death into the spiritual world. Zoroaster teaches us that God grants to the soul such means and assistance as are requisite for the carrying out of its allotted task: these are knowledge, wisdom, judgment, thought, action, free-will, religious conscience, a guardian angel or beneficent genius, and, above all, revelation. At the resurrection of the dead, when all things shall

be renewed and the whole of creation will begin over again, the souls will be provided with new bodies, that they may taste, in the life to come, bliss ineffable."

Among the ancient nations that believed in the soul's survival, none had a firmer or more active faith in immortality than the Gauls; for it was this doctrine of a future life, with its rewards and punishments, that laid the foundation for their institutions as well as their individual life. The acts of heroism with which they accentuated their devotion to the State and their contempt for death, were the direct effect of their belief in a future world. Unfortunately, as in the case of the Druidic and some other doctrines, a complete idea of the teachings of the Gauls' philosophy is unobtainable. Thus we know that they held that man's immaterial part was a divine emanation, and that this was the one vital principle of life. Prior to its appearance as the soul of man, however, it had animated many forms of inferior life—first plants, and afterwards animals. After this experience it was imprisoned in the

"circle of the abyss, *anufu*, but, after long years of struggle and waiting, it escaped thence, and entered the circle of liberty, *abred*, which is also the circle of transmigration. This circle includes all the worlds of trial and atonement peopled by mankind; and of these worlds the earth is one. After many transmigrations the soul will pass on, and will attain the circle of happy worlds and felicity, *gwynfid*. But even this is not all. Far higher and inaccessible removed is the circle of the infinite, *ceugant*, encompassing the other circles and belonging to God alone" (Elbé, c. viii. 89, 90).

While the Gauls taught the passage of the soul through many forms, their doctrine of transmigration was infinitely nobler than the more or less crude ideas that appear in the early theories of metempsychosis. It

was a passing through many bodies, including those of animals, or even plants, but its progress was marked by a steady ascent towards the heights of infinite perfection, and there was no place in this plan for the return of the soul to lower conditions. So thoroughly were the Gauls convinced of the truth of their doctrines, and so firm was their faith in the glory of the future life, that they always gave a condemned prisoner five years in which to prepare for death, not only that he might have time for repentance for his own sake, but for the reason that they did not desire to sully the spirit world by sending a guilty soul into it.

In the Druidical doctrine, the earth was an inferior world devised as a transient abode for the soul during its work of preparation for admission to the world of love. This goal, which is attained only after many transmigrations, is the reward bestowed upon those who have conquered the three great shortcomings of life: (1) neglect of self-instruction, (2) lack of love of good, and (3) attachment to evil.

When the ancient Greeks maintained the idea of survival, as may be seen by an examination of their legendary tales or mythology, it seldom appeared to form a reason for their acts. It was at the foundation of their mysteries, and the arguments that their philosophers advanced for a belief in a future existence are often adapted to modern use. So far as the character of this doctrine of immortality was concerned, however, it was not to be compared to the clearly defined notions maintained by the Gauls. According to the Greek idea, the soul of the deceased person enjoyed at least a semi-conscious existence, in which it retained a sort of half-sensible dependence upon the physical comforts of life. Accordingly the smell of blood of animals, or their cooking flesh, was supposed to be most agreeable to

the shades of the dead heroes. It was due to this belief that funeral banquets were held, to which—when the holy fire had been kindled upon the altar of Zeus by the head of the family—the souls of the ancestors were summoned that they might derive their pleasure from the food that was to be sacrificed for the satisfaction of their ghostly appetite.

Crude as these ideas of the people may seem, the poets and philosophers upheld more spiritual theories, by which they not only taught the future existence of the soul, but the two alternatives of good and evil awaiting it after death. Thus Hesiod wrote:—

“Wrapped in the fluid-like envelopes rendering them invisible, the souls of the righteous wander over the earth wielding their regal powers. They mark the good and evil deeds, and they extend their special protection to such as they have loved in life. As to the souls of the wicked, they are held in Tartarus, where they are punished by the ever-present memory of the crimes which they have committed.”

Some six centuries later these views were more definitely and, in many respects, more rationally formulated by Pythagoras, one of the greatest of the world's philosophers. He asserted that, in addition to the natural body, a spiritual element existed—an element possessing unity and surrounded by a semi-material soul. In appearance this soul resembled the body, to which it was so necessary that life would become extinct the moment it was withdrawn. Thus death was the withdrawal of the soul from the body, and in the act of withdrawing it took with it the spirit, or the immaterial element which it enfolded, and proceeded to a region in space corresponding in character to the nature of the deeds that it had performed in the flesh. As Plato described it, the pure soul soared upward with the spirit to the spheres divine, while the impure soul fell back

“into the dark regions of matter.” To explain the inequality of human conditions and the apparent injustices of life, Pythagoras took refuge in the doctrine of reincarnation.

The Romans were not dissimilar from the Chinese in their early adoption of the system of ancestor worship, and it was upon this religious idea that they constructed the family organisation that contributed to the successful upbuilding of their social state. Their ideas of immortality, however, while more impersonal in their tendency than those of the Greeks, were still sufficiently apparent to be recognisable. They did not theorise as to the effect of this future life upon the general harmony of the universe, or apply its rewards to the acts of this existence, for, as Elbé has said, “the thought of immortality appears rather as a pious longing of the imagination devoid of sufficient support in the reality of fact.”

Despite this, however, the idea of immortality appears quite conspicuously in the works of many Roman writers. Thus Ovid not only explicitly announces his belief in a future existence, but even adopts the theory of transmigration as a logical explanation of the phenomena of natural life. “Nothing perishes,” he says, “but everything changes here on earth. Souls come and go unceasingly in visible form; the animals that succeed in acquiring goodness take upon them human form.” Cicero, too, expresses his belief in immortality, and adds that it has been the universal theory from the day of man’s first appearance upon earth. To quote the passage from *Scipio’s Dream* :—

“Know that it is not thou, but thy body alone which is mortal. The individual in his entirety resides in the soul, and not in the outward form. Learn, then, that thou art a god; thou, the immortal intelligence which gives movement to a perishable body, just as the eternal God animates an incorruptible body.”

As the speculations of Christian theology are described in the chapter on "The Theological Aspect of Death and Immortality," it is only necessary to refer at this time to two ideas that are in direct opposition to these modern religious opinions. These are the ideas of Spiritualism and Theosophy, which embody many of the more or less esoteric doctrines of antiquity, but reproduced in modern garb.

Of course, the use of the word "Spiritualism" in this connection is due entirely to the fact that the term has derived the authority of popular approval. Literally, the title "Spiritualism" should be used solely to describe theories that are contrary to those of "Materialism," and in this respect every professing Christian is spiritualistic in his beliefs. Ordinarily, therefore, the term "Spiritism" is much to be preferred; but in this instance we will follow the line of least resistance, and speak of the "Spiritists" in the manner that will be generally understood.

It is the teaching of this theory that the discarnate soul, on entering the future world, carries with it the *perisprit*, or astral body, which it had possessed during the period of earthly existence. So far as rewards and punishments are concerned, the soul finds its future already written into the record of its earthly acts. If its mind has been centred upon elevating thoughts, if it has not been too deeply absorbed in material things, and if it has lived in accordance with the purest law of love, it finds it possible to go far from the earth plane, into the condition in which good and righteous souls abide. If, on the other hand, it passes into the next life under evil conditions, it is practically chained to earth. Its *perisprit* is far more material, and its ability to retain the memory of the pleasures and needs of the physical life inspires so strong a craving for these material things,

that it remains close to earth, where it may seize upon every opportunity to appear to the living. When spirits appear under noxious conditions they become what may be termed "evil spirits," or what are popularly known as "demons." It is upon this theory that the idea of demoniac possession is based.

Under more favourable conditions, however, the spirit succeeds in animating the partially free perispirit of a living person, after which it is able to produce the phenomena that have played so important a part in the development of modern spiritualism, sometimes giving communications that are intended to establish the fact of the existence of the personality after death. Dr. Alfred Russel Wallace, in his *Miracles and Modern Spiritualism*, pp. 115-16, thus sums up the belief of the average spiritualist on this question:—

"After death man's spirit survives in an ethereal body, gifted with new powers, but mentally and morally the same individual as when clothed in flesh. Then he commences from that moment a course of apparently endless progression, which is rapid just in proportion as his mental and moral faculties have been exercised and cultivated while on earth. Thus his comparative happiness or misery will depend entirely on himself. Just in proportion as his higher human faculties have taken part in all his pleasures, here will he find himself contented and happy in a state of existence in which they will have the fullest exercise; while he who has depended more on the body than on the mind for his pleasures will, when the body is no more, feel a grievous want, and must slowly and painfully develop his intellectual and moral nature until its exercise shall become easy and pleasurable. Neither punishments nor rewards are meted out by an External power, but each one's condition is the natural and inevitable sequence of his condition here. He starts again from the level of moral and intellectual development to which he had raised himself while on earth."

Emma Hardinge Brittain, in her address on *Hades*, thus further explains the position of the spiritualist:—

“Of the nature of these spheres and their inhabitants, we have spoken from the knowledge of the spirits,—dwellers still in Hades. Would you receive some immediate definition of your own condition, and learn how you shall dwell, and what your garments shall be, what your mansion, scenery, likeness, occupation? Turn your eyes within, and ask what you have learned, and what you have done in this, the school-house for the spheres of spirit-land. There—there is an aristocracy, and even royal rank in varying degree, but the aristocracy is one of merit, and the royalty of soul. It is only the truly wise who govern, and, as the wiser soul is he that is best, as the truest wisdom is the highest love, so the royalty of soul is truth and love. And within the spirit-world all knowledge of this earth, all forms of science, all revelations of art, all mysteries of space, must be understood. The exalted soul that is then all ready for his departure to a higher state than Hades, must know all that earth can teach, and have practised all that heaven requires. The spirit never quits the spheres of earth until he is fully possessed of all the life and knowledge of this planet and its spheres. And though the progress may be here commenced, and not one jot of what you learn or think or strive for here is lost, yet all achievements must be ultimated there, and no soul can wing its flight to that which you call, in view of its earth perfection, Heaven, till you have passed through Earth and Hades, and stand ready in your fully completed pilgrimage, to enter on the new and unspeakable glories of the celestial realms beyond.”

Theosophy, on the other hand, is a more mystical philosophy, as it seeks to solve the problems of life, death, and the future existence by means of a system of higher metaphysics. In many cases it has adopted the ideas of the most ancient religions, especially the esoteric doctrines of the Hindu philosophers, all of which combine to produce a system of belief that, however

logically it may be presented, is beyond the possibility of objective proof.

Theosophy declares that the material world is but an insignificant portion of the created universe, and that the human being, so far from being confined to a physical body, possesses a spiritual body, or invisible, fluid-like, intermediary body through which the conscious Ego acts. Moreover, this inner body is extremely complex in its construction, being composed of several distinct and different bodies, one encased within another. As summarised by Elbé, these bodies are distinguished as follows:—

First, in order of materiality, there is the *etheric body*, which assumes the form and existence of the physical body, to which it is bound by an indissoluble bond. It is composed of ether-like particles that are so infinitely minute that it is impossible to compare them to any earthly substance. Born at the inception of organic life, and expiring at its death, it governs its manifold operations.

Second, is the *kamic* or *astral body*, the organ of man's passions and desires. It is the vehicle of feeling and emotion, and through its operations the human being becomes conscious of pleasure, pain, passion, desire, and regret. Although composed of elements that are more subtile than those of the etheric body, the materiality of this body differs in individuals, just as sensitiveness does.

Third, comes the *mental body*, which is the organ of the intellect, and so, of course, manifests itself variously in different individuals.

Fourth, is the *causal body*, through which man conceives abstract ideas, receives the unconscious residue of past experiences, and from which springs the germ that is to expand into future existences.

Lastly, the *Buddhistic body*, which is believed to be in a very embryonic state, even in persons of a high degree of righteousness. It is the organ of unselfish love, charity, and self-sacrifice.

While the etheric body, like the physical body, does not survive death, the soul continues to exist in the astral body for a brief or lengthy period, according to its earthly acts. This astral body is finally destined to die, whereupon the soul joyously departs from the plane of conscious suffering in which till then it has found its existence, to ascend, now clothed in the mental body, to a plane of purer ideas and greater bliss. Still, even this is but a temporary heaven, or plane of observation, from which the soul can look back and study the various lives through which it has passed, thus viewing the connection existing between the successive existences, and appreciating the happy and unhappy incidents of life in their proper light as the manifestation of the operations of the law of karma, which leaves neither act nor thought unpunished or unrewarded.

If, during the course of these lives, the soul has succeeded in cancelling its debt to karma, and has developed the qualities that compose the Buddhistic body, it ascends into yet another world, much closer to God, in which the process of evolution may be continued upon a plane where subsequent reincarnations are unnecessary. But if, in this ascent, the demands of karma have been left unsatisfied, and the thoughts and deeds of life have not been expiated, the soul turns back from this temporary heaven, to pursue its life on earth once more. It is at this time that the most important purpose of the causal body is developed, for it is through the operations of this organ that the various bodies needed as a covering for the immaterial soul are reconstructed. Thus, step by step, the soul that

is condemned to live again, enwraps itself in its different envelopes, and, in this manner, it finally shuts out all recollection of the past lives because of which it has been judged unworthy to ascend to the higher realms of light and joy.

While these are by no means the only opinions that man has held upon these ever vital subjects of contemplation, they are sufficient to indicate that he has so far failed to solve the mystery that envelops the fact of being. In spite of all his speculation, there is but one fact that he has been able to establish to his own satisfaction. He is *here*, but whence he came, and whither he is going, or why, are questions to which faith alone has made answer.

Myths as to the Origin of Death.—Many curious beliefs have been held by savage nations as to the cause of death—how death originally came into the world. Taylor, in his *Primitive Culture*, tells us that natural deaths are by many tribes regarded as supernatural. These tribes have no conception of death as the inevitable; as the eventful obstruction and cessation of the powers of the bodily machine; the stopping of the pulses and processes of life by violence or decay or disease. The savage believes that the only real death is due to accident, or by bewitching the unfortunate patient. He knows nothing of “natural” death. For him, man would never die at all, if he were not bewitched, or if some unfortunate accident did not carry him off. Many races in Australia hold this view. The negroes in Central Africa have very much the same belief. Every man who dies what we call a natural death is really killed by witches! The Esquimaux hold similar views.

Myths as to the origin of death are numerous. Usually, death is supposed to have come into the world,

owing to some sin of omission (not commission). It was due to the fact that some message from a deity was not properly delivered, or because of the failure to live up to a compact with the gods. Here are some of the Australian myths. "The first created man and woman were told not to go near a certain tree in which a bat lived. One day, however, the woman was gathering firewood, and she went near the tree. The bat flew away, and after that came death." Here is another: "The child of the first man was wounded. If his parents could have healed him, death would never have entered the world. They failed. Death came." Some of the natives of Bengal believe that death came into the world owing to one of their number having bathed in a certain pool of water, which was forbidden. The Greek origin of death is too well known to need re-statement. Pandora and her box will always live in the memory of lovers of art.

In New Zealand it is believed that death came because of the neglect of a ritual process. The Bushman story of the origin of death is very quaint: "The mother of the little hare was lying dead (but we do not know how she came to die). The moon then struck the little hare on the lip, cutting it open, and saying, 'Cry loudly, for your mother will not return, as *I* do, but is quite dead.'" There are several variations of this myth. Some natives believe that death is caused by a snake stealing away souls while God is asleep! In another version, a woman offered to instruct two men *how* to sleep. "She held the nostrils of one, and he never woke at all." In still other cases, death was due to direct murder, in the first instance. In Banks Island it was believed that death came in order to keep down the population, which had become too numerous, owing to man's inherent immortality!

According to the *Satapatha Brahmana*, death was

made, like the gods and other creatures, by a being named Prajapati. "Now, of Prajapati, half was mortal, half was immortal. With this mortal half he feared death, and concealed himself from death in earth and water. Death said to the gods: 'What hath become of him who created us?' They answered: 'Fearing thee, hath he entered the earth.' The gods and Prajapati now freed themselves from the dominion of death by celebrating an enormous number of sacrifices. Death was chagrined by their escape from the 'nets and clubs' which he carried in the Aitareya Brahmana. 'As you have escaped me, so will men also escape,' he grumbled. The gods appeased him by the promise that, *in the body*, no man henceforth for ever should evade death. 'Every one who becomes immortal shall do so by first parting with his body.'" (See also Appendix E.)

CHAPTER II

THE PHILOSOPHICAL ASPECT OF DEATH AND IMMORTALITY

THE late Professor William A. Hammond, of Cornell University, writing upon "Immortality," asserted that "the question of the . . . survival of the soul is not a scientific problem. Positive science is impotent either to prove or disprove the dogma," and it is this theory that has been maintained by most philosophers. As Stahelin¹ says:—

"We might take up a line of argument used by philosophy both in ancient and modern times—from Socrates down to Fichte—to prove the immortality of the inner being, an argument derived from the assertion that the soul, being a unity, is, as such, incapable of decay, it being only in the case of the complex that a falling to pieces, or a dissolution, is conceivable. . . . But the abstruse nature of this method leads us to renounce a line of argument from which, we freely confess, we expect little profitable result. For, after all, what absolute proof have we of this unity of the soul? Can we subject it to the microscope, or the scalpel, as we can the visible and tangible? It must content us for the present simply to indicate that the instinct and consciousness of immortality have nothing to fear from the most searching examination of the reason, but find far more of confirmation and additional proof than of contradiction in the profoundest thinking. Further, that this instinct and consciousness do actually exist, and are traceable through all the stages and ramifications of the human

¹ *Foundations of our Faith*, p. 232.

race . . . is confirmed to us by our opponents themselves . . . that there is in man something which is deeper and stronger than the maxims of a self-invented philosophy, namely, the divinely created nobility of his nature, the inherent breath of life, breathed into him by God, the relation to the Eternal, which secures to him eternity."

Watson goes still further, even to the extent of declaring¹ that no where else but in the Bible is there any

"indubitable declaration of man's immortality . . . any facts or principles so obvious as to enable us confidently to infer it. All observation lies directly against the doctrine of man's immortality. He *dies*, and the probabilities of a future life, which have been established upon the unequal distributions of rewards and punishments in this life, and the capacities of the human soul, are a presumptive evidence that have been adduced . . . only by those to whom the doctrine has been transmitted by tradition, and who were therefore in possession of the *idea*; and even then to have any effectual force of persuasion, they must be built upon antecedent principles furnished only by the revelations contained in holy Scriptures. Hence some of the wisest heathens, who were not wholly unaided in their speculations on these subjects by the reflected light of these revelations, confessed themselves unable to come to any satisfactory conclusion. The doubts of Socrates, who expressed himself the most hopefully of any on the subject of a future life, are well known; and Cicero, who occasionally expatiated with so much eloquence on this topic, shows, by the sceptical expressions which he throws in, that his belief was by no means confirmed."

The first, and, parenthetically, one of the most logical attempts to formulate a philosophical tenet on the doctrine of immortality, is that which is contained in Plato's *Phædo*. It was upon this presentation that the Neo-Platonists reared their argumentative structure, and

¹ *Institutes*, vol. ii., p. 2.

nearly all the efforts that have been made to find a logical solution to this problem, since that work was written, have been adapted from it.

The Platonic argument for the immortality of the soul may be summarily stated as follows:—(1) The fact that the mind brings to the study of truth a body of interpretive principles and axioms with it, as part of its native endowment, shows that they can be only reminiscential, and, therefore, derived from a pre-existent state; (2) the soul is an ultimate unity—(*i.e.* monadic in character), and, therefore, not being composite or divisible, it cannot be disintegrated; (3) the term “soul” means the “principle of life,” having the ideal of life essentially immanent in it, and inseparable from it, and therefore it must exclude the opposite idea, death; (4) the soul is self-moving, deriving its activity from within; consequently its motion, and, therewith, its life, must be perpetual; (5) the soul as an immaterial reality is essentially related to the immaterial, invisible, eternal idea; and, as the former is akin to the latter in nature, so is it also akin in duration; (6) the superior dignity and value of the soul argue for its survival of the crass body, and even the crass body persists for a time; (7) the cyclical movement of nature shows everywhere the maintenance of life by opposition, as night, day; sleeping, waking; the dying seed, the germinating flower (this is an argument from analogy; out of the decay and death of one living organism, a new life is generated); (8) the instinctive aspiration of the soul towards a future existence shows that the belief is founded on natural law; (9) things that are destructible are destroyed by their peculiar evil or disease; the peculiar evil of the soul is vice, which corrupts the soul’s nature, but does not destroy its existence; (10) the world as a moral and natural

world demands a future life of rewards and punishments for the rectification of inequalities in this life, else the wrong would ultimately triumph, as in a bad play. This argument is based on the ethical claim that there must be a final equivalence between inner worth and external condition or reward. The views of the Greeks, and especially the views of Plato, have had a profound, an incalculable influence on Christian thought, on early theological formulæ, and on the sum of occidental philosophy.

The discussions of the dogma of immortality, which attracted so much attention during the eighteenth and nineteenth centuries, brought no more satisfactory answer to this riddle of existence. In fact, most philosophical writers, who kept within the bounds of logic, came to Emerson's admitted conclusion that "we cannot prove our faith by syllogisms." The French materialists, for example, denied absolutely the possibility of the presence of a soul and the existence of a future life, psychic life to them being purely an organic function. Not less materialistic is the position of the pantheists, headed by Spinoza, for they held that the World-Soul, which, according to their theories, produces and fills the universe, also fills and rules man; that it is only in him that it reaches its special end—which is self-consciousness—and attains to thought and will, but they hold that, at the death of the individual, this World-Soul retreats from him, just as the setting sun seems to draw back its rays into itself; so self-consciousness sinks once more into the great, unconscious, undistinguished spirit-ocean of the whole.

In its effect Schopenhauer's doctrine is not dissimilar. To him life was the manifestation of the Will-to-Live, and death, the extinction of that Will. In Fichte's system of Idealism, the creative Ego is not the indi-

vidual, but the Absolute Ego. "The individual Ego realises itself only by negating its individuality, by universalising itself, and the Ego thus exemplifying the conceptual life of truth, continues to all eternity, as an indestructible part of the reality of the Absolute Ego." So far as individual existence after death is concerned, this is practically the absorption of the Indian Nirvana. Hegel, personally, paid little attention to the problem of life and death, but his disciples were split into two badly divided factions upon this question of continued existence.

Lotze, in his teleological idealism, bases his theory of the immortality of the soul on the principle of value, taking the ground that a thing will continue for ever which by reason of its excellence should be an abiding constitutive part of the Cosmical Order. In other words, immortality, in his opinion, depended upon individual excellence, and was not the fate of all souls. This idea of what may be termed "conditional immortality," was taught by M'Connell, in *The Evolution of Immortality*; by Dr. Edward White, in *Conditional Immortality, or Life in Christ*; and, later, by Professor Henry Drummond, in *Natural Law in the Spiritual World*, a work that excited so much attention that more than one hundred thousand copies were sold.

The conditionalist argues that the soul of man has no inherent right to immortality, but that this privilege has been acquired through the operation of the infinite merits of Jesus Christ, who, by his triumph over death, opened the door to a future existence, that pure spirits might participate with him in the joys of eternal life. The sinner who rejects divine grace, however, is doomed to disappear, like all useless organisms, which, in the struggle for life, fail to adapt themselves to existing conditions.

Kant, Locke, and other metaphysicians, agree with those theologians who exclude all these problems as being beyond the province of actual scientific demonstration. They hold that it is impossible to prove a future existence from a belief in a Creator, regardless of the attributes that we may admit that such a Creator possesses. As Professor Hammond indicates, however, in the article already quoted, they admit that "the work of man as a moral being, with infinite potentialities [*i.e.* infinite possibilities], necessitates an infinite time for their realisation." The laws of the moral life are drawn from a transcendental sphere, free from conditions of time and space, and so the very essence of man's moral being is invested with the eternal. Man is infinitely progressive and perfectible in his moral and intellectual evolution, and this fact points indubitably to a further existence. If death were the end, the moral idea would be illusory, and man would perish a fragment. An infinite moral imperative implies an infinite moral ability. Duty demands moral perfection. Further, the moral ideal is a character-ideal, an ideal of personal aim, which implies a personal destiny, and the non-illusoriness of the moral life implies the possibility of realising its ideal.

Professor Chase, in his article in the *Bibliotheca Sacra*, February 1849, assumed a somewhat similar position, although he expressed the conclusions in a different way, for he based his argument chiefly upon the gradual and progressive development of life in this planet, and this development, in his opinion, when taken in connection with the capacities and endowments of the soul, indicated, on the part of the Creator, a purpose to continue it in being.

Generally speaking, however, the conclusions of most philosophical speculations regarding man's destiny arrive

at the same melancholy *finale*, that, whatever we may accept upon faith, or however strongly we may hope for a continuance of existence in another world, there are no facts to demonstrate that the tomb does not write the word "Finis" to the book of conscious life. It was such an idea as this that Lord Bacon had in mind when he wrote:—

"Our inquiries about the nature of the soul must be bound over at last to religion, for otherwise they still lie open to many errors; for, since the substance of the soul was not deduced from the mass of heaven and earth, but immediately from God, how can the knowledge of the reasonable soul be derived from philosophy?"

And even Alger confesses:—

"The majestic theme of our immortality allures yet baffles us. No fleshly implement of logic or cunning tact of brain can reach the solution. That secret lies in a tissueless realm, whereof no nerve can report beforehand. We must wait a little. Soon we shall grasp and guess no more, but grasp and know."

Although scarcely intended to do so by the author of *The Critical History of the Doctrine of a Future Life*, in the light of modern investigations the words ring with all the promise of prophecy.

CHAPTER III

THE THEOLOGICAL ASPECT OF DEATH AND IMMORTALITY¹

CICERO defined death as "the departure of the mind from the body," and, if the term "soul" should be substituted for the word "mind," this definition would give a very accurate impression of the theological view of the physical aspect of this common phenomenon. Thus, Tertullian describes death as "the disunion of the body and soul," and, unsatisfactory as this definition may be in many respects, it is quite as explanatory as most of the conclusions that have been reached by philosophers and scientists. Of course it is easy to see that, even granting the existence of the soul, death would not consist in this separation between the material and the spiritual parts of our being. Such a separation would occur, but it would be the consequence of the death of the body, and not the cause of it. To say that death is the "termination" of life, therefore, is to parry the question. Spencer's "cessation of life" definition is not more evasive.

So far as theology is concerned, however, it has no better terms in which to describe the termination of life, towards which every human being is tending; so it satisfies itself by accepting this single general conclusion, and

¹ A very good summary of what may be considered the theological aspect of death is to be found in Mr. H. M. Alden's volume, *A Study of Death*. The author makes death and sin synonymous terms, and uses them in that manner throughout his work. His book is, consequently, of no use to a scientific writer, and has only historical and religious interest.

presenting several theories in explanation of the phenomena that it cannot adequately define. Thus, since the days of St. Augustine, accepted orthodox theology has held that as sin and death came into the world through Adam's violation of the commands of God, it was not until the second Adam—Jesus Christ—came that the penalty of the first man's disobedience was provisionally forgiven and the birthright of immortality restored to man. That this is the literal teaching of the Bible there can be no question, nor was it questioned to any considerable degree in its application to either animal or man, until the time that the discoveries of geology demonstrated the prevalence of death in ages long anterior to the creation of man, or countless ages before the appearance of sin, as described in the Book of Genesis. The earth's strata are full of the remains of extinct life—life that existed, died, and was buried by the slow process of nature during periods that greatly antedated the appearance of any civilised race. Even before primitive man had left a mark to indicate his occupancy of the earth there was life, some of which had already become extinct, and it is easy to determine, from an examination of these fossil remains, that in those periods life was inevitably followed by, and in many instances actually sustained by, death.

As the result, most theologians now admit that, long before the period of man's innocence, the phenomena of death had its place in the economy of the world. Even then the revolving years were marked by the opening and closing of the earth's foliage; by the ripening, consummation, and decay of the earth's fruits. When our first parents went to drink of the waters of the streams in Paradise, every draught they took to quench their thirst required the destruction of myriads of animalculæ, just as the drinking of water does to-day. If they walked in

the fields, or plucked fruits or vegetables to gratify the demands of hunger, each act brought death to some creature that had hitherto experienced the joy of living. In fact theology, as represented by most theologians, now agrees with the assumption of science, that this state of things has existed since the earliest days of the creation of life, and that, in fact, death is the logical ultimate of the law of life under which God, in His good pleasure, placed all creatures that He made, with the single exception of man.

In the case of man, the last and highest creation of the Divine will, the idea of death was immediately set before him as the consequence, or, in fact, the just desert that must follow his disobedience of the law of his Maker, and there is every reason to believe that his very clear conception of the import of this threatening evil was derived directly from the ever-apparent evidence of death's dominion over the beasts of the field, the fowls of the air, and all things that came up out of the earth.

With regard to the animals, or to creatures possessing what may be termed "mere instinct," theology finds nothing that indicates that there is anything judicial in their ordination to death. It is man that has been punished in this manner, and yet, for some reason that is often unexplained, the curse from which he has suffered has also "been brought upon the ground," with the result that "the whole creation groaneth and travaileth in pain together." Just how this arrangement of affairs is to be reconciled with the idea of a benevolent Creator is one of those problems which many theologians have found it difficult to solve, but one explanation is given by M'Clintock and Strong:—

"It may relieve the mystery that, as a general rule, the enjoyments of the inferior creatures greatly exceed their sufferings, and death is but little, if at all, the object of their fear, or even a cause

of much pain. That 'the sum of animal enjoyment quenched in death is amply compensated by the law of increase and succession, which both perpetuates life and preserves it in the vigour of its powers and the freshness of its joys is certain'; also (as bearing on the physical and moral condition of man, to whom, as chief in this lower world, all arrangements and disposals affecting the lower forms of life were subordinated) their subjection to death has enlarged immensely the extent of man's physical resources, and multiplied manifold the means of his mental development and discipline."

Theology holds that, as "it is appointed unto all men once to die," death is actually a physical necessity devised by the Creator as a means of carrying out His purposes regarding the welfare of the human race, and, being such, it has become a universal law which now extends to all organisations in the material universe. This is an opinion that has long been held by exponents of nearly all schools of theological thought.

At the same time, as it would be contrary to the doctrine of God's omnipotence to urge that such a law must operate despite His desire to maintain the fulfilment of the law of life, it is held that there are other orders of creation dwelling on an immortal plane who are not subject to this condition, the ultimate fate of every human being. It is also held that these creatures are constituted of some kind of material, or, in other words, that so far from being all spirit, they have their own form of organised existence. And in evidence of this, we are pointed to the fact that the bodies of the risen saints were "clothed with incorruption and immortality."

Theology also contends that even these frail bodies of ours, in the antediluvian period, were able to prolong the objective existence to the verge of a millennium, and it is argued from this that it is quite possible for God to imbue the human organism with the power, or

the means, of repairing the waste of the forces of life in such manner as to preserve man in unabated vigour and freshness, even to the end of time. It was undoubtedly this belief in God's power to find a means to suspend all laws of His own creation that gave rise to the legend of the Wandering Jew, which was so commonly accepted throughout the entire civilised world a few centuries ago. According to this story, the Jew was punished for his insult to Jesus by being condemned to travel ceaselessly until the Christ should come again in glory on "the last day."

According to the covenant that was originally given to man, he was to remain exempt from the operation of this law of death so long as he remained obedient to the divine command: "Thou shalt not eat of the tree of knowledge of good and evil, for in the day thou eatest thereof thou shalt surely die." Again, after this law or command had been violated, the Bible is equally explicit in ascribing the beginning of the reign of death over mankind to the transgression of this law: "By one man sin entered into the world, and death by sin; and so death passed upon all men, for that all have sinned."

Drawing its conclusions from such passages of Scripture, theology assumes that immortality was actually originally ordained for man, but that it was only provisionally ordained. Death was the penalty that would be imposed for the violation of the covenant. As long as man remained steadfast to his agreement with God, the latter would abide by the conditions of His sacramental pledge; and it was due to man's transgression of the law that he was compelled to pay the price of his sin by renouncing the gift of immortality that had been promised to him and to his offspring.

In regard to other forms of creation, however, there

is no indication in these passages of Scripture that they had also been included in the provisions of this contract. It was man only to whom the law applied, and it is argued, therefore, that the other orders of creatures that may have lived in that time or in preceding stages of the world's existence, were exempt, both from the necessity of obedience to the law and from the penalty required in case of its violation.

Whether, in any way, they may have been constituted under a law of death by anticipation, and as in keeping with a state of things in which death should reign over man, we do not venture to pronounce. That, indirectly, as a consequence of their relation to man as a sinner against God, their sufferings have been increased and their lives shortened, it is impossible to doubt or deny. But if, in this view, sin be the occasion of their death, it cannot be the cause of it. They are incapable of sin, and cannot die judicially for sin. The contrary opinion which long and generally prevailed, that the creatures were immortal until man sinned, has as little to justify it in Scripture as in science. Death, it is there said, is the law of their being; and the true doctrine of the Scripture is not that they die because man has sinned, but that man because he has sinned has forfeited his original and high distinction, and has become "like the beasts that perish." It is unnecessary to multiply Scripture proofs of this awful and humbling truth. Every one is familiar with the frequent and equivalent testimonies that death is "the fruit," "the wages," "the end" and consummation of sin, and the circumstances which attend and induce it impressively connect it with sin as its cause.

In order to argue that death, now that it has come, does not necessarily mean the end of all life; theologians have assumed that, in addition to the objective body,

each human being possesses a soul or spirit. In this opinion, of course, they differ from the materialist, who holds that man is composed of a physical body alone; that, in fact, he is no more than a superior animal, whose mental and moral strength are merely the effect of the higher development of this physical organism. To the materialist, the theory that man is possessed of a soul distinct from the body, and that it is this soul that is the seat of the nobler intelligence, is the height of absurdity. To the theologian, however, this belief is a necessity, for if it were not for the existence of this spiritual part of man, it would be impossible to show that death, instead of being the end of all things, is really a second birth—a birth into another, a more important, and an eternal state of being.

As evidence of the existence of the soul, the theologian points to numerous passages of Scripture, for the books of the New Testament are filled with testimony that conclusively establishes the truth of this theory, provided we are willing to accept them as authoritative. According to these passages, man's intercourse with the outward existence is through the body, which is entirely objective in its mode of operation, but his communion with God and his ability to attain any degree of spiritual development comes to him through the soul, or spiritual self that, while associated with the body, is a distinct and different organism.

The effect of this complexity of being not only appears in the affairs of life, but also tends to complicate the nature and the result of death. If man had his body alone, it would be easy to dispose of such a problem, for death extends to every part of the body, and includes every portion of his objective nature. In this manner the threat that death should follow the violation of the divine command has been literally

enforced. Man does die or perish, so far as his earthly body is concerned. The important question is in regard to the other self—the soul, the spirit, through which he, in accordance with the Biblical promise, may eventually experience far greater joys of living.

In reading the Bible it is easy to discover that reference is made to two kinds of death—the death of the body and the death of the soul—or a spiritual death as well as a material death. In other words, while condemning the outward or objective man to experience “the pangs of death” as a punishment for his sins, God does not permit the inner man—the actual cause of that sin—to escape the penalty. On the contrary, the Scripture assures us that the soul that sinneth shall surely die, and there are many references that might be made to passages that indicate that it is possible to be dead in sin while yet alive in the objective or physical body.

Precisely what effect God’s penalty has upon the body and soul, both severally and together, constitute questions over which there has been considerable dispute. According to some theologians, it is the actual physical body that is to be raised from the grave on the “last day.” In the opinion of others, the physical body will play no part in this resurrection, but, being dead, will perish for all time, while the soul alone will be called upon to account for the sins committed in the flesh.

Naturally, the literal effect of death upon the bodily organism is a matter of common observation. When death comes, the body soon loses its comeliness. Corruption follows, and finally, the structure that was once a human form becomes a shapeless mass of dust. That this dust should be brought together again, to serve once more as the soul’s envelope during eternity, is an

idea that is branded as absurd by nearly all so-called rational thinkers. In spite of its apparent absurdity, however, this theory has been very generally held by nearly all schools of theology, and it is still accepted by many Christian sects, some of which could scarcely be designated as "primitive."

Whatever disposition may be made of the body, all creeds admit the eventual immortality of at least a certain number of the souls of those who have died. Just when this eternity of bliss is to open its doors to the waiting soul, or to what degree divine mercy will operate in extending the scope of the plan of redemption, are among the many questions that are still in dispute. One school, more liberal than the others, grants eventual salvation to all mankind; another school—the Roman Catholic Church—provides an intermediate state, or place of purification, in which those who do not merit eternal damnation may expiate the sins committed in this life; while the several schools of Protestant theology differ in their conceptions of the plans of divine justice—ranging from the ultimate salvation of all, as preached by the most liberal Christians, to the final and absolute extinction of the wicked, a doctrine that seems to have lost many of its adherents during the past few years.

Unpopular as this belief may have become, Hudson, in his *Law of Psychic Phenomena*, insists that it is the only logical view of the situation. He says:—

"The first proposition of my theory is that the death or practical extinction of the soul as a conscious entity is the necessary result of unbelief in immortality. The second proposition is that the soul, having attained immortality through belief, is then subject to the law of rewards and punishments, 'according to the deeds done in the body.' The same propositions are more sententiously expressed in Romans ii. 12: 'For as many as have

sinned without law shall also perish without law: and as many as have sinned in the law shall be judged by the law.'

"In other words, the condition precedent to the attainment of immortality, or salvation—that is, the saving of the soul from death—is *belief*. The condition precedent to the attainment of eternal bliss, and the avoidance of the punishments incident to sin, is righteousness.

"Again, we find a spiritual penalty following a violation of spiritual law in what Christ taught regarding the sin against the Holy Ghost. Just what that sin consists in, never has been satisfactorily defined. We are told that it is a sin that cannot be forgiven. It must therefore consist of a violation of some fundamental law of the soul's existence, the penalty for which is inevitable according to the fixed laws of God. It cannot be a moral offence, consisting simply in wrong-doing, for such sins can be atoned for. . . . It must, therefore, be the sin of unbelief, and consist of a blasphemous denial of the existence of the soul and its Father, God. This would be in strict accordance with the fundamental law of suggestion."

So far as the popular view of death and life after death is concerned, it now differs widely from the position that theology must take when it decides to stand by the logical aspect of the question. According to the popular impression, the souls of those who die go directly to the seat of judgment, and remain eternally in the realm of bliss if they are able to establish their worthiness to participate in this glorious existence of the blessed. That this idea is suggested by preachers and teachers of religion there can be no doubt, but it is equally certain that the Bible nowhere presents any such theory. On the contrary, it teaches that, as sin and death came into the world through Adam, it was through Christ, the sacrifice, that they have been overcome. It was Christ alone who came sinless into the world, and who lived a sinless life; it was Christ alone who arose triumphant over death, and it is through the acceptance of Christ

alone that the soul can be saved. This is the promise of the Bible: that he who believes in Christ, and who lives in accord with that faith, shall have eternal life, but no salvation is promised for those who fail to take advantage of this opportunity. In fact, for the unbeliever, the best that is offered is eternal darkness. To him the eternity that is to be so blissful an experience for the faithful Christian becomes a burden, a period of ceaseless torment—either of mind or body—a time of “weeping, and wailing, and gnashing of teeth.”

This, in brief, is the position to which the logical student of theology must turn, contradictory though it may be to the popular view upon these questions, for there can be no doubt that this is the literal gospel that is taught in the Bible. The sin of Adam, which separated him from God, and which sent him flying with fear from the Garden of Eden, began its disrupting work at the very moment of his transgression. The act of treason—the violation of the covenant—intercepted the happy intercourse that had existed between God the Maker, and man His creature. In this manner God’s contract was instantly fulfilled. Man had sinned, and God ceased to live with him. The law of God had been broken, the fruit of the forbidden tree had been eaten, and death, through this sin, was brought into the life of the man—the one creature of earth to whom the provisional promise of immortality had been given. “In the day thou eatest thou shalt surely die,” God had said, and in the day that he ate the work of death began in the creature’s disrupted relations with the Creator.

Although these conditions are sufficient to cause death (and death without delay), through the mercy of God, as displayed in the plan of atonement, man lives on in the body for a little time, that he may have an opportunity to take advantage of the new covenant that God has

made with him. Through the expiation of the Cross the doors of eternal life have been opened once more, that he who will may enter. The price that must be paid is *faith* plus *works*, and to every man is given the chance to win this prize which was once lost through Adam's sin: immortality—not immortality in this life indeed, but in a life that lies beyond the grave. Thus, whatever the result of God's forbearance and mercy to each individual soul, the physical man must still die. In theology this mortal crisis which each and all must face is known as the "temporal" death, to distinguish it from the "spiritual" death, which makes it possible for a man to be "dead while he liveth."

When this point has been reached, when this dread day has come, theology recognises but one more step before the complete and final issue is attained, for when the last plans of the divine administration have been realised, and the God who created all things is ready to take His own unto Himself, the bodies of all who have slept in dust will be reorganised; both the just and the unjust shall rise from their graves to stand with the quick before their judge, that they may give account of their experience in the flesh, and be judged in accordance with their deserts. It is then that the just shall be raised by faith through grace to the life eternal and incorruptible, while the unjust, the unbeliever, and impenitent sinner shall go away from God's presence into the place of everlasting punishment which is devised for the "resurrection of damnation." It is this that is meant by "the second death."

CHAPTER IV

THE COMMON ARGUMENTS FOR IMMORTALITY

WHILE it is true that positive science has been unable—with microscope or scalpel—to find the smallest trace of an immortal spark in man; while theology has nothing more evidential to offer than an appeal based upon the presumptive accuracy of its revelation, and philosophy stands ready to confess its inability to cope with the problems of death and the continuance of conscious existence, the great majority of human beings are quite as confident of the reality of the next world as it would be possible for them to be if their theories were supported by the most conclusive scientific evidence. Of course, as has been shown, the inability of man to demonstrate the mere existence of the soul to the satisfaction of any law of logic leaves mankind absolutely dependent upon the hope that is in him, that instinctive desire for immortality, the arguments for which are so beautifully summarised by Addison:—

“ Plato, thou reason'st well,
Else whence this pleasing hope, this fond desire,
This longing after immortality ?
Or whence this secret dread, and inward horror
Of falling into naught ? Why shrinks the soul
Back on herself, and startles at destruction ?
'Tis the divinity that stirs within us ;
'Tis heaven itself that points out an hereafter,
And intimates eternity to man.” ¹

¹ *Cato*.
275

True as these words may be, if we are to regard them solely as a picture of man's protest against the doctrine of extinction, they are not of the faintest evidential value in support of the belief that life continues beyond the grave. In fact, as Hudson has said :¹—

“Natural theology stands precisely where it did when Thales philosophised and Simonides sang ; and the arguments are identical with those which Socrates employed in his confutation of the atheism of Aristodemus. Not one of the physical sciences in which we excel the Idumeans has advanced us one step in solution of the great problem propounded by Job, ‘If a man die, shall he live again?’”

Professor Hammond mentions five traditional arguments that have commonly been used to establish the fact that death is not the end of conscious being. These are :—

“(1) The ontological argument, which bases immortality on the immateriality, simplicity, and irreducibility of the soul-substance ; (2) The teleological argument, which employs the concept of man's destiny and function, his disposition to free himself more and more from the conditions of time and space, and to develop completely his intellectual and moral potentialities, which development is impossible under the conditions of earthly life ; (3) The theological argument : the wisdom and justice of God guarantee the self-realisation of personal beings whom He has created ; (4) The moral argument, *i.e.* the moral demand for the ultimate equivalence of personal deserts and rewards, which equivalence is not found in life ; (5) The historical argument ; the fact that the belief is widespread and ancient, showing it to be deep-seated in human nature, and the historical fact of the resurrection of Christ and the statements of the New Testament Scriptures.”

As all of these arguments have already been considered in previous chapters, it is unnecessary to dwell upon them further, except to the degree in which they

apply to the arguments that are in more common use among men; for while many of us may be unable to follow the philosophers and logicians through the intricate mazes of reasoning that lead to their ultimate conclusions, there are certain arguments—more common-place, perhaps—that appeal to ordinary thinkers as extremely convincing. As Hudson says in *A Scientific Demonstration of the Future Life*:—

“It may sound very unscientific, but I must confess that I attach more of scientific value to Emerson’s dogmatic assertion that ‘man is to live hereafter’ than I do to the aggregate of philosophical speculations known to the literature of the subject. He was one of those pure, lofty, and poetic souls whose intuitive perception and recognition of truth is oftentimes as perfect as a mathematical demonstration.”

And there are many individuals who, whether their process of reasoning is scientific or not, will heartily agree with this statement.

Of course, as a matter of fact, there are but two methods of reason that can be applied logically to any question. One is inductive reasoning—the reasoning which begins with accepted facts, or particulars, and from them argues up to the last logical conclusions. The other is deductive reasoning, or the reasoning that begins with conclusions, and from them argues down to facts. Inductive reasoning, therefore, is a logical appeal to fact; whereas deductive reasoning takes the facts that have been obtained more or less inductively, and from them proceeds to calculate its logical particulars. While both methods of reasoning are perfectly legitimate, therefore, both are liable to be mistaken in their conclusions, for both depend upon the accuracy of the facts, or observations, upon which these conclusions are based.

As may easily be imagined, the exponents of the doctrine of life after death have found it extremely difficult to present a very conclusive inductive argument in support of their theories, owing to the absence of facts from which to approach the general conclusion. Accordingly, the tendency shown by modern science—both biology and physiology—has been to dismiss the theory of the soul's existence as undemonstrable.

At the same time it must not be imagined that no attempt has been made to adduce a sound and rational argument based upon the accepted facts of science. Thus, the relations existing between the molecular movements of the brain and their manifestation in human thoughts and feelings have been held to be evidence of the fallacy of the materialistic theory. Professor James, in *Human Immortality*, attempted to “draw the fangs of cerebralistic materialism” by ascribing to the brain a “transmissive” function, but many scientists have not accepted his theory.

It cannot be too strongly insisted upon that, because mental activity and molecular change always go hand in hand, the one is not therefore *produced* by the other. It is certainly true that for every thought we think, there is a corresponding change in the brain substance; but this merely proves the *coincidence* to us, and does nothing to solve the problem of *causation*. We know that there is a definite activity of the brain during all thinking processes, but that does not tell us what the activity is. It is usually assumed that this is a causative function, but that is merely an assumption, as a matter of fact; and Professor William James and other writers have shown us, and indeed insisted upon the fact, that this function might be other than causal in character—it might be coincidental, or even the result of mental operations! In his *Human Immortality*, Pro-

fessor James contended that this function of the brain might be a *transmissive* function just as well as a causal one; and, on that theory, consciousness might exist apart from the brain, and merely function *through* it; and such an interpretation of the facts would leave us quite open to believe anything we pleased regarding the possible separate existence of consciousness. At all events, it would appear that there is no valid reason, physiologically considered, for denying immortality; it is merely a question of interpretation of the observed phenomena. Although certain facts would seem to tell in favour of materialism at first glance, it will be seen that this alternate explanation is always open to us; and hence physiology is as helpless as philosophy when it comes to this question of immortality—and the possibility of solving the problem on *a priori* grounds.

In the *Unseen Universe*, by Stewart and Tait, an effort was made to establish the existence of an unseen world from which this world has come, and to which it is connected by bonds of energy. These physicists believe that their theory explains both the origin of molecules and the force which animates them. They claim that the idea that the visible universe has the power to originate life is utterly contradictory to the facts of observation and experiment; and they assert that the hypothesis of an eternal unseen universe is necessary if we are to explain the law of evolution, the conservation of mass and energy, the law of biogenesis (every living being presupposing an antecedent life), the law of continuity (there being no break in reality, the universe being of a piece), and other recognised phenomena of life in the visible world.

Louis Elbé, who endeavours to explain existence, both in this life and in a world to come, by means of scientific

facts, resorts to the etheric hypothesis for some of his most important arguments.¹ He says:—

“Seeing that the physical sciences acquire paramount importance in our inquiry, we turn to them . . . and discover the fundamental law of indestructibility governing all the manifestations of matter and mechanical forces. We know that we are impotent to create or to destroy the minutest material atom, and we can induce no new manifestation of energy without at once causing an equal quantity under another form to disappear. We remarked that the law of indestructibility applied not only to matter and energy, but also to all events of the past, which also become indestructible when they have once been recorded in the vibrations of the ether, and we have every reason to suppose that the law holds good of phenomena purely immaterial in appearance. . . . We recognise, in fine, that nothing whatsoever in the universe can elude the inevitable operation of the incorruptible law which eternally preserves the memory of the past; and we are hence justified in concluding that the living, and especially the conscious, forces must also be amenable to the same law, for it can scarcely have determined to preserve the memory of our most insignificant acts and yet be unwilling to preserve the being who is their author.²

“If we then proceed to inquire into the mode of action of the physical forces, in the hope of thence drawing some important deductions concerning the nature of conscious force, the existence of which we are thus led to surmise, we find that all of them are exercised through the agency of a hypothetical medium which we term the ether, for it is to it that we trace back the most divergent manifestations of energy. According to our conception the ether effects the solidarity of all the elements of this immense universe, which it entirely pervades; it is capable of transmitting the effort, almost immeasurably great, by which the planets are maintained in their orbits, and at the same time the most minute of electric, calorific, or luminous actions. It produces with equal fidelity each

¹ *Future Life*, p. 370.

² For the modern scientific objection to these theories see Mr. Meader's *Theory of Death*, pp. 207-26.

tremor of life, and it is the requisite agent in the production of all phenomena. But the ether is even more than this, for we think to discover it to-day in the very constitution of matter. The atom, despite its infinitely small dimensions, appears to us to be a kind of infinite world, formed by the union of etheric molecules, the existence of which determines its fundamental properties.

“Thus, in order to explain the slightest material fact, we are bound to fall back upon the hypothesis of an ether, which henceforth becomes for us the one reality, the hidden reason inspiring matter; as the ancients put it, ‘*Mens agit at molem.*’ Are we not, therefore, entitled to look to ether for an explanation of life itself? May we not consider life as depending upon the action of some special immaterial aggregate, perhaps more subtle even than the ether?”

Convincing as such arguments may seem to those to whom they appeal, the critical mind is compelled to admit that their validity does not stand the test of the infallible rules to which all such propositions must logically submit. So, too, the analogical argument inevitably falls when exposed to the analysis of the rules of correct reasoning.

In presenting the details of the analogical argument in support of a future life, it is impossible to summarise such speculations more briefly and completely than by quoting from Alger’s *Critical History of the Doctrine of a Future Life*:¹—

“Man, holding his conscious being precious beyond all things, and shrinking with pervasive anxieties from the moment of destined dissolution, looks around through the realms of nature, with thoughtful eye, in search of parallel phenomena further developed, significant sequels in other creatures’ fates, whose evolution and fulfilment may haply throw light on his own. With eager vision and heart-prompted imagination, he scrutinises whatever appears related to his object. Seeing the snake cast its

¹ Pp. 38, 39.

old slough and glide forth renewed, he conceives that in death man but sheds his fleshly exuviæ, while the spirit emerges regenerate. He beholds the beetle break from its filthy sepulchre, and commence its summer work; and straightway he hangs a golden scarabæus in his temples as an emblem of a future life. After vegetation's wintry deaths, hailing the returning spring that brings resurrection and life to the graves of the sod, he dreams of some far-off spring of humanity, yet to come, when the frosts of man's untoward doom shall relent, and all the costly seed sown through ages in the great earth-tomb shall shoot up in celestial shapes. On the moaning seashore, weeping some dear friend, he perceives, now ascending in the dawn, the planet which he lately saw declining in the dusk; and he is cheered by the thought that—

“ So sinks the day-star in the ocean-bed,
 And yet anon repairs his drooping head,
 And tricks his beams, and with new-spangled ore
 Flames in the forehead of the morning sky :
 So Lycidas sunk low, but mounted high.”

“Some traveller or poet tells him fabulous tales of a bird which, grown aged, fills his nest with spices, and, spontaneously burning, soars from the aromatic fire, rejuvenescent for a thousand years; and he cannot but take the phoenix for a miraculous type of his own soul swinging, free and eternal, from the ashes of his corpse. Having watched the silkworm, as it wove its cocoon and lay down in its oblong grave apparently dead, until at length it struggles forth, glittering with rainbow colours, a winged moth, endowed with new faculties, and living a new life in a new sphere, he conceives that so the human soul may, in the fulness of time, disentangle itself from the imprisoning meshes of this world of larvæ, a thing of spirit beauty, to sail through heavenly airs; and henceforth he engraves a butterfly on the tombstone in vivid prophecy of immortality. Thus a moralising observation of natural similitudes teaches man to hope for an existence beyond death.”

Butler, in the *Analogy*,¹ presents a very similar argument, assuming that because the caterpillar is transformed

¹ Part I. c. i.

into the butterfly, and "worms into flies," we are to exist hereafter "according to a natural order or appointment of the very same kind with that we have already experienced"; but, like Alger and other exponents of analogical reasoning, he makes the mistake of trying to adapt poetic figures of speech or fanciful comparisons to questions that must be determined upon a purely logical basis. To be legitimate, analogical reasoning must justify itself by its conformity to all the conditions of correct logical induction. Thus the field in which analogical reasoning may be properly employed has very decided limitations. It may be proper to employ it when dealing with matters which are known to be governed by the same or substantially the same laws; but never when instituting comparisons, either between subjects which are known not to be governed by the same laws, or between subjects which are not known to be governed by the same laws. . . . In all inductive reasoning there is one proposition that is, or may be, always assumed, namely, *the constancy of nature*. Thus, by the observation of a series of phenomena, say the rising and the setting of the sun, we are enabled to predict with absolute confidence that it will on any given day in the future rise in the east and set in the west. Why? Because we have such confidence in the immutability of the laws of nature that we may assume that the order of the rising and the setting of the sun will never be reversed. It is upon this assumption of the constancy of nature, or rather upon the sublime verity of this assumption, that all advancement in the arts and sciences depends; for if it were not true, we would derive no certain information from our experience, or from our observation of the phenomena of nature. If gravity operated one day and on the next refrained from operating, the whole human race would be instantly

put to confusion, and lose faith in the integrity of the Creator. Inductive reasoning, therefore, could have no possible value as a means of interpreting the laws of nature but for the fact that we know that nature is ever constant.

It is interesting to note, in this connection, that Professor S. P. Langley did not believe that any "Laws of Nature" exist at all, as a matter of fact, but are merely mental conceptions! Thus he believed that Nature exists, and that her phenomena are uniform, and from this uniformity we have constructed modern science, and formulated what we choose to call "the laws of nature." But these laws do not exist as absolute, fixed realities, as a matter of fact; they are merely mental concepts. At any time new facts may come upon the scene, which will make us alter our conception of the laws of nature, and extend them in a fashion hitherto undreamed of. And yet the laws are not really altered, in the old sense of the term; the fact was that no such laws existed as we had postulated, and constant readjustment must be made to fit new facts. Professor Langley insisted upon this over and over again, and wrote in this connection:—

"The immensely greater number of things we know in almost every department of science beyond those which were known one hundred and fifty years ago has had an effect which doubtless could have been anticipated, but which we may not have wholly expected. (It is, that the more we know the more we recognise our ignorance, and the more we have a sense of the mystery of the universe and the limitations of our knowledge. . . . Innumerable are the illusions of custom, but of all these perhaps the cleverest is her knack of persuading us that the miraculous, by simple repetition, ceases to be miraculous. . . . Suppose that a century ago, in the year 1802, certain French academicians, believing like every one else then in the

'laws of nature,' were invited, in the light of the best scientific knowledge of the day, to name the most grotesque and outrageous violation of them which the human mind could conceive. I may suppose them to reply, 'If a cartload of black stones were to tumble out of the blue sky above us before our eyes in this very France, we should call that a violation of the laws of nature, indeed.' Yet the next year, not one, but many cartloads of black stones did tumble out of the blue sky, not in some far-off land, but in France itself.

"It is of interest to ask, what became of the 'laws of nature' after such a terrible blow? The 'laws of nature' were adjusted, and after being enlarged by a little patching, so as to take in the new fact, were found to be just as good as ever. So it is always; when the miracle has happened, then and only then it becomes most clear that it was no miracle at all, and that no 'law of nature' had been broken.

"Applying the parable to ourselves, then, how shall we deal with new facts which are on trial, things perhaps not wholly demonstrated, yet partly plausible? During the very last generation hypnotism was such a violation of natural law. Now it is part of it. What shall we say, again, about telepathy, which seemed so absurd to most of us a dozen years ago? I do not say there is such a thing now, but I would like to take the occasion to express my feeling that Sir William Crookes, as president of the British Association, took the right, as he took the courageous course, in speaking of it in the terms he did. . . . Though nature be external to ourselves, the so-called 'laws of nature' are from within—laws of our own minds—and a simple product of our human nature."¹

To return, however, we see that analogical reasoning is a form of deductive reasoning, and it depends for its validity upon the accuracy of the facts which it assumes. Thus, when it begins to argue from one subject up to an entirely different subject, or attempts to make conditions existing in one class of phenomena apply to phenomena that are entirely dissimilar in character, it

¹ *Smithsonian Report*, pp. 545-52.

is treading upon dangerous ground. If the laws governing the subject-matter observed are not identical with those of the subject-matter investigated, the analogical argument must fall to the ground from sheer lack of supporting facts.

Professor Chase, in his *Bibliotheca Sacra* article already mentioned, objects to Bishop Butler's argument as being "less fortunate than any other part of that great work." In particularising, he said: "Both of the main arguments employed by him are no less applicable to the lower animals than to man, and just as much prove the immortality of the living principle connected with the minutest insect or humblest infusoria as of the human soul. It is not a little remarkable that this fact, which in reality converts the attempted proof into a *reductio ad absurdum* of the principles from which it is drawn, should not have awakened in the cautious mind of Butler a suspicion of their soundness, and led him to seek other means of establishing the truth in question. These he would have found, and, as we think, far better suited to his purpose, in the facts and principles so ably and so fully set forth in his chapters on the moral government of God, and on probation considered as a means of discipline and improvement."

In addition to the particulars to which Professor Chase objects, there are other directions in which these analogical arguments fail to meet the test of criticism. For example, if it had merely been inferred that because a silkworm is metamorphosed into a butterfly, other larvæ were destined to be transformed into winged insects, there might be a reasonably logical basis for such an assumption, because the laws governing the one case might reasonably be assumed to be applicable to all other like cases. The laws governing man, and those that apply to the life of insects, are, however, of an

entirely different class, and to attempt to make the mortal life of one prove the immortal existence of the other is certainly an illegitimate use of the principles of analogy, especially in view of the fact that the changed conditions of the life of this insect do not in any sense present the elements of immortality, as the insect dies after its transformation is concluded. Equally fallacious are Butler's arguments based upon the hatching of the bird from the egg, or the birth of man from the womb. In no case do the same physical laws act as the governing force. On the contrary, as several writers have said, the presumptions from analogy, when they are legitimate, are against rather than in favour of the continued existence of man after death. If we take Nature as an illustration, her phenomena would lead the logical mind to assume that death is actually the end of the process of life. Even the analogical argument drawn from the germination of the seed fails as ignobly to apply in the case of continued existence, for the vegetable life that is derived from the seed that has fallen to the ground and disintegrated is in no respect the same life as that which existed in the plant from which the seed was produced, and, if the analogy applies to man at all, it simply bears out the theory of the materialistic scientists who hold that man's only immortality is in his posterity. If we believed, like the Saracens, that the individual soul is instantaneously transferred to the universal soul at death there might be some logical justification for the assumption that an analogy exists "between the gathering of the material of which the body of man consists from the vast store of matter in nature and its final restoration to that store, and the emanation of the spirit of man from the universal intellect, the Divinity, and its final reabsorption."¹ As here, also,

¹ Draper's *Conflict between Religion and Science*.

however, the validity of this analogy depends upon the assumption of the existence of a soul—and this is the very fact that must be proved, not assumed—it would fall far short of meeting all the logical requirements of science. In fact, no analogy can be instituted

“Between the operations of physical nature and those of the spiritual realm . . . unless it is first clearly shown that the laws of the two worlds are identical. And as it is manifestly impossible to know the laws which prevail in the unseen universe, it follows that reasoning from such analogies is not only unsatisfactory to the last degree, but, measured by logical and scientific standards, it is, to employ no harsher expression, positively nugatory. It is like trying to demonstrate a proposition in mathematics by citing a rule in grammar. Nor does it avoid the objection to express the analogy in the negative form, which was such a favourite of the late Bishop Butler; for it is the logical equivalent of saying, ‘There is no presumption from analogy to be found in the rules of grammar against the possibility of squaring the circle. Therefore the circle can be squared.’”

There are many Christians who feel that it is little better than a waste of time and brain-matter to endeavour to establish the fact of immortality when this doctrine has been so explicitly taught in the New Testament. It was this analogical argument that Paul used when (1 Cor. xv. 14) he wrote:—

“Now, if Christ be preached that He rose from the dead, how say some among you that there is no resurrection of the dead?”

“But if there be no resurrection of the dead, then is Christ not risen, and if Christ be not risen, then is our preaching vain, and your faith is also vain.”

Even should we go to the extent of assuming—as science will not—that the New Testament narrative of the resurrection of Jesus is literally true, and that every

doctrine of the Christian faith can be substantiated beyond the shadow of doubt, we are still confronted by the same objections, that exist in every instance in which the argument from analogy is made to apply to the question of immortality. Thus, if the dogmas of orthodox Christianity be true, and Christ the God who was raised from the dead, the very fact of His divinity subjects Him to the operation of a different kind of law from that which governs mankind. Moreover, if we are to assume—with some other sects—that, while Christ was mere man, the Father performed a miracle in restoring Him from death, this assumption leaves us in the same position as before, for what right have we to imagine that because a miracle was performed in this case the law of nature is to be violated for every man who dies?

It will be remembered, of course, that these objections to the New Testament approval of the doctrine of immortality are simply raised to show that we must resort to something more evidential than mere prescriptive authority if we are to prove the continuance of conscious life to the satisfaction of science. As an intuitive argument, the teachings of the various scriptures are of far more importance as showing the persistence of man's belief in a future life.

As has already been shown in previous chapters, the antiquity of this belief in eternal life is beyond question. All races have held it, and in all ages it has been the star of hope to which all men have instinctively turned. Thus, Alger says:—

“It is obvious that man is endowed at once with foreknowledge of death and with a powerful love of life. It is not a love of being here, for he often loathes the scenes around him. It is a love of self-possessed existence, a love of his own soul in its central consciousness and bounded reality. This is the inseparable element of his very entity. Crowned with free-will, walking on the crest

of the world, enfeoffed with individual faculties, served by vassal nature with tributes of various joy, he cannot bear the thought of losing himself or of sliding into the general abyss of matter. His interior consciousness is permeated with a self-preserving instinct, and shudders at every glimpse of danger or hint of death. The soul, pervaded with a guardian instinct of life and seeing death's steady approach to destroy the body, necessitates the conception of an escape into another state of existence. Fancy and reason, thus set at work, speedily construct a thousand theories filled with details. Desire first fathers the thought, and then thought woos belief."

This restless yearning for another world, a realm in which the disembodied spirit may continue the conscious existence that the physical senses now know as life, has been at the bottom of all religious faiths; but while it is possible that this belief in immortality may be the logical expression of the immortal spark within us, this argument, conclusive though it may be to many persons, does not, and will not, satisfy science until we can demonstrate that it is something more than the material instinct of self-preservation which is common to all physical organisms. Like the analogical argument presented by Alger and Butler, the argument of intuition applies to the lower animals quite as logically as it does to man. Though we may look upon ourselves as of more account in the eye of the Creator, the final product of an evolutionary process to which we are no longer subject, such presumptions do not constitute a particularly valid argument. As Schopenhauer says:—

"Every one feels that he is something different from a being who has once been created from nothing by another being. In this way the assurance rises within him that although death can make an end of his life, it cannot make an end of his existence."¹

¹ *Indestructibility of our Nature by Death.*

Clearly as Schopenhauer states this argument with which mankind has sought to establish a basis for its belief in immortality, man is too logical a reasoner not to recognise the fact that such a theory cannot be adapted exclusively to the members of the *genus homo*. "Man is something else than an animate nothing," he asserts, and with this all who believe in immortality will agree; but to this he adds, "and the animal also."

In conclusion, we may say that, while we are ready to admit that the presence of the belief in eternal life in almost every human heart may be taken as a *presumption* that such a desire may yet be realised, we still deny that such theories as those we have described can logically be accepted as a conclusive argument. Before the doctrine of the continuance of conscious existence after death can be accepted as *proved*, we must demonstrate that another world actually exists, and that in this unseen realm the disembodied spirit, by whatever name we may designate it, continues to maintain the individuality that it possessed on earth. When this result has been attained, and not until then, will man be justified in regarding his hope for immortality as anything more than the manifestation of that instinct of self-preservation that has ever been the "first law of nature."



PART III
PSYCHOLOGICAL



INTRODUCTORY

ALL things perish! So far as we can see, there is not one thing in the universe which escapes that fate, unless it be energy. Science has always contended that every individual organism must die; that, no matter how long death may be postponed, it must come sooner or later. Everything in the universe perishes, it was said—all but two things, matter and energy. But now the newer school of physicists contends that matter, too, perishes, and that the old dogma of the indestructibility of matter is erroneous, and not in accord with the latest discoveries of modern science. Yet, oddly enough, *life*, the most precious of all the energies, is supposed to become extinct at death! The energy we call life is supposed, it is true, to pass into other modes of energy; but it does not persist *as such*. The only trouble experienced by those who condemned this view and contended that the mental life did persist after bodily dissolution was that there was no evidence that it did! In the absence of this proof the doctrine had, naturally, to be given up.

When consciousness came to be treated as a function of the brain, still more doubt was thrown upon the belief, which now seemed to have no solid ground for its rational support. On the materialistic theory, consciousness was considered a mere product of the brain's functioning—a position, however, open to many objections, as one of us has already shown.¹ But in the absence of positive proof

¹ *The Coming Science*, pp. 114–179; *The Physical Phenomena of Spiritualism*, pp. 413, 414.

to the contrary, there was always a justification for the scepticism that prevailed, for the most part, during the closing years of the last century.

But now we come to psychical phenomena. *Here* are facts which (apparently at least) prove that consciousness does persist apart from the body, and evidence is produced in support of that belief. Whether the evidence is sufficiently conclusive or not is, of course, another matter; but no one can dispute the fact that this is the rational *method*—the right way of solving the problem, and the only way in which it can ever be solved. Arguments as to world-theories and metaphysics might go on forever; but if definite *facts* can be produced, indicating that some consciousness is active (that consciousness having been severed from its body previously), then rival theories will have to be adjusted to the facts, and only by such facts can the question ever be satisfactorily settled.

This, then, is the method we propose to adopt in our investigation or inquiry. All speculations will be avoided, and we shall devote ourselves to a study of the facts. If these tend to prove the survival of consciousness, theories will have to be readjusted to conform to them.

CHAPTER I

THE MOMENT OF DEATH

1. THE HOUR OF DEATH.

THAT more deaths occur at some particular hour of the day or night than at any other time has been more than once maintained by statisticians, who have always produced figures to support their claims. The latest essays in this line, the investigations of Dr. H. D. Marsh, of New York, indicate that the wave of diurnal efficiency, or the range of mental and physical activity, varies with the habits of the individual as regards work and sleep, and that with inhabitants of civilised communities the hour of greatest efficiency is likely to be 5 P.M. Says *The British Medical Journal* (London, January 18, 1910), in an article on this subject:—

“This conclusion was the outcome of a special investigation conducted by Dr. Marsh, and curiously enough an examination of the records of death in New York City, likewise made by him, showed that during the period under examination 5 P.M. was also the hour at which the majority of 23,439 deaths from disease occurred. It is certainly notable that the period of the twenty-four hours at which the average man is most alive should be the same as that at which his death is most likely to occur, and the apparent inconsistency has led to turning over our own columns in search of previous observations on the question of what may be called the hour of death. The general result is to indicate that before any final statement can be made as to the hour of the twenty-four at which *cæteris*

paribus death is most likely to occur in any given individual, much more extended and thorough investigations of the point will have to be carried out than have yet been undertaken. At present the evidence is somewhat conflicting. Thus it is found that Finlayson, writing in the *Glasgow Medical Journal* and using some statistics compiled by the City Chamberlain, found that of 13,000 deaths recorded in 1865, the greatest number occurred between the hours of 5 and 6 A.M., while Schneider, writing in *Virchow's Archiv* on deaths in Berlin, concluded that the most fatal hour was between 4 A.M. and 7 A.M. The number of deaths upon which he based his conclusions was 57,000; while Berens, arguing from the limited number of 1000 deaths in Philadelphia, and writing in the *Philadelphia Medical Times*, concluded in favour of the hour between 6 A.M. and 7 A.M. In 1896 Dr. C. F. Beadles published the result of an examination of the statistics of Colney Hatch Asylum. These showed a difference between the two sexes as regards the hour of greatest mortality. Thus, among 1000 women the most fatal hour was between 6 and 7 in the evening, while among 3424 men it was between 5 and 6 in the morning."

Apparently there is a pretty wide choice here for those who prefer to die at the popular hour. The majority, however, would appear to lean toward the earlier hours of the day, as against the conclusion reached by Dr. Marsh. None of them, however, the writer in *The British Medical Journal* reminds us, give countenance to the popular belief that an invalid is most likely to succumb at about 2 A.M., when, according to the Duke of Wellington, the heroic attitude is most difficult to assume. We read in conclusion:—

"On the surface of things, it seems unlikely that any particular hour should be more fatal than another, and in any case it is clear that those who have investigated the matter have not always been dealing with truly comparable units. Precision in recording the exact hour of death is not

easy to obtain, and, besides this, data such as the nature of the illness, its duration, and the age and sex of the patient, have also to be considered. The observers, as a rule, seem to be alive to this point.”

2. PAIN AT THE MOMENT OF DEATH.

Contrary to general opinion, there is seldom any pain at the moment of death. A great deal of evidence could be adduced in support of this statement, but we shall content ourselves with citing a certain number of authorities and a limited amount of evidence only. Dr. Thomas D. Spencer, writing in the *Popular Science Monthly*, some years ago, said :—

“At birth the babe undergoes an ordeal that, were he conscious, would be more trying than a most painful death; yet he feels it not. Born in an unconscious state, the brain incapable of receiving conscious impressions, his entrance into this hitherto unknown world is accomplished during a state of oblivion, known as ‘Nature’s anæsthesia.’ From the earliest period of history, death has been considered as necessarily accompanied by pain; so general is this belief, that the terms ‘death agony,’ ‘last struggle,’ ‘pangs of death,’ &c., have been in almost universal use in every age and under all conditions of society.

“Nothing could be more erroneous; the truth is, pain and death seldom go together—we mean the last moments of life. Of course, death may be preceded by weeks or even months of extreme suffering, as occurs during certain incurable diseases.

“The blood sent to the brain is not only diminished in quantity, but is laden with carbonic-acid gas, which, acting on the nervous centres, produces a gradual benumbing of the cerebral ganglia, thereby destroying both consciousness and sensation. The patient gradually sinks into a deep stupor, the lips become purple, the face cold and livid, cold perspiration

(death-damp) collects on the forehead, a film creeps over the cornea, and, with or without convulsions, the dying man sinks into his last sleep. As the power of receiving conscious impressions is gone, the death struggle must be automatic. . . . Even in those cases where the senses are retained to the last, the mind is usually calm and collected, and the body free from pain."

Professor Tyndall stated that death by lightning must be quite painless, and, from an experience of his own, in which he was shocked into insensibility, on one occasion, he should be entitled to speak upon this point with exceptional authority (*Fragments of Science*). Dr. Edward Clark, in his book on *Visions*, asserted that "death is no more painful than birth." Dr. James M. Peebles stated that in all cases of death from shock, there could be no pain—consciousness being obliterated too suddenly. Henry Ward Beecher asserted that "there is no pain at the last moment." An article in the *Medical National Review*, some years ago, pointed out that death, in cases where a rifle ball passes through the brain, &c., must be painless. Many other cases and statements to like effect could be adduced, if it were necessary.

Of course there is pain in a certain number of cases; of that there can be no doubt. In a few cases, notably in those who "fight for life," self-consciousness, with pain, is present, but such cases are very rare. In most cases, "nature's anæsthetic" is doubtless operative.

Regarding this question of pain at the moment of death, Dr. Osler has said:—

"I have careful records of about five hundred death-beds, studied particularly with reference to the modes of death and the sensations of the dying. The latter alone concern us here. Ninety suffered bodily pain or distress of one sort or another, eleven showed mental apprehension, to positive

terror, one expressed spiritual exaltation, one bitter remorse. The great majority gave no sign one way or the other; like their birth, their death was a sleep and a forgetting.”¹

Says M. Finot: ²—

“The pains which accompany death are chiefly imaginary. Even putting on one side accidental death caused by the breakage of nerves, apoplectic strokes, and diseases of the heart, in which pain is absent, the cases in which we suffer at the approach of death are very rare.”

It is a curious fact that pain is generally lost when nature “gives up the fight.” In cases of cancer, *e.g.*, pain is experienced so long as there is life and activity, but this pain almost invariably passes away a few hours before death. So long as there is pain, some attempt is being made to repair the vital damages; but when pain ceases, then nature has given up the fight.

It is certainly a noteworthy fact that shock to the nervous system or the mind will induce a sort of stupor, and render pain absent, for the time being. Thus, Dr. Livingstone, the African traveller, relates that on one occasion he saw a lion which was just in the act of springing upon him:—

“He was on a little height. The animal caught him³ by the shoulder as he sprang, and they both came to the ground together. Growling horribly close to his ear, he shook him as a terrier dog does a rat. The shock produced a stupor similar to that which seems to be felt by the mouse after the shake of the cat; it caused a sort of dreaminess in which there was no sense of pain nor feeling of terror, although he was quite conscious of all that was happening. It was like

¹ *Science and Immortality*: quoted by Dickinson, *Is Immortality Desirable?* p. 11.

² *The Philosophy of Long Life*, pp. 225-6.

³ Related in the third person, and re-written from dictation.

those experiences which patients partially under the influence of chloroform describe—who see all the operation, but feel not the knife. He claims that this condition was not the result of any mental process. The shake annihilated fear, and allowed no sense of horror on looking around at the beast. Fortunately he was rescued from his perilous condition without receiving any serious injury.”

But, while it is generally asserted that the law of painless death is universal, unfortunately it must be admitted that there are some striking exceptions to this rule. Even very aged persons, who seem to view the approach of death with calm serenity, occasionally fight strenuously against it when the moment of final dissolution arrives, just as the convicted murderer, who knows that nothing can save him from the fate that is awaiting him in the person of the executioner, sometimes struggles so violently that the keepers find it necessary to drug him into a temporary state of semi-insensibility.

The exceptions to this law that sometimes present themselves are usually displayed just as conspicuously as the manifestations of the law; that is to say, the calmness and courage shown by the dying are qualities that often excite our wonder and admiration, and yet, as a matter of fact, they are generally held to be the natural result of the benumbing process that Dr. Livingstone and many others have described; but when the will to live is sufficiently strong to overcome the quieting suggestion of impending dissolution, the phenomena of death assume entirely different characteristics. Under these conditions death indeed becomes a fight for life, and this hopeless contest with nature sometimes continues up to the very moment that the last breath is drawn, to the surprise and horror of those who are present as witnesses of this unequal struggle between Death and his victim. Personally, we have records of but few

cases of this kind, but we have known of a few. We believe, however, that the prevailing theory is substantially correct, and that, ordinarily, death is comparatively painless.

It is also a remarkable fact that in certain cases the nearer the patient is to the point of death the more indifferent to it does he become. There are many instances on record in which the patient has fought against the oncoming of death for many hours or even days, but shortly before death occurred assumed a placid and peaceful expression and even attitude of mind. In some cases this is doubtless due to the accumulation within the system of carbon-dioxide and other toxic substances, which serve as deadeners to the sensitive nerves, and induce practical insensibility. But there are also cases on record in which the mind has remained apparently clear to the last, and yet no aversion to death has been manifested by the patient, though he was in terror of it before. Examples of this will be found in the next section.

3. THE CONSCIOUSNESS OF DYING.

“Sir Benjamin Brodie states that he has been curious to watch the state of dying persons, and is satisfied that where an ordinary observer would not for an instant doubt that the individual is in a state of complete stupor the mind is often very active even at the very moment of death.

“Dr. Bailie once said that ‘all his observations of death-beds inclined him to believe that nature intended that we should go out of the world as unconscious as we came into it.’ ‘In all my experience,’ he added, ‘I have not seen one instance in fifty to the contrary.’ Yet even in such a large experience the occurrence of ‘one instance in fifty to the contrary’ would invalidate the assumption that such was the law of nature (or ‘nature’s intention,’ which, if it means anything, means the same). The moment in which the spirit meets death is perhaps like the moment in which it is embraced by sleep. ‘It never, I suppose’ (says Mrs. Jameson, whose observations we quote), ‘happened to any one to be conscious of the immediate transition from the waking to the sleeping state.’”¹

A letter on this subject is to be found in the *Journal* of the (English) Society for Psychical Research, June 1898, pp. 250–55, and we quote that part of it which bears upon the problem before us:—

“... From the materialistic point of view it would seem difficult, if not impossible, to account for such a phenomenon (as the consciousness of dying). Thus, if materialism be true, death must be the extinction of consciousness. It would seem that it must be impossible ever to be *conscious* of dying; that is, conscious that consciousness is being extinguished. Consequently, materialism would seem to make impossible the phenomenon which is at least an apparent fact. . . .

“I have stated the *a priori* difficulty in supposing the fact, and this is the circumstance that direct proof must be found in the

¹ *Mysteries of Life, Death and Futurity*, by Horace Welby, p. 147.

experience of the individual himself who is dying, and external observers can only conjecture the condition of consciousness of the dying. But there is another difficulty. Often enough a person fears that he is dying when he is not, and also we often observe cases where persons evidently near death think that they are dying, when, in fact, they may survive hours, days, weeks, or even recover altogether. When, therefore, we measure such instances against those which happen to be connected with actual death, we may raise the question whether they are not after all merely inferences on the part of the decedent, and not immediate cognitions of it. Then, again, in favour of materialism and against the hypothetical assumption here made, we have to meet the allegation that we can be conscious of going to sleep, which on a materialistic theory ought to be as impossible as any alleged consciousness of dying, though the fact of going to sleep is perfectly consistent with materialism. Hence, if I can be conscious of going to sleep, which may be only a temporary suspension, as death is the permanent suspension of consciousness, why, the materialist will ask, may it not be possible to be conscious of dying? All these facts throw the burden of proof on the anti-materialist."

The writer (Dr. Hyslop) attempted to meet these arguments in several ways. First, he pointed out that many persons are never conscious of going to sleep. Yet one might be conscious of going to sleep without being conscious of dying. But it would appear, at all events, that a consciousness cannot be aware of its own suspension. It might be aware of its own *withdrawal*, but not its extinction; and the obvious inference to be drawn from this fact is that consciousness is probably withdrawn in both cases—sleep and death. This would agree with the traditional conception of the departure of the soul from the body. Certainly there seemed to be a consciousness, and a distinct consciousness, of dying in the case observed by him. And what is significant about the case is that his father (who was the patient observed) afterwards "communicated" through Mrs. Piper,

apparently, and confirmed some of these inferences regarding the moment of death and the consciousness of dying! To be conscious of a thing we must possess a large amount of consciousness, and be able to reason clearly; and if consciousness were being extinguished at that time it would seem quite impossible for any person ever to be conscious of dying. The inability to express thought in motor action might be present, but that is a very different thing from an extinction of consciousness. Sometimes, indeed, there may be an intensely active consciousness, and yet it may be totally unable to express itself. In paralysis this is often the case; and when certain drugs are administered the body is unable to show any signs of consciousness, and yet all the senses and the mind are painfully active. It may be the same here. It is probable that at death there is a partial extinction of consciousness owing to the shock and wrench of death, and in the majority of cases this would doubtless prevent the individual spirit from exhibiting any external signs of consciousness; indeed, there was but little there—though we must always bear in mind the great distinction between the state of being conscious and the ability to express that consciousness in motor action. This is a distinction which is frequently overlooked by psychiatrists, but it should receive their careful attention. This subject of the consciousness of dying persons should certainly receive most careful attention from all physicians and others who have opportunities for studying the dying.¹ A tremendous mass of valuable psychological information might be gained in this manner, and it might throw light on the human spirit, its destiny and its potentialities, that could be obtained in no other way.

¹ A number of such cases are to be found in a little book entitled *X-Rays*, by Gail Hamilton.

In one case known to us, a most interesting and suggestive phenomenon took place. The patient, who knew that she was dying, was dictating her last wishes—verbally—to those about her. Within a few minutes of her death she became too weak to speak, and requested that a pencil be placed in her right hand, and a pad of paper under the point of the pencil, so that she might write without hindrance. Her hand then proceeded to write out her dying wishes in a perfectly clear handwriting. The hand seemed to possess remarkable strength—a force of its own—the writing being bold and distinct, and the ideas conveyed were consistent and logical to the end. While this writing was going on, however, the patient completely lost control of her body; the breathing became stertorous, and she passed into a state of seeming unconsciousness. This state grew deeper and deeper, until the patient passed into a condition which might have been pronounced “death.” The pulse and respiration ceased, to all appearances; the temperature fell; a limpness of the whole body ensued; the face became deathly pale, and yet her right hand and arm continued to write and write, and correct, and give clear and intelligible messages, which could only be interpreted as issuing from a sound and alert consciousness—in full possession of all its faculties. Where this intelligence resided we cannot say, but there can be no question as to its actual existence during the dramatic scene. The dead, inert body on the bed, the right hand and arm alive, mobile, active—writing out the behests of that consciousness—the whole scene came as closely as anything well could to a distinct utilisation of a dead body by a living “spirit.” It seems to us to bridge the gulf which separates normal, conscious influence from the automatic writing of an entranced medium.

We can, perhaps, throw some light on these questions

by considering the last words of certain famous men ; an analysis of their words may lead to some clue as to the nature of their mental operations at such times. We quote a number of these, on the authority of a writer in *Notes and Queries*.

LAST WORDS OF DISTINGUISHED PERSONS.

John Quincy Adams—It is the last of earth.

Addison—See how a Christian can die.

Alexander II., of Russia (when wounded)—Take me to the palace, there to die.

Alexander III.—This box was presented to me by the Emperor of Prussia.

Archimedes (when ordered to leave Syracuse)—When I have finished this problem.

Augustus Cæsar—Have I not played the farce of life well?

Thomas à Becket—I confide my soul, and the cause of the Church of God, to the Virgin Mary, to the patron saints of the Church, and St. Denis.

The Venerable Bede—Glory be to the Father, and to the Son, and to the ——

Beethoven (deaf)—I shall hear.

J. Wilkes Booth—Useless, useless!

John Bunyan—Take me, for I come to Thee.

Robert Burns—Don't let the awkward squad fire over my grave.

Byron—I must sleep now.

Julius Cæsar—Et tu, Brute!

Charlemagne—Lord, into Thy hands I commend my spirit.

Charles I.—Remember!

Charles II.—Don't let poor Nell starve.

Cicero—Strike!

Columbus—Lord, into Thy hands I commend my spirit.

Copernicus—Now, O Lord, set free Thy servant.

Queen Elizabeth—All my possessions for a moment of time!

Erasmus—Domine domine, fac finem, fac finem.

George IV.—Watty, what is this? It is death, my boy; they have deceived me!

Goethe—Light—more light!

Lady Jane Grey—Lord, into Thy hands I commit my spirit.

King Gustavus Adolphus—My God!

Hannibal—Let me now relieve the Romans of their fears.

Haydn—God preserve the Emperor.

Hazlitt—I have led a happy life.

Henry VIII.—Monks, monks, monks!

Alexander von Humboldt—How grand these rays; they seem to
beacon earth to heaven.

Robert E. Lee—Have A. P. Hill sent for.

Dr. David Livingstone—I am cold; put more grass on the hut.

Mirabeau—Surround me with perfumes and the flowers of spring;
dress my hair with care, and let me fall asleep amid the
sound of delicious music.

Mohammed—Lord, pardon me and place me among those whom
Thou hast raised to grace and favour.

Mozart—Let me hear once more those notes so long my solace and
my delight.

Napoleon Bonaparte—Mon dieu! La nation française! Tête
d'armée!

Thomas Paine (to Dr. Manley, who asked him, "Do you wish to
believe that Jesus was the son of God?")—I have no wish
to believe on the subject.

Swedenborg—What o'clock is it? (He was told.) It is well;
thank you, and God bless you.

Washington—It is well.

Daniel Webster—I still live!

William the Conqueror—I commend my soul to Mary.

Rabelais—Ring down the curtain; the farce is over!

Sir Walter Raleigh (to the executioner)—Why dost thou not
strike? Strike, man!

Comparatively few of the ejaculations quoted, unfortunately, afford any clue to our problem. The majority of these "last words"—even if authentic—were spoken before falling asleep, apparently, in which sleep they died, or were too exhausted to speak upon

awakening. Such "last words," therefore, are of little use. Nor can those of Charles I., Cicero, &c., be considered, since these men were in full possession of their faculties when they spoke. A few of the other sentences were apparently spoken in delirium, and we should have to disregard these also. A few of interest remain. The dying words of Goethe, Alexander von Humboldt, and Daniel Webster are perhaps the only ones that could be cited as bearing directly on this question; but their words have peculiar significance. It would be useless to speak of Goethe's words. More has been written about those famous words already than many persons read in a lifetime! But Webster's remark, "I still live," and Humboldt's apparent attempt to describe what he was seeing, would indicate that an intelligence was active in both these cases, and that remarkable things were happening to the mental man which they were endeavouring to describe. These last words of dying persons should be recorded with the utmost care, and all those who see much of death-beds should make it their duty faithfully to record all such utterances—as possibly bearing on this question of the consciousness of dying, and even on the far greater question of the immortality of the soul.

Another fact of great interest in this connection, and bearing more or less directly on the problem, is the question of *sensations* (mental operations) by those who *thought* they were dying, and were, as a matter of fact, revived, after they had lost consciousness.

In connection with this question of the existence of consciousness, and of its relation to the organism during the time of sleep, trance, &c., we desire briefly to refer to the argument by F. R. C. S. in his article, "Hora Mortis Nostræ," in the *Contemporary Review* for August 1905. After emphasising the fact that there is probably no pain at the moment of death in the majority of cases, and

quoting Sir James Paget, who even was inclined to the opinion that if we were conscious of death it would be a pleasure—he states his own opinion—which is, that it is a condition involving neither pain nor pleasure, but is, on the contrary, a condition of total unconsciousness. In support of this he cites certain facts, observed by himself, of the effects of anæsthetics upon patients. Here he points out that after the senses have been obliterated one by one, there probably comes a moment when the patient is conscious of but one fact still left standing—that he is he. At that moment, if he be of a logical turn of mind, he may expect that he will now get behind the veil, see things as they are in themselves, contemplate pure Being, stand before the *merum ens* of his philosophy—and then somebody says, “He’ll be all right now; it’s a good thing that he had it done”; and behold he is back in bed sick and sore, and drunk, painfully sorting unpleasant phenomena, and as far as ever from pure Being!

The writer turns to what he conceives to be the likeness between anæsthesia and death. He asks if we can find any clue to the nature of death in such states, and he is inclined to think that we can. His conclusion is in favour of materialism, as against the possible persistence of consciousness after death. He insists that these phenomena conclusively prove that no such thing as a soul-entity existing apart from the body is possible. He says:—

“To the notion of the soul as an invisible personage, made, and put into the body at birth, and extracted from it at the end of life, they [these facts] are utterly opposed. The anæsthetised body contains nothing save that which is bodily; no spark or vestige of consciousness; there it lies, still working, but without an occupant; just pumping the blood through the vessels, and maintaining the physical interchanges of the tissues; and if the

loss of consciousness be due, not to an anæsthetic, but to injury, or disease of the brain, it may last an interminable time. Here, in these cases, is the best object lesson in materialism ever given to the world. . . . No amount of corpses can advance materialism, but to watch day after day a case of profound unconsciousness, the body a mere log, fed through a tube, fouling the bed, a physiological machine, a thing with no more thought in it than a dummy figure, and to see men and women brought to a like state in a few minutes by chloroform or ether, and kept there, just as part of the day's work; and to see the process reversed, and the lost owner of the body spirited back into it by an operation on his brain—here are the arguments ready made for materialism to be used with effect."

The writer sees no way out of this difficulty, since, as he said, if the mind was still there, in the anæsthetised body, with consciousness suspended, what is this mind, and where? To these questions he can find no answer.

Now it seems to us that a solution of these facts may be found, were we to conceive the relation of consciousness to organism from a different point of view than is afforded by present-day physiology, and the current production theory of consciousness. If the brain were the actual producer of consciousness, as is taught, of course its annihilation would be the only rational conclusion at which to arrive from these facts; but there is another way of viewing and interpreting these same phenomena. Consciousness might exist apart from the body, be *en rapport* with it, and merely manifest *through* it. On that theory the brain and nervous system, and even the body as a whole, would act merely as its transmitter, or vehicle for expression, and the paralysing of any centre in the brain by means of drugs, chemicals, &c., would mean simply that we have rendered impossible the motor expression of consciousness; we have rendered its manifestation to our sense perception impossible, but we have by

no means proved that we have annihilated consciousness. We could take the same facts, and merely interpret them in a different manner. The conclusion which the author has drawn is therefore unwarrantable, and all his facts might be just as readily explained on the theory of an external consciousness or soul, which is active at the time elsewhere, and which persists after the death of the body.

Let us illustrate this fact:—

Dr. Stephens (*Natural Salvation*, pp. 179–80) says:—

“What happens at death?”

“First, the interlacing neurons let go their hold on each other, and self-consciousness of the person vanishes. It goes out, as flame vanishes when atoms of carbon and oxygen no longer combine.

“What next?”

“The heart no longer propels the life-tide of refined food in the blood to the brain—as in sleep—and after a few minutes the neurons themselves die from suffocation and starvation. All those thousands of little individual lives vanish, as did the larger self-consciousness of the person; for in each the constituent bond of living molecules, atoms, and ions is disrupted.

“What next?”

“The dissipation of the brain as cadaver is a somewhat slower, more homogeneous process, involving invasions of bacteria, disintegration, and reduction to more stable compounds, but tending ultimately to a return from the highly complex living substance, with all its maze of organisation, to the abysmal base of the primeval ions and their lowly endowment of life-potential.”

Here, it will be seen, we have as the first and most important condition the abolition of self-consciousness. It is considered the *sine qua non*. Yet we have seen that in many cases this self-consciousness is not abolished in the manner supposed at all; but that it is

conscious and aware of all that is going on. As we have argued, this does not look in the least like extinction, but rather transition. And again, it would be most difficult to account for many of those cases in which the subject had dropped dead *instantly*. Are we to suppose that the interlacing neurons let go their hold on each other all at once? Or would it not rather appear to be an instantaneous process complete in itself, and that this "letting go" phenomenon was merely one of the many physiological processes that *resulted* from death, rather than the one that *caused* it? We must be most careful to distinguish between cause and effect here. Does consciousness cease because the neurons no longer function; or do the neurons cease to function because consciousness is no longer present? Of course that is always a ground for debate, and is a question that has not yet been settled—opposite schools taking opposite views—and although we cannot claim that the facts tell in favour of our theory, yet we must insist that they do not tell in favour of the opposing theory either. The question remains an open one, and must be settled by other methods entirely.

In Part I. we made mention of certain cases, when discussing the question of drowning, in which remarkable flashes of memory are reported. There are a few cases on record in which similar mental flashes have been observed by persons falling great distances, and it is probable that we should have a large number of such examples if more people who had fallen great distances lived to tell the tale. The following instances, however, cannot fail to be of interest in this connection.

4. SENSATIONS WHILE FALLING.

The following is a typical example of a case of this character. The psychological interest is remarkable. It runs, in part, as follows:—

“Although I fell backward from a tremendous height, I experienced none of the anxiety which occasionally attacks us in dreams at supposed falling accidents; on the contrary, I felt as if I were carried downwards slowly on giant wings that protected me against collision. During the whole time of this fall, consciousness never left me. Without feeling the least bit embarrassed or frightened, I reviewed my situation and the future of my family; and the various features of my own life passed before me with unequalled rapidity. I have heard people say that, in falling a great distance, one loses his breath; I never lost my breath, and when my body finally bounded against the rocks at the foot of the glacier, I became unconscious without experiencing any pain whatever. I felt nothing of the many wounds on head or limbs received during my journey down the precipice from coming in contact with rocks and masses of ice. The moments when I stood at the brink of a future life were the happiest I ever experienced. I remember reading the provisions of my life insurance policy with my mind’s eye: the big sum of money which death was bound to bring to my loved ones I saw before me counted out on a green table-cloth, all in crisp bills and shining gold.”

Dr. Heim gives the following description of his fall down a mountain side, which he fully expected would end in certain death:—

“Quick as the wind I flew against the rocks to my left, rebounded, and was thrown upon my back, head downward. Suddenly I felt myself carried through the air for at least a hundred feet, to finally land against a high snow wall. At the instant I fell, it became evident to me that I was to be thrown against the rock, and I did my utmost to avoid that calamity by digging

with my fingers in the snow and tearing the tips of them horribly without knowing it. I heard distinctly the dull noise produced when my head and back struck against the different corners of the rock; I also heard the sound it gave when my body bounded against the snow wall, but in all this I felt no pain; pain only manifested itself at the end of an hour or so" (*Encyclopædia of Death*, vol. ii., pp. 384-5).

5. MEMORY AT THE MOMENT OF DEATH.

Those apparently supernormal flashes of memory and conscious activity at the moment of death are of very great interest from many points of view. If memory be a purely physiological process, as materialistic psychology would have us believe, how comes it that such instantaneous and vast recallings are possible—at a time, too, when the brain is supposed to be in a *lessened* condition of activity? It is not that the brain is preternaturally stimulated at such times, precisely the reverse; it is practically *inert* and unresponsive to external stimuli; and, one would think, would be in no condition to think and remember normally, far less recall such immense numbers of facts in so short a period of time. And not only is the time remarkably brief on such occasions, but facts are often recalled which had entirely passed out of the conscious mind, and would never have been remembered in the normal course of the conscious life. It would almost seem that *nothing is forgotten*—a statement which agrees with De Quincey's estimate of the case. In his *Opium-Eater*, he says:—

“Of this, at least, I feel assured, that *there is no such thing as forgetting possible* to the mind; a thousand incidents may and will interpose a veil between our present consciousness and the secret inscriptions of the mind; accidents of the same sort will also rend away this veil; but alike, whether veiled or unveiled,

the inscription remains for ever, just as the stars seem to withdraw before the common light of day, whereas, in fact, we all know that it is the light which is drawn over them as a veil, and that they are waiting to be revealed when the obscuring daylight shall have withdrawn."

Similarly, the author of the *Hasheesh Eater* says:—

"De Quincey's comparison of it to the palimpsest manuscripts, while it is one of the most powerful that even that great genius could have conceived, is not at all too much so to express the truth. We pass, in dreamy musing, through a grassy field; a blade of the tender herbage brushes against the foot; its impression hardly comes into consciousness; on earth, it is never remembered again. But not even that slight sensation is utterly lost. The pressure of the body dulls the soul to its perception; other external experiences supplant it, but when the time of the final awakening comes, the resurrection of the soul from its charnel of the body, the analytic finger of inevitable light shall search out that old impression, and to the spiritual eye, no deep-graven record of its earthly triumphs shall be clearer!"

Surely this closely resembles the "Book of Judgment" of theology!

CHAPTER II

VISIONS OF THE DYING

ONLY very rarely have "visions of the dying" been mentioned in the literature either of psychology or of physiology. The only extended discussion of them that we have been enabled to find is contained in a book by Dr. Edward H. Clarke, entitled, *Visions: A Study of False Sight*. After giving a résumé of all that was known at that time of this subject, the author devoted some twenty pages to visions of the dying. He pointed out the fact that automatic activities of the brain and of vitality may take place without any conscious knowledge on the part of the patient, who might be completely unconscious. Cerebral excitement, congestion, and the abnormal conditions that might be supposed to surround the moment of death, would account for many of these hallucinations; memory pictures and images would come before the mind, elaborated and dramatised by the dream-consciousness of the patient. In this manner, we are told, are these visions to be accounted for. And this is the belief of practically every physician to-day. They see in these states and visions nothing but the activities of a disordered and feverish imagination. And yet, one cannot study such facts for long before he becomes convinced that there is often something not accounted for in at least some of the instances. Even Dr. Clarke, who started out very dogmatically to "shatter the hopes" of

his readers, ended up this section of his work very humbly by saying :—

“ In Correggio’s ‘ Notte ’ the light which illumines the group round this infant Jesus proceeds from the face of the Christ child, who, reposing on His mother’s lap, unconsciously baptizes all with heavenly beauty. Such should, and such must, be the ineffable expression of transfigured humanity upon the features of whoever gets a sight of heaven before he has left the earth. If ever a scene like this occurs, who will dare say that the explanation of it may not come from a height inaccessible to our imperfect physiology ? ” (p. 279).

Dr. Hyslop, in an able article in the *Journal of the American Society for Psychological Research* (January 1907), writes as follows :—

“ VISIONS OF THE DYING.

“ The interest which such phenomena may have for science will depend upon a variety of considerations. The first is that we shall be able to attest their existence and their nature. The second is that we shall have some reason to believe that they have a selective character pertinent to their apparent significance. The third is that we shall have some means of distinguishing them from those capricious and kaleidoscopic phenomena that are classifiable as ordinary hallucinations. The fourth is that their characteristics shall suggest some coincidental incidents not referable to chance, and, at the same time, distinguishable from others possibly due to subjective causes. It will not be an easy task to conduct such an investigation, but it is possible by long efforts and perseverance to accumulate facts enough for some sort of study and analysis. The method of effecting this object will be the subject of discussion later in this article. We must first describe the phenomena to which attention needs to be called.

“ The phenomena which I have in mind are a type of apparition. Whatever their explanation, they have one char-

acteristic which distinguishes them from ordinary deliria. They represent the appearance of deceased persons to the vision, imagination, or other source of sensory representation, of the dying person. If we should find that they bear evidences in any case of supernormal information, they would become especially significant. But one of the most important things to study in them would be their relation to instances of hallucination under the same circumstances that had no coincidental value. That is, we need to study the statistical aspects which would require a comparison of the really or apparently coincidental cases with those which are unmistakably hallucinatory and subjective in their origin. For this a large collection is necessary, and this can be made without any presumption regarding their explanation. I shall illustrate the kind which are particularly interesting and suggestive. They are, as described above, instances in which dying persons seem to see previously deceased friends claiming, in certain cases, to be present for the purpose of aiding in the passage of death. When this claim of assistance in the crisis of death is made, it is through mediums, and it is sometimes or generally made when there has been no evidence at the death scene that such a presence was remarked. I shall give a few illustrations of both kinds.

“The following instance I received from a correspondent whose testimony I have no reason to question:—

“I called this afternoon (May 14th, 1906) upon a lady who buried a nine-year-old boy two weeks ago. The child had been operated upon for appendicitis some two or three years ago, and had had peritonitis at the same time. He recovered, and was apparently quite well for a time. Again he was taken sick, and from the first, the doctor thinks, he did not expect to get well. He was taken to the hospital and operated upon. He was perfectly rational, recognising his parents, the doctor, and the nurse after coming out from under the influence of the anæsthetic. Feeling that he was going, he asked his mother to hold his hands until he should be gone. He had, I forgot to say, been given strong stimulants after the operation, which, I suppose, made his mind very active.

“‘ Soon he looked up and said : Mother, dear, don’t you see little sister over there ?

“‘ No, where is she ?

“‘ Right over there. She is looking at me.

“‘ Then the mother, to pacify him, said she saw the child. In a few moments his face lighted up full of smiles and he said :—

“‘ There comes Mrs. C—— [a lady, of whom he was very fond, who had died nearly two years before], and she is smiling just as she used to. She is smiling and wants me to come.

“‘ In a few moments :—

“‘ There is Roy ! I’m going to them. I don’t want to leave you, but you’ll come to me soon, won’t you ? Open the door and let them in. They are waiting for me outside. And he was gone.

“‘ No, I forgot to tell about his grandmother. I gathered the impression that he did not know his maternal grandmother, but may be wrong.

“‘ As his mother held his hands, he said : How small you are growing ! Are you still holding my hands ? Grandma is larger than you, isn’t she ? There she is ! She is larger, isn’t she ? Her hand is larger than yours. She is holding one hand, and her hand is larger than yours.

“‘ Remember that the boy was but nine years old. Did he really see spirits and recognise them ? Or was it the result of the highly sensitive condition of the brain caused by the medicine ?’

“‘ The mother confirms this narrative, and inquiry brings out the following facts :—The boy had never known his grandmother, who had died twenty years ago. His sister had died four years before his own birth. Roy is the name of a friend of the child, and he had died about a year previously.

“‘ The following case was reported at first hand :—

“‘ Four or five weeks before my son’s death Mrs. S—— was with me—she was my friend and a psychic—and a message was given me that little Bright Eyes (control) would be with my son who was then ill with cancer. The night before his death he complained that there was a little girl about his bed and asked who it was. This was at Muskoka, 160 miles north of Toronto. He had not known what Mrs. S—— had told me. Just before his

death, about five minutes, he roused, called his nurse for a drink of water, and said clearly: I think they are taking me. Afterward, seeing the possible significance of this, I wrote to Miss A—— and asked her to see Mrs. S—— and try to find why the word *they* was used, underscoring it in the letter, as I always supposed the boy's father would be with him at death. Miss A—— went to see Mrs. S——, and did not mention the letter. When I saw Mrs. S—— more than a week later we were having a sitting, and Guthrie, my son, came and told me how he died. He said he was lying on the bed and felt he was being lifted out of his body and at that point all pain left. His first impulse was to get back into his body, but he was being drawn away. He was taken up into a cloud and he seemed to be part of it. His feeling was that he was being taken by invisible hands into rarefied air that was so delightful. He spoke of his freedom from pain and said that he saw his father beyond.'

“We quote next a well authenticated instance on the authority of Dr. Minot J. Savage. He records it in his *Psychics: Facts and Theories*. He also told me personally of the facts, and gave me the names and addresses of the persons on whose authority he tells the incidents. We are not permitted to mention them. But the story is as follows:—

“In a neighbouring city were two little girls, Jennie and Edith, one about eight years of age, and the other but a little older. They were schoolmates and intimate friends. In June 1889, both were taken ill of diphtheria. At noon on Wednesday, Jennie died. Then the parents of Edith, and her physician as well, took particular pains to keep from her the fact that her little playmate was gone. They feared the effect of the knowledge on her own condition. To prove that they succeeded and that she did not know, it may be mentioned that on Saturday, June 8th, at noon, just before she became unconscious of all that was passing about her, she selected two of her photographs to be sent to Jennie, and also told her attendants to bid her good-bye.

“She died at half-past six o'clock on the evening of Saturday, June 8th. She had roused and bidden her friends good-bye, and

was talking of dying, and seemed to have no fear. She appeared to see one and another of the friends she knew were dead. So far it was like the common cases. But now suddenly, and with every appearance of surprise, she turned to her father, and exclaimed, 'Why, papa, I am going to take Jennie with me!' Then she added, 'Why, papa! Why, papa! You did not tell me that Jennie was here!' And immediately she reached out her arms as if in welcome, and said, 'O Jennie, I'm so glad you are here.'

"As Dr. Savage remarks in connection with this story, it is not so easy to account for this incident by the ordinary theory of hallucination. We have to suppose a casual coincidence at the same time, and while we should have to suppose this for any isolated case like the present one, the multiplication of them, with proper credentials, would suggest some other explanation, whatever it might be.

"We shall turn next to two instances which are associated with the experiments and records of Mrs. Piper. They both represent the allegation of death-bed apparitions and statements through Mrs. Piper, purporting to represent communications from the deceased, showing a coincidence with what was otherwise known or alleged to have taken place at the crisis of death. The records in these cases are unusually good, having been made by Dr. Richard Hodgson. We quote his reports. The first instance is the experience of a man who gives only initials for his name, but was well known to Dr. Hodgson. It occurred at a sitting with Mrs. Piper.

"'About the end of March of last year (1888) I made her (Mrs. Piper) a visit—having been in the habit of doing so, since early in February, about once a fortnight. She told me that a death of a near relative of mine would occur in about six weeks, from which I should realise some pecuniary advantages. I naturally thought of my father, who was in advanced years, and whose description Mrs. Piper had given me very accurately a week or two previously. She had not spoken of him as my father, but merely as a person nearly connected with me. I asked her at this sitting whether this person was the one who would die, but she declined to state anything more clearly to

me. My wife, to whom I was then engaged, went to see Mrs. Piper a few days afterwards, and she told her (my wife) that my father would die in a few weeks.

“‘About the middle of May my father died very suddenly in London from heart failure, when he was recovering from a very slight attack of bronchitis, and the very day that his doctor had pronounced him out of danger. Previous to this Mrs. Piper (as Dr. Phinuit) had told me that she would endeavour to influence my father about certain matters connected with his will before he died. Two days after I received the cable announcing his death my wife and I went to see Mrs. Piper, and she (Phinuit) spoke of his presence, and his sudden arrival in the spirit world, and said that he (Dr. Phinuit) had endeavoured to persuade him in these matters while my father was sick. Dr. Phinuit told me the state of the will, and described the principal executor, and said that he (the executor) would make a certain disposition in my favour, subject to the consent of the other two executors when I got to London, England. Three weeks afterwards I arrived in London; found the principal executor to be the man Dr. Phinuit had described. The will went materially as he (Dr. Phinuit) had stated. The disposition was made in my favour, and my sister, who was chiefly at my father’s bedside the last three days of his life, told me he had repeatedly complained of the presence of an old man at the foot of his bed, who annoyed him by discussing his private affairs.’

“‘The reader will remark that the incident is associated with a prediction, but it is not the subject of important observation at present. The chief point of interest is that the prediction is connected with a reference to a will affecting private business matters, that the sister reported a number of visions or apparitions on the man’s death-bed, and that subsequent to his death, not known apparently to Mrs. Piper, the statement was made by Phinuit that he had influenced or tried to persuade the man in reference to these matters. The coincidence is unmistakable, and the cause is suggested by the very nature of the phenomena and the conditions under which they occurred. But we should have a large mass of such incidents to give the hypothesis something like scientific proof.

“The next case is a most important one. It is connected with an experiment by Dr. Hodgson with Mrs. Piper, as was the previous one, and came out as an accidental feature of the sitting. The account is associated in his report with incidents quoted by him in explanation of the difficulty and confusion accompanying real or alleged communications from the dead. It will be useful to quote the report on that point before narrating the incident itself as the circumstances associated with the facts are important in the understanding of the case, while they also suggest a view of the phenomena which may explain the rarity of them.

“‘That persons just deceased,’ says Dr. Hodgson, ‘should be extremely confused and unable to communicate directly, or even at all, seems perfectly natural after the shock and wrench of death. Thus in the case of Hart, he was unable to write the second day after death. In another case a friend of mine, whom I may call D., wrote, with what appeared to be much difficulty, his name and the words, “I am all right now. Adieu,” within two or three days of his death. In another case, F., a near relative of Madame Elisa, was unable to write on the morning after his death. On the second day after, when a stranger was present with me for a sitting, he wrote two or three sentences, saying, “I am too weak to articulate clearly,” and not many days later he wrote fairly well and clearly, and dictated to Madame Elisa (deceased), as amanuensis, an account of his feelings at finding himself in his new surroundings.’

“In a footnote Dr. Hodgson adds an account of what this Madame Elisa communicated regarding the man. We quote this in full. Referring to this F. and Madame Elisa, he says:—

“‘The notice of his death was in a Boston paper, and I happened to see it on my way to the sitting. The first writing of the sitting came from Madame Elisa, without my expecting it. She wrote clearly and strongly, explaining that F. was there with her, but unable to speak directly, that she wished to give me an account of how she had helped F. to reach her. She said that she had been present at his death-bed, and had spoken to him, and she repeated what she had said, an unusual form of expres-

sion, and indicated that he had heard and recognised her. This was confirmed in detail in the only way possible at the time, by a very intimate friend of Madame Elisa and myself, and also of the nearest surviving relative of F. I showed my friend the account of the sitting, and to this friend a day or two later, the relative, who was present at the death-bed, stated spontaneously that F., when dying said that he saw Madame Elisa, who was speaking to him, and he repeated what she was saying. The expression so repeated, which the relative quoted to my friend, was that which I had received from Madame Elisa through Mrs. Piper's trance, when the death-bed incident was of course entirely unknown to me.'"

The cases which we have mentioned show interesting coincidences and are too valuable for us to disregard the opportunity to collect similar instances with a view to their study in detail. We must expect the largest number of them to be non-evidential—that is, to represent facts which are not verifiable regarding "the other side." But if they can be obtained in sufficient numbers to exclude chance, then we may have a scientific problem. To exclude chance we need to compare them with visions that do not represent the discarnate as thus appearing, but that may be treated as casual hallucinations. Hence we should want to take account of all types of dying experiences as observed by the living. It will be especially important to have records from those who were thought to be very ill or dying, and recovered, who may describe peculiar experiences in conditions bordering on death. Our chief object will have been gained, however, if we have shown that such visions are not invariably products of diseased imaginations, but may sometimes represent glimpses of a reality—of a spiritual world, into which the soul of the dying person is apparently about to enter.

In an interesting article in the *Annals of Psychological Science*, Dr. Bozzano enumerates some twenty-two cases of this character, of which the following is one. It will be seen that apparent supernormal information is given here, seeming to indicate that some unexplained faculty is operative, enabling the dying man to be cognisant of facts normally unknown to him. The account reads:—

“My brother, John Alkin Ogle, died at Leeds, July 17th, 1879. About an hour before he expired he saw his brother, who had died about sixteen years before, and looking up with fixed interest said, ‘Joe! Joe!’ and immediately after exclaimed with ardent surprise, ‘George Hanley!’ My mother, who had come from Melbourne, a distance of about forty miles, where George Hanley resided, was astonished at this, and, turning to my sister-in-law, asked if anybody had told John of George Hanley’s death. She said, ‘No one,’ and my mother was the only person present who was aware of the fact. I was present and witnessed this.” (Signed, Harriet H. Ogle.) In answer to inquiries, Miss Ogle states: “J. A. Ogle was neither delirious nor unconscious when he uttered the words recorded. George Hanley was an acquaintance of John A. Ogle, not a particularly familiar friend. The death of Hanley was not mentioned in his hearing.”

It will be seen that in this case the dying man became conscious of the fact that his friend had died, but how he came into possession of that knowledge, if he did not actually see something corresponding to his physical body, it would be hard to say.

CHAPTER III

DEATH DESCRIBED FROM BEYOND THE VEIL

1. CLAIRVOYANT DESCRIPTIONS OF DEATH.

MANY persons who possess that peculiar gift which, for want of a better name, we term "clairvoyance," have been enabled to perceive (apparently) just what takes place at death, and have described this with great detail and exactitude. Here, for example, is a description given by Andrew Jackson Davis, in his *Great Harmonia*, vol. i., p. 157, &c. :—

"When the hour of her death arrived, I was fortunately in a proper state of mind and body to induce the superior (clairvoyant) condition; but, previous to throwing my spirit into that condition, I sought the most convenient and favourable position, that I might be allowed to make the observations entirely unnoticed and undisturbed. Thus situated and conditioned, I proceeded to observe and investigate the mysterious process of dying, and to learn what it is for an individual human spirit to undergo the changes subsequent upon physical death or external dissolution. They were these :—

"I saw that the physical organism could no longer subserve the diversified purposes or requirements of the spiritual principle. But the various internal organs of the body appeared to resist the withdrawal of the animating spirit. The body and the soul, like two friends, strongly resisted the various circumstances which rendered their external separation imperative and absolute. These internal conflicts gave rise to manifestations of what seemed, to the material senses, the most thrilling and painful sensations; but I was unspeakably thankful and de-

lighted when I perceived and realised the fact that those physical manifestations were indications, not of pain or unhappiness, but simply that the spirit was eternally dissolving its copartnership with the material organism.

“Now the head of the body became suddenly enveloped in a fine, soft, mellow, luminous atmosphere; and, as instantly, I saw the cerebrum and the cerebellum expand their most interior portions; I saw them discontinue their appropriate galvanic functions; and then I saw that they became highly charged with the vital electricity and vital magnetism which permeate subordinate systems and structures. That is to say, the brain, as a whole, suddenly declared itself to be tenfold more positive, over the lesser proportions of the body, than it ever was during the period of health. This phenomenon invariably precedes physical dissolution.

“Now the process of dying, or the spirit's departure from the body, was fully commenced. The brain began to attract the elements of electricity, of magnetism, of motion, of life, and of sensation, into its various and numerous departments. The head became intensely brilliant; and I particularly remarked that, just in the same proportion as the extremities of the organism grew dark and cold, the brain appeared light and glowing.

“Now I saw, in the mellow, spiritual atmosphere which emanated from and encircled her head, the indistinct outlines of the formation of another head! This new head unfolded more and more distinctly, and so indescribably compact and intensely brilliant did it become, that I could neither see through it, nor gaze upon it as steadily as I desired. While this spiritual head was being eliminated and organised from out of and above the material head, I saw that the surrounding aro-mal atmosphere which had emanated from the material head was in great commotion; but, as the new head became more distinct and perfect, this brilliant atmosphere gradually disappeared. This taught me that those aro-mal elements, which are, in the beginning of the metamorphosis, attracted from the system into the brain, and thence eliminated in the form of an atmosphere, were indissolubly united in accordance with the divine principle of

affinity in the universe, which pervades and destines every particle of matter, and developed the spiritual head which I beheld.

“In the identical manner in which the spiritual head was eliminated and unchangeably organised, I saw, unfolding in their natural progressive order, the harmonious development of the neck, the shoulders, the breast and the entire spiritual organisation. It appeared from this, even to an unequivocal demonstration, that the innumerable particles of what might be termed unparticled matter, which constitute the man's spiritual principle, are constitutionally endowed with certain elective affinities, analogous to an immortal friendship. The innate tendencies, which the elements and essences of her soul manifest by uniting and organising themselves, were the efficient and imminent causes which unfolded and perfected her spiritual organisation. The defects and deformities of her physical body were, in the spiritual body which I saw thus developed, almost completely removed. In other words, it seemed that those hereditary obstructions and influences were now removed, which originally arrested the full and proper development of her physical constitution; and, therefore, that her spiritual constitution, being elevated above those obstructions, was enabled to unfold and perfect itself, in accordance with the universal tendencies of all created things.

“While this spiritual formation was going on, which was perfectly visible to my spiritual perceptions, the material body manifested to the outer vision of observing individuals in the room many symptoms of uneasiness and pain; but the indications were totally deceptive; they were wholly caused by the departure of the vital or spiritual forces from the extremities and viscera into the brain, and thence into the ascending organism.

“The spirit rose at right angles over the head or brain of the deserted body. But immediately previous to final dissolution of the relationship which had for so many years subsisted between the two, spiritual and material bodies, I saw—playing energetically between the feet of the elevated spiritual body and the head of the prostrate body—a bright stream or current of vital

electricity. . . . And here I perceived, what I had never before obtained a knowledge of, that a small portion of this vital, electric element returned to the deserted body immediately subsequent to the separation of the umbilical thread; and that that portion of this element which passed back into the earthly organism, instantly diffused itself through the entire structure, and thus prevented immediate decomposition. . . .

“As soon as the spirit, whose departing hour I thus watched, was wholly disengaged from the tenacious physical body, I directed my attention to the movements and emotions of the former; and I saw her begin to breathe the most interior or spiritual portions of the surrounding terrestrial atmosphere. . . . At first, it seemed with difficulty that she could breathe the new medium; but in a few seconds she inhaled and exhaled the spiritual elements of nature with the greatest possible ease and delight. And now I saw that she was in possession of exterior and physical proportions, which were identical in every possible particular—improved and beautified—with those proportions which characterised her earthly organisation. That is to say, she possessed a heart, a stomach, a liver, lungs, &c.—just as her natural body did previous to (not her, but) its, death. This is a wonderful and consoling truth. But I saw that the improvements which were wrought upon her in her spiritual organisation were not so particular and thorough as to destroy or transcend her personality; nor did they materially alter her natural appearance or earthly characteristics. So much like her former self was she that, had her friends beheld her as I did, they certainly would have exclaimed—as we often do upon the sudden return of a long-absent friend, who leaves us in illness and returns in health—‘Why, how well you look! How improved you are!’ Such was the nature—most beautifying in their extent—of the improvements that were wrought upon her.

“I saw her continue to conform and accustom herself to the new elements and elevating sensations which belong to the inner life. I did not particularly notice the workings and emotions of her newly-awakening and fast-unfolding spirit, except that I was careful to remark her philosophical tranquillity throughout the entire process, and her non-participation with

the different members of her family in their unrestrained bewailing of her departure from the earth, to unfold in love and wisdom throughout eternal spheres. She understood at a glance that they could only gaze upon the cold and lifeless form which she had but just deserted; and she readily comprehended the fact that it was owing to a want of true knowledge upon their part that they thus vehemently regretted her merely physical death.¹

“The period required to accomplish the entire change which I saw was not far from two and a half hours; but this furnished no rule as to the time required for every spirit to elevate and reorganise itself above the head of the outer form. Without changing my position of spiritual perceptions, I continued to observe the movements of her new-born spirit. As soon as she became accustomed to the new elements which surrounded her, she descended from her elevated position, which was immediately over the body, by an effort of the will-power, and directly passed out of the door of the bedroom in which she was laid, in the material form, prostrated with disease for several weeks. It being in a summer month the doors were all open, and her egress from the house was attended with no obstruction. I saw her pass through the adjoining room, out of the door, and step from the house into the atmosphere! I was overwhelmed with delight and astonishment when, for the first time, I realised the universal truth that the spiritual organisation can tread the atmosphere, which, while we breathe in the coarser earthly form, is impossible, so much more refined is man’s spiritual constitution. She walked in the atmosphere as easily and in the same manner as we tread the earth and ascend an eminence. Immediately upon her emergence from the house she was joined by two friendly spirits from the spiritual country, and

¹ This aspect of the case, this view of death, is brought out quite beautifully by Mrs. Mary F. Davis in her little book, *Death, in the Light of the Harmonial Philosophy*. One or two sentences may serve as examples: “When our soul becomes weary of companionship with the body, then does she gather the frail form in her loving arms and lay it away to rest, opening the door meanwhile for the spirit’s ingress to the higher and better mansions of our Father. . . . Like falling asleep upon a bed of sand to awake in a garden of roses, would be the natural departure of the spirit from earth” (pp. 10, 23).

after tenderly recognising and communing with each other, the three, in the most graceful manner, began ascending obliquely through the ethereal envelopment of our globe. They walked so naturally and so fraternally together that I could scarcely realise the fact that they trod the air—they seemed to be walking upon the side of a glorious but familiar mountain. I continued to gaze upon them until the distance shut them out from my view; whereupon I returned to my external and ordinary condition.”

The same author, in his later work, *Death, and the After Life*, pp. 15, 16, thus further describes the process of dying:—

“Suppose the person is now dying. It is to be a rapid death. The feet first grow cold. The clairvoyant sees right over the head what may be called a magnetic halo—an ethereal emanation, in appearance golden, and throbbing as though conscious. The body is now cold up to the knees and elbows, and the emanation has ascended higher in the air. The legs are cold to the hips and the arms to the shoulders; and the emanation, though it has not risen higher in the room, is more expanded. The death-coldness steals over the breast and around on either side, and the emanation has attained a higher position nearer the ceiling. The person has ceased to breathe, the pulse is still, and the emanation is elongated and fashioned in the outline of the human form. Beneath, it is connected with the brain. The head of the person is internally throbbing—a slow, deep throb—not painful, but like the beat of the sea. Hence the thinking faculties are rational while nearly every part of the person is dead. Owing to the brain’s momentum, I have seen a dying person, even at the last feeble pulse-beat, rouse impulsively and rise up in bed to converse with a friend; but the next instant he was gone—his brain being the last to yield up the life principle.

“The golden emanation, which extends up midway to the ceiling, is connected with the brain by a very fine life-thread. Now the body of the emanation ascends. Then appears something white and shining, like a human head; next, in a very

few moments, a faint outline of the face divine; then the fair neck and beautiful shoulders; then, in rapid succession, come all parts of the new body down to the feet—a bright, shining image, a little smaller than its physical body, but a perfect prototype or reproduction in all except its disfigurements. The fine life-thread continues attached to the old brain. The next thing is the withdrawal of the electric principle. When this thread snaps the spiritual body is free! and prepared to accompany its guardians to the Summer-Land. Yes, there is a spiritual body; it is sown in dishonour and raised in brightness.”

2. SEPARATION OF SOUL AND BODY.

These clairvoyant descriptions of the departure of the soul from the body gain greater credibility when we take into account the fact that, even during *this* life, certain instances have occurred in which this temporary separation has taken place; the spirit has left the body, seen it, looked at it from without, and travelled to great distances and accurately seen what was taking place *there*, and returned to the body at the end of a varying period. All this time the external intelligence retained full possession of its mental faculties, and remembered perfectly what was happening! Let us give one or two cases of this character by way of illustration, and these will tend to show that the body and the life principle are far more separable, even in this life, than they are supposed to be, or possibly could be, if Materialism were true. Here at least are the facts, which we leave for the reader's consideration.

The Indian adept has always claimed the possession of the power to send his “astral body” to any portion of the world to which he might direct it to go. Science, however, has been especially reluctant to accept such tales, demanding more proof of the phenomena than has ordinarily been forthcoming.

On several occasions since its organisation, the London Society for Psychological Research has had its attention drawn to cases of this character, and, in every instance, has investigated them as thoroughly as possible. Some of these investigations are reported in *Phantasms of the Living*, and it is from these volumes that the following facts are drawn. In the first case the percipient was the Rev. W. S. Moses, and he corroborates the report, as written by the agent:—

“One evening I resolved to appear to Z. at some miles’ distance. I did not inform him beforehand of the intended experiment, but retired to rest shortly before midnight with my thoughts intently fixed on Z., with whose rooms and surroundings I was quite unacquainted. I soon fell asleep, and awoke next morning unconscious of anything having taken place. On seeing Z. a few days afterwards, I inquired, ‘Did anything happen at your rooms on Saturday night?’ ‘Yes,’ replied he, ‘a great deal happened. I had been sitting over the fire with M., smoking and chatting. About 12.30 he rose to leave, and I let him out myself. I returned to the fire to finish my pipe, when I saw you sitting in the chair just vacated by him. I looked intently at you, and then took up a newspaper to assure myself that I was not dreaming; but on laying it down I saw you still there. While I gazed, without speaking, you faded away.’”

The second case quoted is also written by the agent, who is known to the public as “S. H. B.” It was confirmed, to the satisfaction of the investigators, by both percipients.

“On a certain Sunday evening in November 1881, having been reading of the great power which the human will is capable of exerting, I determined, with the whole force of my being, that I would be present in spirit in the front bedroom on the second floor of a house situated at 22 Hogarth Road, Kensington, in which room slept two ladies of my acquaintance, namely Miss L. S. V. and Miss E. C. V., aged respectively twenty-five

and eleven years. I was living at this time at 23 Kildare Gardens, a distance of about three miles from Hogarth Road, and I had not mentioned in any way my intention of trying this experiment to either of the above ladies, for the simple reason that it was only on retiring to rest upon this Sunday night that I made up my mind to do so. The time at which I determined that I would be there was one o'clock in the morning; and I also had a strong intention of making my presence perceptible. On the following Thursday I went to see the ladies in question, and, in the course of my conversation (without any allusion to the subject on my part), the elder one told me that on the previous Sunday night she had been much terrified by perceiving me standing by her bedside, and that she screamed when the apparition advanced towards her, and awoke her little sister, who also saw me.

“I asked her if she was awake at the time, and she replied most decidedly in the affirmative; and, upon my inquiring the time of the occurrence, she replied, ‘About one o'clock in the morning.’

“This lady at my request wrote down a statement of the event, and signed it. . . .”

Mr. Gurney (one of the authors of *Phantasms of the Living*), became deeply interested in these experiments and requested Mr. B. to notify him in advance of the next occasion when he proposed to make his presence known in this strange manner. Accordingly, March 22, 1884, he received the following note:—

DEAR MR. GURNEY,—I am going to try the experiment to-night of making my presence perceptible at 44 Morland Square, at 12 P.M. I will let you know the result in a few days.
—Yours very sincerely, S. H. B.

The next letter, which was written on April 3, contained the following statement, prepared by the percipient, Miss L. S. Verity:—

“On Saturday night, March 22, 1884, at about midnight, I had a distinct impression that Mr. S. H. B. was present in my room, and I distinctly saw him while I was quite awake. He came towards me and stroked my hair. I voluntarily gave him this information when he called to see me on Wednesday, April 2, telling him the time and the circumstances of the apparition without any suggestion on his part. The appearance in my room was most vivid and quite unmistakable.”

Miss A. S. Verity also furnished this corroborative statement:—

“I remember my sister telling me that she had seen S. H. B., and that he had touched her hair, *before* he came to see us on April 2.”

The agent's statement of the affair is as follows:—

“On Saturday, March 22, I determined to make my presence perceptible to Miss V. at 44 Morland Square, Notting Hill, at twelve midnight; and as I had previously arranged with Mr. Gurney that I should post him a letter on the evening on which I tried my next experiment (stating the time and other particulars), I sent him a note to acquaint him with the above facts. About ten days afterwards I called upon Miss V., and she voluntarily told me that on March 22, at twelve o'clock, midnight, she had seen me so vividly in her room (whilst widely awake) that her nerves had been much shaken, and she had been obliged to send for a doctor in the morning.”

Andrew Lang, in *The Book of Dreams and Ghosts*, relates a curious but authenticated story about another “sending” of the “astral body.” It is as follows:—

“Mr. Sparks and Mr. Cleave, young men of twenty and nineteen, were accustomed to ‘mesmerise’ each other in their dormitory at Portsmouth, where they were students of naval engineering. Mr. Sparks simply stared into Mr. Cleave's eyes as he lay on his bed till he ‘went off.’ The experiments seemed

so curious that witnesses were called, Mr. Darley and Mr. Thurgood. On Friday, January 15, 1886, Mr. Cleave determined to try to see, when asleep, a young lady at Wandsworth, to whom he was in the habit of writing every Sunday. He also intended, if possible, to make *her see him*. On awakening, he said that he had seen her in the dining-room of her house, that she had seemed to grow restless, had looked at him, and then had covered her face with her hands. On Monday he tried again, and he thought he had frightened her, as, after looking at him for a few minutes, she fell back in her chair in a kind of faint. Her little brother was in the room with her at the time. On Tuesday next the young lady wrote, telling Mr. Cleave that she had been startled by seeing him on Friday evening (this is an error), and again on Monday evening, 'much clearer,' when she nearly fainted."

At Mr. Gurney's request, Mr. Cleave wrote an account of this experience, and Mr. Sparks, Mr. Darley, and Mr. Thurgood corroborated it as to their presence during the trance as well as to Mr. Cleave's statements when he awoke. The young woman's statement, dated January 19, and post-marked "Portsmouth, January 20," was also produced. In this letter she mentions her *first* vision of Mr. Cleave as occurring on Tuesday (not Friday), and her second, while she was alone with her little brother at supper on Monday.

In commenting upon this fact, Mr. Lang adds:—

"But the very discrepancy in Miss ——'s letter is proof of fairness. Her first vision of Mr. Cleave was on 'Tuesday last.' Mr. Cleave's first impression of success was on the Friday following. But he had been making the experiment for five nights previous, including the Tuesday of Miss ——'s letter. Had the affair been a hoax, Miss —— would either have requested him to re-write her letter, putting Friday for Tuesday, or, what is simpler, Mr. Cleave would have adopted her version and written 'Tuesday' in place of 'Friday.'"

In other words, in Mr. Lang's opinion, the apparent error in dates actually tends to prove the accuracy of all the statements about the experiment.

Goethe declares that he once met himself face to face at a certain place, and noticed that he was wearing somewhat peculiar garb. Several years later he found himself in the same place, wearing the same costume. Some of Shelley's friends once saw him at Lerici, when he was not there—in the flesh at least. He passed along a balcony in full view of all, and disappeared as mysteriously as he had come, although there was no exit through which a man could have passed. Mark Twain, who was much interested in psychic research, relates that, at a crowded reception, he saw a woman whom he had not met for many years. Although she approached him, he lost sight of her just before she reached him, and, when later he met her in reality, he discovered that she was in a railway train, travelling towards that town, at the moment her apparition had appeared to him.

These may be hallucinations, but it is not so easy to account for the following tale, which is taken from the *Journal of the American Society for Psychological Research*, December 1907. Like many of the experiences related in *Phantasms of the Living*, it suggests possibilities that are entitled to serious consideration. The story is as follows:—

“At one o'clock on Sunday morning, I was awakened from a perfectly sound, dreamless sleep, with the consciousness that some one was in the room. On becoming clearly awake, I saw standing at the foot of the bed my wife. I remember she wore a dress which she ordinarily wore about the house when attending to her morning duties. I was not conscious until later that the room was absolutely dark. In dress, and every other way, my wife appeared perfectly natural.

"I half sprung up in bed, and exclaimed, 'What are you doing here?' She replied, 'I thought I would come out and see how you are getting along.' She walked around from the foot of the bed, where she was standing, to the side and head of the bed where I was lying, bent over, kissed me, and disappeared. In an instant I sprang to my feet, realised then that the room was absolutely dark, lighted the gas, and, as a result of the experience, was nervously in a chill, with the cold perspiration starting out all over the body.

"On going down to the breakfast table the next morning, I related the experience to both Dr. K. and Mr. P. I was so worried by the whole experience, in spite of what I supposed was usually good, common sense, I made up a sham telegram and sent it to my wife, asking if a letter had come making a certain engagement. Later in the day I received her reply, 'No such engagement; we are all well.'

"Upon returning to my home several days later, I was at once impressed with the fact that my wife was interested with regard to my sleeping on Saturday night. After some sparring over the matter, I finally asked her why she asked the questions she did. She then told me that she had been reading Hudson's *Psychic Phenomena*, in which he had stated that if a person fixed his mind just at the point of losing consciousness in sleep upon another person, and the desire to meet that person under certain conditions, that the result with the second party would be practically as determined by the original experimenter.

"After reading me the extract from Hudson, she told me that, on retiring on Saturday night, she had fixed her mind upon the fact that at one o'clock in the morning she would appear to me, and kiss me.

"The above are the facts as I now remember them. I have never had a similar experience, and though she has confessed to me that she has tried the same experiment at other times, it has never proved successful, unless it may have been in some disturbing dream.—Very sincerely yours,

"C. W. S."

Dr. Hyslop has in his possession the original letter of Mrs. S., wife of Mr. S., in which she describes her experiment. This was sent to him by Dr. Funk, and it made unnecessary the re-writing of the whole experience. It was not possible to obtain the exact date of the experiment described. The letter to Dr. Funk was written before the above account of the experience as submitted by Mr. S. The original narrative is as follows:—

“Having read a convincing statement made by Mr. Thompson Jay Hudson, in his *Law of Psychic Phenomena*, to the effect that by a mental process it is possible to appear in visible form to people at a distance from one’s self, I tried the experiment some years ago, with my husband as object. According to Mr. Hudson’s directions, I went to sleep one night (at home, in Derby, Conn.), willing myself to appear to my husband in his room, whether in New York City, Syracuse, Schenectady, or Buffalo, I do not now remember. My purpose was to awaken him from sleep, to attract his attention to myself as I stood on the opposite side of the room, and, as some act seemed necessary to the drama, to walk over to his bedside and kiss him on the forehead. (I do not remember having spoken or intending to speak.)

“I remember holding the matter well in mind as long as I was conscious. Several days later my husband returned. I was most anxious to know the result of my efforts, but did not wish to ask him outright for fear of hearing of failure on my part. After various general remarks on both sides with regard to the health of each during his absence, my husband asked pointedly, ‘What have you been doing since I’ve been gone? Have you tried any of your psychic experiments on me?’ (He knew that I had been reading the book, but up to that time I had not presumed to attempt anything of that sort myself, and he had nothing to base his question on except my general interest in the subject.)

“I replied, ‘Why, what has happened?’ Then he told me

that he had awakened suddenly, out of a sound sleep, on Saturday night, about eleven o'clock, and was frightened by seeing me standing in the room. So real did I seem that he exclaimed, 'Rosa, why are you here?' With that I walked over to his bedside, kissed him on the forehead, and was gone.

"He was thoroughly shaken and alarmed, and did not sleep again for hours. Then I confessed my part of the experience. The only detail that did not tally in the working out of the thought with the original plan had to do with *time*. I had in mind *one* o'clock, and he saw the vision at eleven, or *vice versa*. The hour was not correct.

"My husband begged me to try nothing more of the sort on Saturday night, since it upset him sadly for his Sunday work.

"I believe this is substantially the whole story.

"R. T. S."

In reply to inquiries for further information regarding certain features of his experience, Mr. S. makes the following statements:—

"NEW YORK, *June 25, 1907.*

"MY DEAR DR. HYSLOP,—Very briefly, for I have only a moment, the answers to your questions are as follows:—

"1. I did not notice that the room was dark until after the apparent disappearance of my wife.

"2. My attention was not drawn to the fact with regard to the light in the room any more than it would have been if my wife had walked into any ordinary room at any time in the day.

"3. This question which you ask is a difficult one to answer. Psychologically I am not sure just at what point I was fully awake. At the cessation of the experience I found myself sitting half out of bed, in a dripping perspiration. The impression, as I look back, is that of an actual occurrence and in no way a dream.

“4. There was no consciousness on my part of the presence of any other person in the room other than my wife.

“5. So far as I know, Mrs. S. had no impressions beyond those accompanying the resolution just before going to sleep, as I have stated it in my letter.

“6. I have never had any experience of this nature previous to or since this.—Very truly yours,
C. W. S.”

As both persons concerned in this case are known to be eminently honest and trustworthy, the possibility of conscious deception may be said to be practically eliminated. As Dr. Hyslop says, in commenting upon the experience:—

“The psychologically interesting incident of these replies is found in the answer to question second. The phenomenon shows a resemblance to the hypnogogic condition which often precedes or follows certain cases of sleep. It involves that action of the optical centres which show that they may continue their dream or hallucinatory functioning while the central self-consciousness is normally awake. It suggests a more or less central source of the phantasms which accompany the condition, though they may have an extraneous origin in respect to their stimuli.”

The next case we take from Dr. I. K. Funk's book, *The Psychic Riddle* (Funk & Wagnalls Co.), pp. 179–184, quoting only that passage which directly bears on our problem. The narrator, in this instance, was an educated man, a physician of standing, who had been suffering for some time past from a remarkable malady, which rendered complete control of his body impossible. After describing some of his early experiences, he goes on:—

“After a little while I put out the light and retired, but no sooner had I done this than the action became more rapid, and I could feel it almost as though it was a creeping sensation moving up my legs. I got up and lit the gas and went back to

bed; with pillows arranged in such a way as to make me comfortable. In a comparatively short time all circulation ceased in my legs, and they were as cold as those of the dead. The creeping sensation began in the lower part of my body, and that also became cold. . . . There was no sensation of pain or even of physical discomfort. I would pinch my legs with my thumb and finger, and there was no feeling or no indication of blood whatever. I might as well have pinched a piece of rubber so far as the sensation produced was concerned. As the movement continued upward, all at once there came a flashing of lights in my eyes and a ringing in my ears, and it seemed for an instant as though I had become unconscious. When I came out of this state, I seemed to be walking in the air. No words can describe the exhilaration and freedom that I experienced. No words can describe the clearness of mental vision. At no time in my life had my mind been so clear and so free. Just then I thought of a friend who was more than a thousand miles distant. Then I seemed to be travelling with great rapidity through the atmosphere about me. Everything was light, and yet it was not the light of the day or the sun, but, I might say, a peculiar light of its own, such as I had never known. It could not have been a minute after I thought of my friend, before I was conscious of standing in a room where the gas jets were turned up, and my friend was standing with his back toward me, but, suddenly turning and seeing me, said, 'What in the world are you doing here? I thought you were in Florida'—and he started to come toward me. While I heard the words distinctly, I was unable to answer. An instant later I was gone, and the consciousness of the things that transpired that memorable night will never be forgotten. I seemed to leave the earth, and everything pertaining to it, and enter a condition of life of which it is absolutely impossible to give here any thought I had concerning it, because there was no correspondence to anything I had ever seen or heard or known of in any way. The wonder and the joy of it was unspeakable; and I can readily understand now what Paul meant when he said, 'I knew a man, whether in the body or out of it I know not, who was caught

up to the third heaven, and there saw things which it was not possible (lawful) to utter.'

"In this latter experience there was neither consciousness of time nor of space; in fact, it can be described more as a consciousness of elastic feeling than anything else. It came to me after a time that I could stay there if I so desired, but with that thought came also the consciousness of the friends on earth and the duties there required of me. The desire to stay was intense, but in my mind I clearly reasoned over it,—whether I should gratify my desire or return to my work on earth. Four times my thought and reason told me that my duties required me to return, but I was so dissatisfied with each conclusion that I finally said, 'Now I will think and reason this matter out once more, and whatever conclusion I reach I will abide by.' I reached the same conclusion, and I had not much more than reached it when I became conscious of being in a room and looking down on a body propped up in bed, which I recognised as my own. I cannot tell what strange feelings came over me! This body, to all intents and purposes looked to be dead. There was no indication of life about it, and yet here I was apart from the body, with my mind thoroughly clear and alert, and the consciousness of another body to which matter of any kind offered no resistance.

"After what might have been a minute or two, looking at the body, I began to try and control it, and in a very short time all sense of separation from the physical body ceased, and I was only conscious of a directed effort towards its use. After what seemed to be quite a long time, I was able to move, got up from the bed, dressed myself, and went down to breakfast.

"I may add here that the friend referred to as having been seen by me that night was also distinctly conscious of my presence and made the exclamation mentioned. We both wrote the next day, relating the experiences of the night, and the letters corroborating the incident crossed in the post."

Dr. Funk states that the author of this narrative

has long been known to him, and that he has every confidence in his honour and powers of observation.

A most interesting case of this kind is given in Mr. Myers' paper "On Indications of Continued Terrene Knowledge on the Part of Phantasms of the Dead," in *Proceedings S. P. R.*, vol. viii., pp. 180-93. We quote some passages from this account, which is of great interest, as apparently showing the disunion of soul and body. The narrator is again a physician, and sworn statements from several witnesses are included in the original report, together with answers to a number of questions by Dr. Hodgson. The narrative runs in part as follows:—

"I passed four hours in all without pulse or perceptible heart-beat, as I am informed by Dr. S. H. Raynes, who was the only physician present. During a portion of this time several of the bystanders thought I was dead, and, such a report being carried outside, the village church bell was tolled. Dr. Raynes informs me, however, that by bringing his eyes close to my face, he could perceive an occasional short gasp, so very light as to be barely perceptible, and that he was upon the point several times of saying, 'He is dead,' when a gasp would occur in time to check him.

"He thrust a needle deep into the flesh at different points from the feet to the hips, but got no response. Although I was pulseless for four hours, the state of apparent death lasted only about half-an-hour.

"I lost, I believe, all power of thought or knowledge of existence in absolute unconsciousness. Of course, I need not guess at the time so lost, as in such a state a minute or a thousand years would appear the same. I came again into a state of conscious existence, and discovered that I was still in the body, but the body and I had no longer any interests in common. I looked in astonishment and joy for the first time upon myself—the *me*, the real Ego, while the not-me closed it upon all sides like a sepulchre of clay.

“With all the interest of a physician I beheld the wonders of my bodily anatomy, intimately interwoven with which, even tissue for tissue, was I, the living soul of that dead body! I learned that the epidermis was the outside boundary of the ultimate tissues, so to speak, of the soul. I realised my condition and calmly reasoned thus: I have died, as man terms death, and yet I am as much a man as ever. I am about to get out of the body. I watched the interesting process of the separation of soul and body. By some power, apparently not my own, the Ego was rocked to and fro, laterally, as the cradle is rocked, by which process its connection with the tissues of the body was broken up. After a little time, the lateral motion ceased, and along the soles of the feet, beginning at the toes, passing rapidly to the heels, I felt and heard, as it seemed, the snapping of innumerable small cords. When this was accomplished, I began slowly to retreat from the feet, toward the head, as a rubber chord shortens. I remember reaching the hips, and saying to myself, ‘Now, there is no life below the hips.’ I can recall no memory of passing through the abdomen and chest, but recollect distinctly when my whole self was collected in the head, when I reflected thus: ‘I am all the head now, and I shall soon be free.’ I passed around the brain as if it were hollow, compressing it and its membranes, slightly on all sides, towards the centre, and peeped out between the sutures of the skull, emerging like the flattened edges of a bag of membranes! I recollect distinctly how I appeared to myself something like a jelly-fish as regards colour and form! As I emerged, I saw two ladies sitting at my head. I measured the distance between the head of my cot and the knees of the lady opposite the head, and concluded there was room for me to stand, but felt considerable embarrassment as I reflected that I was about to emerge naked before her, but comforted myself with the thought that in all probability she would not see me with her bodily eyes, as I was a spirit. As I emerged from the head, I floated up laterally like a soap-bubble attached to the bowl of a pipe, until I at last broke loose from the body and fell lightly to the floor, where I slowly rose and expanded to the full stature of a man. I seemed to be translucent, of a

bluish cast and perfectly naked. With a painful sense of embarrassment, I fled toward the partially opened door to escape the eyes of the two ladies whom I was facing, as well as others who I knew were about me, but upon reaching the door I found myself clothed, and satisfied upon that point, I turned and faced the company. As I turned, my left elbow came in contact with the arm of one of two gentlemen, who were standing in the door. To my surprise, his arm passed *through* mine without apparent resistance, the several parts closing again without pain, as air reunites. I looked quickly up at his face to see if he had noticed the contact, but he gave me no sign—only stood and gazed toward the couch I had just left. I directed my gaze in the direction of his, and saw my dead body.

“Suddenly I discovered that I was looking at the straight seam down the back of my coat. ‘How is this, I thought, how do I see my back?’ and I looked again, to reassure myself, down the back of the coat, or down the back of my legs to the very heels. I put my hand to my face and felt for my eyes. They were where they should be: I thought, ‘Am I like an owl that I can turn my head half-way round?’ I tried the experiment and failed.

“No! Then it must be that, having been out of the body, but a few moments, I have yet the power to use the eyes of the body, and I turned about and looked back in at the open door, where I could see the head of my body in a line with me. I discovered then a small cord, like a spider’s web, running from my shoulders back to my body and attaching to it at the base of the neck, in front.

“I was satisfied with the conclusion that by means of that cord, I was using the eyes of my body, and, turning, walked down the street.¹

¹ This has frequently been described by clairvoyants, and others. See A. J. Davis’ account, given above. Numbers of others of like nature could be cited. It is generally asserted that so long as this cord remains unbroken, re-manifestation in the body is possible; but if it gets ruptured for any reason, re-habitation of the body becomes impossible. In natural death, it is asserted that this cord snaps some minutes after the spiritual body has completely emerged from the material body.

“A small, densely black cloud appeared in front of me and advanced toward my face. I knew that I was to be stopped. I felt the power to move or to think leaving me. My hands fell powerless to my side, my shoulders and my head dropped forward, the cloud touched my face and I knew no more.

“Without previous thought and without effort on my part, my eyes opened. I looked at my hands and then at the little white cot upon which I was lying, and, realising that I was in the body, in astonishment and disappointment, I exclaimed: ‘What in the world has happened to me? Must I die again?’ . . .”

Many cases of a like nature are to be found in the *Proceedings of the Society for Psychological Research*, and in Mr. F. W. H. Myers’ *Human Personality*. A remarkable case of a somewhat different character, but more evidential in that the “double” was *seen* by another person, is the following instance, narrated in *Phantasms of the Living*, vol. i., pp. 225–6, by the Rev. P. H. Newnham, as follows:—

“In March 1854, I was up at Oxford, keeping my last term, in lodgings. I was subject to violent neuralgic headaches, which always culminated in sleep. One evening, about 8 P.M., I had an unusually violent one; when it became unendurable, about 9 P.M., I went into my bedroom, and flung myself, without undressing, on the bed, and soon fell asleep.

“I then had a singularly clear and vivid dream, all the incidents of which are still as clear in my memory as ever. I dreamed that I was stopping with the family of a lady who subsequently became my wife. All the younger ones had gone to bed, and I stopped chatting to the father and mother, standing up by the fireplace. Presently I bade them good night, took my candle, and went off to bed. On arriving in the hall, I perceived that my *fiancée* had been detained downstairs, and was only then near the top of the staircase. I rushed upstairs, overtook her on the top step, and passed my two arms around her waist, under her arms, from behind. Although I was carry-

ing my candle in my left hand, when I ran upstairs, this did not, in my dream, interfere with this gesture.

“On this I woke, and a clock in the house struck ten almost immediately afterwards.

“So strong was the impression of the dream that I wrote a detailed account of it the next morning to my *fiancée*.

“*Crossing* my letter, *not* in answer to it, I received a letter from the lady in question: ‘Were you thinking about me very specially last night, just about ten o’clock? For, as I was going upstairs to bed, I distinctly heard your footsteps on the stairs, and felt you put your arms round my waist.’”

Mrs. Newnham’s confirmation of this account was received.

Such cases would surely seem to indicate that the spiritual body is more or less detachable from the material body, and, that once granted, materialism would be overthrown, and the case practically won for some sort of spiritualism.

3. THE PROCESS OF DYING AS DESCRIBED BY “SPIRITS.”

Throughout spiritualistic literature there exists a great mass of evidence on this subject of the future life; and we are told with the utmost detail and precision exactly what we shall do when we come to pass the “great divide” ourselves, what our occupations shall be, and in fact all about the future state. If we could believe these statements, the future must be a very rational sort of existence—not very far removed from our present state; and, in fact, if we can credit the statements made by Mr. John K. Wilson, in his singular book *Death: its Meanings and Results*, things must be very much the same as they are here. Throughout the three large volumes of *The Encyclopædia of Death*, are to be found

many passages of the kind ; and, indeed, the volumes are mostly taken up with spiritualistic material of this sort. From such passages we select the following narrative as of especial interest for our present purpose—since it describes the process of dying very minutely, and will be found to agree, largely, with the descriptions given by clairvoyants and others :—

“When I awoke in the spirit-life, and perceived I had hands and feet, and all that belongs to the human body, I cannot express to you in form of words the feelings which at that moment seemed to take possession of my soul. I realised that I had a body—a spiritual body. . . . I realised at that moment, as I had never done before, the glorious truth of my own unfoldings. I had expected to sleep a long sleep of death, and awake at last, at the general resurrection, to receive commendation or condemnation, according to the deeds done in the body. . . .

“Imagine then, if you can, what the surprise of a spirit must be to find, after the struggle of death, that he is a new-born spirit, from the decaying tabernacle of flesh that he leaves behind him. I gazed on weeping friends with a saddened heart, mingled with joy,—knowing, as I did, that I could be with them, and behold them daily, though unseen and unknown ; and, as I gazed upon the lifeless tenement of clay, and could behold the beauty of its mechanism, I felt impelled to seek the author of so much beauty and use, and prostrate myself in adoration at his feet. I felt a light touch on my shoulder, and, joy unspeakable ! I beheld the loved ones of earth, some of whom had long since departed from the earth plane, saying to me, ‘Leave this sad and weeping group of mourning friends, and come with us, and behold your future home—your place appointed unto you—and be introduced by us into the society of congenial spirits, who have long known you while sojourning on the earth plane, but of whose presence you were ignorant. And I felt myself ascending, or rather floating onward and upward through the regions of space ; and I beheld worlds inhabited with people like unto those who dwell upon the earth ;

and ascending from each of these beautiful orbs were freed spirits, and their guides, bearing me company through the bright realms of immensity . . ." (*Encyclopædia of Death*, vol. i., pp. 47, 48).

Again, we read that Judge Edmonds, when describing his death through the lips of Cora L. V. Tappan, stated that—

“During the whole of the death-change, he was in the full and clear possession of his faculties, and he felt no pain, although for some years previously he had been suffering from debility. His body sank into sweet repose, whilst his spirit, already free, gazed upon it as one would look upon a worn-out garment; he was not aware of losing any faculty; he re-entered his body at times to see the loved ones around his bed; and he admonished his children not to mourn. He sprang into the new existence as one would leap from bonds which for years had encircled him and chained him to the flesh and to physical suffering—he sprang forth delighted, as one would leap into a golden sea, which immediately gave strength, vigour, and immortality. . . .”

In the record of experiences, published in vol. i., part ii., of the *Proceedings of the American Society for Psychical Research*, the author, “G. A. T.,” asserts that an intelligence purporting to be that of his deceased father, frequently communicated with him by means of automatic writing. Some of the answers to questions are of interest in this connection, even if it is impossible to confirm them. Thus, on one occasion, this intelligence was asked if his present life was eternal. To this the answer was, “I don’t know.” Asked if any of his companions had disappeared, he replied, “No.” To questions in regard to the lapse of time, he answered, “There is no time.”

When conversing with what purported to be the discarnate spirit of a friend named “H. R.,” the author

asked her if she was happy. She said, "Yes!"—"I asked her if she was happier than when in the body, and she answered, 'Yes, far!' I asked if the spirits lived on earth as of old, and the reply was, 'We can stay here if we wish.' I asked if it was her desire to stay here, and she said, 'Yes.'"

The communications which have been received by Dr. Hyslop, purporting to come from Dr. Hodgson, contain many references regarding the conditions existing in the world beyond the grave. Many of these messages belong more appropriately to a later chapter, "Intracosmic Difficulties of Communication," but as all the facts pertaining to this subject have not been included in the discussion of that phase of the question, we quote the following from the *Journal* of the American Society, April 1907:—

"Thus, after some reference to experiments which he had wished to carry out while living, he interrupted the communications with an allusion to an unverifiable experience after death. He said: 'It is delightful to go up through the cool ethereal atmosphere into this life and shake off the mortal body.' He had himself believed that the spiritual world was ethereal, and we have in this passage one of the many interpolations of communicators which represent possibilities but not evidence of what these phenomena purport to be.

"At another sitting 'he became greatly excited and confused, and the hand wrote so heavily and rapidly that it tore the paper, and when we managed to have it calm down, the following came, and was almost likely the interpolation of the control or trance personality:—

"'In leaving the body the shock to the spirit knocks everything out of one's thoughts for awhile, but if he has any desire at all to prove his identity he can in time collect enough evidence to prove his identity convincingly.'

"To try a question which was designed to test the possibility of our getting marginal thoughts of the communicator instead

of the main ones intended, I asked at this latter sitting if some of the thoughts came through that he did not intend to send. The answer and colloquy was as follows :—

“‘At times they do, and then again his thoughts are somewhat changed. They are not exactly what they were when in the body.’

“‘Very good—I understand.’

“‘The change called Death, which is really only transition, is very different from what one thinks before he experiences it. That in part explains why Myers never took a more active part after he came over here. He had much on his mind before he came which he vowed he would give after he came over, but the shock was such that many of his determinations were shattered from his living memory. This is a pretty excuse for a living reality—a fact. It is unmistakably so with every one who crosses the border line.’”

Other quotations might be made, but these are sufficient to indicate the character of the communications that purport to penetrate from the “Spirit World.”

CHAPTER IV

EXPERIMENTS IN PHOTOGRAPHING AND IN WEIGHING THE SOUL

1. EXPERIMENTS IN PHOTOGRAPHING THE SOUL.

THE clairvoyant descriptions of death, and of what takes place at that moment, are of great interest—that must be granted, no matter how we may choose to interpret the facts. But these experiences in themselves—backed up, as they are, apparently, by the statements of so-called Spirits—cannot be taken as conclusive, in the absence of any external evidence tending to corroborate these visions. In spite of the *a priori* improbability that these visions should agree with one another in the marvellous manner they do, there is still the *possibility* that these perceptions are merely subjective hallucinations, coincidental in the minds of several seers. But if we could obtain external evidence that these visions are not merely subjective; if we could obtain such evidence as the photographic camera and the balance afford, then we should assuredly have striking proof—or at least a strong presumption—that something does actually leave the body at death, and that this “something” can be photographed and even weighed.

Having these considerations in mind, then, let us now turn to the facts, and see how much evidence there is that such phenomena ever have occurred. We shall discuss primarily the experiments that have been con-

ducted in photographing the soul—these having been made by Dr. Hippolyte Baraduc, of Paris. This physician has written much on nervous diseases, on the stomach, gynæcology, and especially upon human vitality. Of late years, his attention had been called to the possibility of photographing the invisible; and it was asserted that he had succeeded in photographing the thought of a living person, and obtaining impressions of such “thought-forms,” created by the living. As these experiments will naturally open the way for our consideration of the more marvellous experiments to follow, we shall commence by describing these researches—coming to the experiments in “photographing the soul” later on.

Dr. Baraduc asserted that he had obtained photographs of human radiations and of human thought, under certain conditions. For instance, calm, peaceful emotions produce pictures of softly homogeneous light, or the appearance of a gentle shower of snow-flakes against a black background; whereas sad or violent passions suggest, in the arrangement of the light and shadows, the idea of a whirlpool or revolving storm, somewhat like a meteorological diagram representing a cyclone. If these photographs are really what they are believed to be, they would seem to indicate that, in our ordinary normal condition, we emit radiations which are regulated and flow forth in smooth, even succession; but when violent emotions, such as anger or fear, break through the control of the will and take possession of us, they produce a violent and confused emission.

There is no reason, *a priori*, why the soul should not be a space-occupying body, save for the tradition of theology. For all that we know, the soul might be a point of force, existing within and animating some sort of ethereal body, which corresponds, in size and shape, to our material body. But at all events, there is an

abundance of very good testimony to the effect that the shape of the spiritual body corresponds to that of the material body; and, as such, it certainly occupies space, and possibly has weight also. It might and it might not; it is a question of evidence. It will have to be settled, if at all, not by speculations, but by *facts*. Are there any facts, then, that would seem to indicate that the soul might be photographed? Have we any evidence that the soul may be photographed under certain conditions, and particularly at the moment of death? If so, we shall have advanced a great step in our knowledge of this subject.

Before we adduce our evidence on this point, however, it may be well to illustrate the fact that there is no inherent absurdity in the idea, as many might suppose. Of course the spiritual body would have to be material enough to reflect light waves, but where is the evidence that it is not? There seems to be much evidence, on the contrary, that it is. And it must be remembered that the camera will disclose innumerable things quite invisible to the naked eye, or even to the eye aided by the strongest glasses or telescopes. Normally, we can see but a few hundred stars in the sky; with the aid of telescopes, we can see many thousand; but the photographic camera discloses more than *twenty million!* Here, then, is direct evidence that the camera can observe things which we cannot see; and, indeed, this whole process of sight or "seeing" is a far more complicated one than most persons imagine. As Sir Oliver Lodge has recently pointed out (*Harper's Magazine*, August 1908), there is no reason why we should not be enabled to photograph a spirit, when we can photograph an image in a mirror—which is composed simply of vibrations, and reflected vibrations at that! We are a long way from the tangible thing, in such a case; and

yet we are enabled to photograph it with an ordinary camera. Any disturbance in the ether we should be enabled to photograph likewise—if only we had delicate enough instruments, and if the “conditions” for the experiment were favourable. The phenomena of spirit-photography, and especially the experiments of Dr. Baraduc, to which we shall immediately recur, would seem to be proof of this.

These experiments, as well as those that are about to follow, gain greater credibility when considered in the light of the newer experimental researches in physics, which demonstrate, apparently, that matter can be made to disintegrate and disappear, and can be again re-formed from invisible vortices in the ether into sufficiently solid bodies to be photographed by the sensitive plate. In his remarkable work, *The Evolution of Matter*, Dr. Gustave Le Bon has devoted a whole section of his argument to what he has denominated “the dematerialisation of matter.” He proves by experiments in the physical laboratory that matter can dissociate, and vanish into apparent nothingness. What really takes place, however, is that the solid matter, as we have been accustomed to conceive it, is resolved into its finer constituent parts—not only into the material atoms of which it is composed, but these atoms are in turn dissociated and resolved into a series of etheric vortices, invisible to normal sense perception. Apparently, therefore, matter has ceased to be, as such; and, in fact, it has been resolved into energy! Conversely, Dr. Le Bon proved that, by producing artificial equilibria of the elements arising from the dissociation of matter, he could succeed in creating, with immaterial particles, “something singularly resembling matter.” These equilibria were maintained a sufficient length of time to enable them to be photographed.

On p. 164 of Dr. Le Bon's *Evolution of Matter*, are to be found photographs of what is practically materialised matter. This author says, in part:—

“Such equilibria can only be maintained for a moment. If we were able to isolate and fix them for good—that is to say, so that they would survive their generating cause—we should have succeeded in creating with immaterial particles something singularly resembling matter. The enormous quantity of energy condensed within the atom shows the impossibility of realising such an experiment. But, if we cannot with immaterial things effect equilibria, able to survive the cause which gave them birth, we can at least maintain them for a sufficiently long time to photograph them, and thus create a sort of momentary materialisation.”

If, therefore, physical science now admits, as it does, that vibrations, or disturbances in the ether, can be photographed, there is no longer any *a priori* objection to these experiments by Dr. Baraduc—which claim, merely, that similar vibrations have been photographed—such vibrations being the external modification or impression left upon the ether by the causal thought.

So much for theoretical possibilities: now for the facts.

In a remarkable little booklet, entitled, *Unscen Faces Photographed*, Dr. H. A. Reid has presented a number of cases of supposed spirit photography, some of which are certainly difficult to account for by any theory of fraud. It is true that the methods of imitating this process by fraudulent means are numerous and ingenious; but practically none of them are unknown to us. In *The Physical Phenomena of Spiritualism*, pp. 206–23, one of us has described these fraudulent methods in considerable detail; and has also published an account of a case in which trickery was actually detected in the

process of operation—a personal incident. (See *Proceedings of the American S.P.R.*, vol. ii., pp. 10–13.) But there seem to be certain cases on record that are most difficult to account for by any theory of trickery—partly because of the excellence of the conditions, and partly because of the character of the experimenter. Let us glance at one or two of the cases in which the character of the experimenter would seem to insure the fact that no conscious and voluntary fraud was practised. A résumé of a few such cases is to be found in Mr. Edward T. Bennett's book on *Spiritualism* (T. C. & E. C. Jack, Edinburgh), pp. 113–20. We quote in part:—

“The most notable exception to this (rule of fraud) which I am able to quote is that of the late Mr. J. Traill Taylor, who was for a considerable time the editor of the *British Journal of Photography*. The following quotations are from a paper on ‘Spirit Photography’ by Mr. Taylor. It was originally read before the London and Provincial Photographic Association in March 1893, and was reprinted in the *British Journal of Photography* for March 26th, 1904, shortly after Mr. Taylor's death. He says:—

“‘Spirit photography, so called, has of late been asserting its existence in such a manner and to such an extent as to warrant competent men in making an investigation, conducted under stringent test conditions, into the circumstances under which such photographs are produced, and exposing the fraud should it prove to be such, instead of pooh-poohing it as insensate because we do not understand how it can be otherwise—a position that scarcely commends itself as intelligent or philosophical. If, in what follows, I call it “spirit photography,” instead of psychic photography, it is only in deference to a nomenclature that extensively prevails. . . . I approach the subject merely as a photographer.’

“Mr. Taylor then gives a history of the earlier manifestations of spirit photography, and goes on to explain how striking phenomena in photographing what is invisible to the

eye may be produced by the agency of florescence. He quotes the demonstration of Dr. Gladstone, F.R.S., at the Bradford meeting of the British Association in 1873, showing that invisible drawings on white cards have produced bold and clear photographs when no eye could see the drawings themselves. Hence, as Mr. Taylor says: 'The photographing of an invisible image is not scientifically impossible.'

"Mr. Taylor then proceeds to describe some personal experiments. He says: 'For several years I have experienced a strong desire to ascertain by personal investigation the amount of truth in the ever-recurring allegation that figures, other than those visually present in the room, appeared on the sensitive plate. . . . Mr. D., of Glasgow, in whose presence psychic photographs have long been alleged to be obtained, was lately in London on a visit, and a mutual friend got him to consent to extend his stay in order that I might try to get a psychic photograph under test conditions. To this he willingly agreed. My conditions were exceedingly simple, were courteously expressed to the host, and entirely acquiesced in. They were that I, for the nonce, would assume them all to be tricksters, and, to guard against fraud, should use my own camera and unopened packages of dry plates purchased from dealers of repute, and that I should be excused from allowing a plate to go out of my own hand till after development, unless I felt otherwise disposed; but that as I was to treat them as under suspicion, so must they treat me, and that every act I performed must be in the presence of two witnesses; nay, that I would set a watch upon my own camera in the guise of a duplicate one of the same focus—in other words, I would use a binocular stereoscopic camera and dictate all the conditions of operation. . . .

"'Dr. G. was the first sitter, and, for a reason known to myself, I used a monocular camera. I myself took the plate out of a packet just previously ripped up, under the surveillance of my two detectives. I placed the slide in my pocket and exposed it by magnesium ribbon which I held in my own hand, keeping one eye, as it were, on the sitter, and the other on the camera. There was no background. I myself took the plate from the dark slide, and, under the eyes of the two detectives,

placed it in the developing dish. Between the camera and the sitter a female figure was developed, rather in a more pronounced form than that of the sitter. . . . I submit this picture. . . . I do not recognise her, or any of the other figures I obtained, as like any one I know. . . .

““ Many experiments of like nature followed ; on some plates were abnormal appearances, on others none. All this time Mr. D., the medium, during the exposure of the plates, was quite inactive. . . .

““ The psychic figures behaved badly. Some were in focus, others not so. Some were lighted from the right, while the sitter was so from the left ; some were comely . . . others not so. Some monopolised the major portion of the plate, quite obliterating the material sitters. . . . But here is the point : Not one of these figures which came out so strongly in the negative was visible in any form or shape to me during the time of exposure in the camera, and I vouch in the strongest manner for the fact that no one whatever had an opportunity of tampering with any plate anterior to its being placed in the dark slide or immediately preceding development. Pictorially they are vile, but how came they there ?

““ Now, all this time I imagine you are wondering how the stereoscopic camera was behaving itself as such. It is due to the psychic entities to say that whatever was produced on one-half of the stereoscopic plates was produced on the other—alike good or bad in definition. But, on a careful examination of one which was rather better than the other . . . I deduce this fact, that the impressing of the spirit form was not simultaneous with that of the sitter. . . . This I consider an important discovery. I carefully examined one in the stereoscope and found that, while the two sitters were stereoscopic *per se*, the psychic figure was absolutely *flat* ! I also found that the psychic figure was at least a millimetre higher up in one than in the other. Now, as both had been simultaneously exposed, it follows to demonstration that, although both were correctly placed, vertically in relation to the particular sitter, behind whom the figure appeared, and not so horizontally, this figure had not only *not* been impressed on the plate simul-

taneously with the two gentlemen forming the group, but had not been formed by the lens at all, and that, therefore, the psychic image might be produced *without a camera*. I think this is a fair deduction. But still the question obtrudes: How came these figures there? I again assert that the plates were not tampered with by either myself or any one present. Are they crystallisations of thought? Have lens and light really nothing to do with their formation? The whole subject was mysterious enough on the hypothesis of an invisible spirit—whether a thought projection or an actual spirit, being really there in the vicinity of the sitter—but it is now a thousand times more so. . . .

“ ‘In the foregoing I have confined myself as closely as possible to narrating how I conducted a photographic experiment open to every one to make, avoiding stating any hypothesis or belief of my own on the subject.’ ”

A remarkable series of experiments has been reported by Mr. J. Godfrey Raupert in his book, *The Dangers of Spiritualism* (Kegan Paul & Co.). His conclusions are certainly entitled to due weight and consideration—coming, as they do, from so careful an investigator. Personal interviews with Mr. Raupert but served to strengthen our faith in his conclusions. His account runs as follows:—

“ The ordinary methods of spirit photography give an opportunity for so much trickery that the most conservative psychical researchers seem doubtful whether authentic results can be attained at all. In this connection, therefore, it is interesting to note that I claim to have succeeded in getting such photographs under what, to me at least, are satisfactory ‘test’ conditions.

“ In the course of my inquiries I came across a professional photographer who thoroughly believed in psychic photography, and who maintained that he had obtained genuine pictures. He had, of course, suffered a good deal on this account at the hands of a sceptical public and of a certain class of psychical researchers,

who appear to think that they are the only honest people in the world.

“There seemed, in the case of my new friend, no moral objection to the experiment. He had obtained the pictures in question in his studio in broad daylight and under perfectly normal conditions. He had no need of a ‘circle’ or ‘séance,’ and his time of exposure was no more than the time allowed for ordinary pictures. He declared, moreover, that he was not conscious of any loss of vital power or nervous energy in connection with the process: that he could eat and sleep well, and that his health was normal. He had become convinced that the mysterious photographs were produced by intelligences external to, and independent of, the operator, but that they were in some inexplicable way connected with his own physical or psychical personality. After many visits to his studio, I succeeded in thoroughly gaining his confidence so that I found him ready to agree to any experiments I might propose. He assented to my bringing my own marked plates, placed beforehand in the dark shutter; to my taking any attitude I liked in front of the camera, and to my watching the entire process of developing in his dark room. It thus became my habit to go to his studio at all odd times, often dropping in for a chat quite unexpectedly, and then proposing to sit for a picture. It was but seldom that he raised any objection to an experiment thus suggested. When he did so, it was generally on account of his health. Experience had taught him that indisposition, mental or physical, interfered with his success.

“The plates obtained under these conditions invariably disclosed a vague, cloud-like formation hovering near my own person, and sometimes showed distinct outlines of a form. In one or two instances features would become distinctly visible in this cloud-like emanation on the third or fourth plate—the very gradualness of the development of the form seeming to me to tell in favour of the genuineness of the pictures. I have thus obtained an infinite variety of pictures on plates prepared by myself and remaining under my constant observation to the last. Some of them are extremely interesting and have quite a history of their own; but they are all photographically of much the

same value. Experienced photographers who have seen them maintain that they could be produced normally, although they also admit that this could not possibly be done under the conditions stated.

“Finding myself one winter’s morning unexpectedly near the studio in question, I felt tempted to look in and have a talk about psychical matters. I found my photographer friend busily engaged with his ordinary work, but evidently pleased to see me. We talked a good deal about ‘fresh tests,’ ‘favourable conditions,’ and ‘evidence,’ and we agreed as to the difficulties which stood in the way of obtaining the latter. He thought that photographically the evidence was as perfect as it was ever likely to be, but that our greatest difficulties were due to our ignorance of the laws which govern the phenomena. I expressed it as my opinion that good evidence would have to be sought for in a different direction altogether, since I had come to see that it could never photographically be of such a character as to carry conviction to any outside mind.

“Putting on my hat and opening the door, I was on the point of leaving the studio when the thought occurred to me to make an experiment on the spur of the moment. My friend consented at once. As I had no marked plates with me, I felt that we could not under any circumstances create ‘test’ conditions. He put two of his own plates into a dark shutter, left me to arrange myself in front of the camera, and made an exposure in the ordinary way. The result was a figure, the face and upper part of which would seem to be those of a woman shrouded in ‘psychic’ drapery. I could not recognise the features as those of any person I had known, although they seemed familiar to me, and I expressed my regret at the circumstance. At that moment there flashed across my memory the details of a statement which had some months before been made in my presence, and which was to the effect that these psychic figures in all probability possessed the power of assuming *any* form, and that the drapery was probably only adopted because it facilitated the shaping of some kind of body, and because it involved the least amount

of expenditure of force. Assuming, therefore, the presence of an intelligent being which could hear and see me, I exclaimed:—

“I cannot recognise you in the drapery which you have assumed in this picture: but I might do so if I were to see you in the dress you last wore in your earth life. I am told that it is merely a question of memory, and that you can change your appearance. Try and think of what you were and looked like before you passed out of this life, and we will make another exposure.’

“The photographer smiled at the boldness of the experiment, but I took my place again before the camera. He exposed the second plate. I have not been able to identify the result, but it was all that could be desired. The question was, Is the face on the second plate that of the first plate? We examined the faces very closely as soon as we had printed the pictures, and the magnifying glass certainly disclosed a very striking likeness. But the predisposed mind, I have reason to know, is no very reliable judge. We are very apt to see what we wish to see. I have consequently submitted the pictures to what I believe to be the highest authority on this subject in England, requesting that no pains might be spared to discover the truth, with the result that the faces were pronounced to be identical.” (The pictures referred to in this connection are reproduced in Mr. Raupert’s book.)

“It will be seen that the evidence in favour of the genuineness of these pictures, whatever their origin, is very strong, and that it is quite independent of anything that might be urged from the photographic point of view. Any other theory clearly involves difficulties which, to say the least, make it infinitely more cumbrous and incredible. It will be remembered that I had no appointment with the photographer, and that I had myself no intention of making any experiment. The first photograph was taken entirely on the spur of the moment, and it was only *after* I had obtained it that the thought of suggesting the transformation entered my mind. I do not know what modern photography is able to accomplish, but I do know that the most ingenious photographer cannot prepare for an experiment which the experimenter himself has not even contemplated when he

sets to work, and which is only suggested to his mind by what occurs in the process.

“It is clear that in this instance the solution of the problem must be sought for elsewhere, and that the evidence in favour of the action of abnormal agencies is exceptionally strong. It increases in force when other important circumstances, such as the appearance of the forms on marked and observed plates, the curious cloud-like formations, and other things are borne in mind. It does not necessarily follow, of course, that these forms, because they are genuine, are actually representations of the dead. That is a different question altogether. All I claim is that the plates disclose the existence of a certain force or matter at present not known to a great many scientists, and the existence of an intelligence, or intelligences, other than those of the operators that are capable, under certain conditions, of causing that force or matter to assume certain forms. This, to my mind, is an undeniable fact, which can be ascertained by any person who chooses to investigate carefully and patiently, and who is prepared to expend upon this great problem of human life as much time and interest as men expend upon the examination of a new species of useless fish or of a new lump of shining dirt.”

Having thus cleared the ground, so to speak, let us now consider the more startling statements and experiments by Dr. Baraduc, summarised by him in his work, *Mes Morts; leurs Manifestations, &c.* (1908). A brief résumé of this book cannot fail to be of interest, since the events he records naturally lead up to the experiments in photography recorded at its end.

At a quarter-past nine, on a certain memorable day in April 1907, died André M. Joseph Baraduc, at the age of nineteen years. Throughout his life there had been a close bond of affection between himself and his father, and we are assured that during the lifetime of the son, telepathic communication had been frequent between

them. When he was but nineteen it was discovered that André was suffering from that dread disease, consumption; and henceforward he grew rapidly worse, dying within the year. Toward the close of this year he made two visits to Lourdes, without, however, receiving much benefit in either case, and returning apparently without augmented faith in the cures brought about at that centre. André was exceedingly religious in temperament, as was his father, and both were given to experiments in psychic research. We are informed that, during the lifetime of the son, his "astral" form had been experimentally separated from his bodily frame on more than one occasion. It was only natural to suppose, therefore, that, at the death of this favourite son, the father's grief should be so intense that the emotional reflex found expression in various visions and apparent conversations with the dead boy. For within six hours after the death of André, the son appeared to his father, and thenceforth many apparitions were seen, and several long conversations were apparently held between father and son. Of course, these in themselves would, under the circumstances, have no evidential value, since it is only natural to suppose that hallucinations, both of sight and hearing, would result in a mind so wrought.

These subjective and apparently telepathic experiences of Dr. Baraduc cannot, therefore, be considered of value; but the objective experiences—that is to say, the experiments performed by him are of great interest, since one can hardly suppose that the camera can be hallucinated, because of the grief of the photographer! The impressions left upon the plates, then, such as they are, have their evidential and scientific value, and it is to a consideration of these photographs that we now turn.

Nine hours after the death of André, Dr. Baraduc took

the first photograph of the coffin in which the body was deposited. When this plate was developed, it was discovered that, emanating from the coffin, was a formless, misty, wave-like mass, radiating in all directions with considerable force, impinging upon the bodies of those who came into close proximity to the coffin, as though attracted to them by some magnetic force. On one occasion, indeed, the force of this projected fluidic emanation was so great that Dr. Baraduc received an electric shock from head to foot, which produced a temporary vertigo. On studying the photograph, it will be seen that there emerge from the body dark, tree-shaped emanations, issuing in formal lines, which gradually diverge, and become more and more attenuated and misty as they recede further and further from the body. Although this photograph does not in itself prove anything supernormal, it is highly suggestive, and it aroused Dr. Baraduc's interest in the subject, and enabled him to pursue his more conclusive experiments immediately upon the death of his wife.

Six months after the death of André, Nadine, Dr. Baraduc's wife and the mother of André, passed quietly away, giving vent, at the moment of her death, to three gentle sighs. Remembering the result of the former experiments (photographing the body of André shortly after his death), Dr. Baraduc had prepared a camera beside the bed of his wife, and, at the moment of her death, photographed the body, and shortly after developed the plate. Upon it were found three luminous globes resting a few inches above the body. These gradually condensed and became more brilliant. Streaks of light, like fine threads, were also seen darting hither and thither. A quarter of an hour after the death of his wife, Dr. Baraduc took another photograph. Fluid cords were seen to have developed, partly encircling these globes of light. At

three o'clock in the afternoon, or an hour after her death, another photograph was taken. It will be seen from this photograph that the three globes of light have condensed and coalesced into one, obscuring the head of Madame Baraduc, and developing towards the right. Cords were formed in the shape of a figure eight, closed at the top, and opened at the point nearest the body. Thus, as the globe develops in one direction, the cords seem to become more tense, and pull in the opposite direction. The separation becomes more and more complete, until finally, three and a half hours after death, a well-formed globe rested above the body, apparently held together by the encircling, luminous cords, which seemed also to guide and control it. At this moment, the globe becomes separated from the body, and, guided by the cords, floats into Dr. Baraduc's bedroom. He speaks to the globe intensely; the globe thereupon approaches him, and he feels an icy cold breeze, which seems to surround and issue from the ball of light.

Frequently, within the next few days after these experiments, Dr. Baraduc saw similar globes in various parts of the house. By means of automatic writing, obtained through the hand of a non-professional psychic, he succeeded at last in establishing communication with this luminous ball, and was informed that it was the encasement of Madame Baraduc's soul, which was still active and alive within it! It was asserted that, as the days progressed, the encircling cords were one by one snapped, and that the spirit more nearly assumed the astral body facsimile of the earthly body. André, however, was seen by him to be a completely developed astral body; and his wife asserted that she too would shortly take her place beside André in her permanent form. As further photographs were not developed, however, there is no experimental evidence confirming these statements.

Although these initial experiments of Dr. Baraduc cannot, of themselves, be considered conclusive, they are nevertheless highly interesting, and should lead to further research in the same direction. The evidence afforded by apparitions, single and collective; by haunted houses; the indirect testimony afforded by the apparent psychic perception by animals; the evidence, such as it is, for "spirit photography"; the recent experiments in thought-photography, and the photographs made at the séances of Eusapia Palladino, all tend to confirm, it seems to us, the conclusions arrived at by Dr. Baraduc, as the result of his preliminary researches. If an astral body of some sort exists, it must occupy space; and, being space-occupying, must, *a priori*, be material enough to occupy it! Whether or not this material is sufficiently solid to reflect light waves, and make an impression upon the sensitive plate of the camera, is an aspect of the problem still open to debate. Certainly, there can be no longer any *a priori* objection to such an hypothesis. The recent discoveries in physics, the experiments in photography, by means of the X-rays, ultra-violet light, and the "black-light" of Dr. Le Bon, all serve to indicate that it is possible to photograph thousands of objects invisible to the naked eye. Indeed, this is well known, for, as before stated, while the naked eye can see but a few thousand stars in the heavens, the photographic plate is capable of receiving impressions from some twenty millions.

Further indirect testimony is afforded by the statements of clairvoyants, and by the direct testimony (taking it for what it is worth) of so-called "spirits" who communicate their sensations and the knowledge they have gained after bodily death. They invariably assert that there is an astral facsimile, or spiritual replica, of the physical body. Repellent as the idea may be to some of a semi-material, space-occupying soul, the facts would seem

to indicate that such is true. Yet there might be a way out of the difficulty, since we might still suppose that the soul, or seat of consciousness, exists as a point of force within this spiritual organism. Whichever theory is ultimately proved correct cannot, of course, be settled by *a priori* speculation, but by *facts*; and such experiments as those conducted by Dr. Baradue in photographing the soul are, perhaps, the best line of investigation to follow, and one from which, with the improvements in photography, most is to be hoped.

2. EXPERIMENTS IN WEIGHING THE SOUL.

Some time ago great interest was aroused by the publication of certain reports of experiments in weighing the soul—the body of a man being weighed just before and just after death—it being found that there was a considerable loss in weight just after the death of the patient, not accounted for by any of the known channels of loss. When these reports were published, the American Society for Psychical Research obtained all the original documents and correspondence concerning these tests, and printed them in full in the June, 1907, issue of its *Journal*. Any one desiring the full and authentic account of these facts will find it there. Dr. Duncan MacDougall also wrote a special article describing his experiments, and from this we quote the following:—

“According to the latest conception of science, substance or space-occupying material is divisible into that which is gravitative—solids, liquids, gases, all having weight—and the ether which is non-gravitative. It seemed impossible to me that the soul substance could consist of ether. If the conception be true that ether is continuous and not to be conceived of as existing or capable of existing in separate masses, we have here the most

solid ground for believing that the soul substance we are seeking is not ether, because one of the very first attributes of personal identity is the quality or condition of separateness. Nothing is more borne in upon consciousness, than that the you in you, and the me in me, the ego, is detached and separate from all things else—the non-ego.

“We are therefore driven back upon the assumption that the soul substance so necessary to the conception of continuing personal identity, after the death of this material body, must still be a form of gravitative matter, or perhaps a middle form of substance neither gravitative matter nor ether, not capable of being weighed, and yet not identical with ether. Since, however, the substance considered in our hypothesis must be linked organically with the body until death takes place, it appears to me more reasonable to think that it must be some form of gravitative matter, and therefore capable of being detected at death by weighing a human being in the act of death.

“The subjects experimented upon all gave their consent to the experiment weeks before the day of death. The experiments did not subject the patients to any additional suffering.

“My first subject was a man dying of tuberculosis. It seemed to me best to select a patient dying with a disease that produces great exhaustion, the death occurring with little or no muscular movement, because in such a case the beam could be kept more perfectly at balance and any loss occurring readily noted.

“The patient was under observation for three hours and forty minutes before death, lying on a bed arranged on a light frame work built upon very delicately balanced platform beam scales. The patient’s comfort was looked after in every way, although he was practically moribund when placed upon the bed. He lost weight slowly at the rate of one ounce per hour, due to evaporation of moisture in respiration and evaporation of sweat.

“During all three hours and forty minutes I kept the beam end slightly above balance near the upper limiting bar in order to make the test more decisive if it should come.

“At the end of three hours and forty minutes he expired, and suddenly coincident with death the beam end dropped with an audible stroke, hitting against the lower limiting bar and

remaining there with no rebound. The loss was ascertained to be three-fourths of an ounce.

“This loss of weight could not be due to evaporation of respiratory moisture and sweat, because that had already been determined to go on, in his case, at the rate of one-sixtieth of an ounce per minute, whereas this loss was sudden and large, three-fourths of an ounce in a few seconds.

“The bowels did not move; if they had moved, the weight would still have remained upon the bed except for a slow loss by the evaporation of moisture depending, of course, upon the fluidity of the fæces. The bladder evacuated one or two drachms of urine. This remained upon the bed, and could only have influenced the weight by slow gradual evaporation, and therefore in no way could account for the sudden loss.

“There remained but one more channel of loss to explore, the expiration of all but the residual air in the lungs. Getting upon the bed myself, my colleague put the beam at actual balance. Inspiration and expiration of air as forcibly as possible by me had no effect upon the beam. My colleague got upon the bed, and I placed the beam at balance. Forcible inspiration and expiration of air on his part had no effect. In this case we certainly have an inexplicable loss of weight of three-fourths of an ounce. Is it the soul substance? How else shall we explain it?

“My second patient was a man moribund from consumption. He was on the bed about four hours and fifteen minutes under observation before death. The first four hours he lost weight at the rate of three-fourths of an ounce per hour. He had much slower respiration than the first case, which accounted for the difference in loss of weight from evaporation and respiratory moisture.

“The last fifteen minutes he had ceased to breathe, but his facial muscles still moved convulsively, and then, coinciding with the last movement of the facial muscle, the beam dropped. The weight lost was found to be half-an-ounce. Then my colleague auscultated the heart and found it stopped. I tried again, and the loss was one ounce and a half and fifty grains. In the eighteen minutes that elapsed between the time he ceased

breathing until we were certain of death, there was a weight loss of one and one-half ounces and fifty grains, compared with a loss of three ounces during a period of four hours during which time the ordinary channels of loss were at work. No bowel movement took place. The bladder moved, but the urine remained upon the bed, and could not have evaporated enough through the thick bed clothing to have influenced the result.

“The beam at the end of eighteen minutes of doubt was placed again with the end in slight contact with the upper bar and watched for forty minutes, but no further loss took place.

“My scales were sensitive to two-tenths of an ounce. If placed at balance, one-tenth of an ounce would lift the beam up close to the upper limiting bar, another one-tenth ounce would bring it up and keep it in direct contact, then if the two-tenths were removed the beam would drop to the lower bar and then slowly oscillate till balance was reached again.

“This patient was of a totally different temperament from the first; his death was very gradual, so that we had great doubt from the ordinary evidence to say just what moment he died.

“My third case, a man dying of tuberculosis, showed a weight of half-an-ounce lost, coincident with death, and an additional loss of one ounce a few minutes later.

“In the fourth case, a woman dying of diabetic coma, unfortunately our scales were not finely adjusted, and there was a good deal of interference by people opposed to our work, and although at death the beam sunk so that it required from three-eighths to one-half ounce to bring it back to the point preceding death, yet I regard this test as of no value.

“With my fifth case, a man dying of tuberculosis, showed a distinct drop in the beam requiring about three-eighths of an ounce which could not be accounted for. This occurred exactly simultaneously with death, but peculiarly, on bringing the beam up again with weights and later removing them, the beam did not sink back to stay back for fully fifteen minutes. It was impossible to account for the three-eighths of an ounce drop, it was so sudden and distinct, the beam hitting the lower bar with as great a noise as in the first case. Our scales in this case were very sensitively balanced.

“My sixth and last case was not a fair test. The patient died almost within five minutes after being placed upon the bed, and died while I was adjusting the beam.

“The net result of the experiments conducted on human beings is that a loss of substance occurs at death not accounted for by known channels of loss. Is it the soul substance? It would seem to me to be so. According to our hypothesis such a substance is necessary to the assumption of continuing or persisting personality after bodily death, and here we have experimental demonstration that a substance capable of being weighed does leave the human body at death.

“If this substance is a counterpart of the physical body, has the same bulk, occupies the same dimensions in space, then it is a very much lighter substance than the atmosphere surrounding our earth, which weighs about one and one-fourth ounces per cubic foot. This would be a fact of great significance, as such a body would readily ascend in our atmosphere. The absence of a weighable mass leaving the body at death would of course be no argument against continuing personality, for a space-occupying body or substance might exist not capable of being weighed, such as the ether.

“It has been suggested that the ether might be that substance, but with the modern conception of science that the ether is the primary form of all substance, that all other forms of matter are merely differentiations of the ether having varying densities, then it seems to me that soul substance, which in this life must be linked organically with the body, cannot be identical with the ether. Moreover, the ether is supposed to be non-discontinuous, a continuous whole and not capable of existing in separate masses as ether, whereas the one prime requisite for a continuing personality or individuality is the quality of separateness, the ego as separate and distinct from all things else, the non-ego.

“To my mind, therefore, the soul substance cannot be the ether as ether; but if the theory that ether is the primary form of all substance is true, then the soul substance must necessarily be a differentiated form of it.

“If it is definitely proven that there is in the human being a

loss of substance at death not accounted for by known channels of loss, and that such loss of substance does not occur in the dog, as my experiments would seem to show, then we have here a physiological difference between the human and the canine at least, and probably between the human and all other forms of animal life.

“I am aware that a very large number of experiments would be required before the matter could be proved beyond any possibility of error; but if further and sufficient experimentation proves that there is a loss of substance occurring at death and not accounted for by known channels of loss, the establishment of such a truth cannot fail to be of the utmost importance.

“One ounce of fact more or less will have more weight in demonstrating the truth of the reality of continued existence with the necessary basis of substance to rest upon than all the hair-splitting theories of theologians and metaphysicians combined.

“If other experiments by other experimenters prove that there is a loss of weight occurring at death, not accounted for by known channels of loss, we must either admit the theory that it is the hypothetical soul substance, or some other explanation of the phenomenon should be forthcoming. If proved true, the materialistic conception will have been fully met, and proof of the substantial basis for mind or spirit or soul continuing after the death of the body, insisted upon as necessary by the materialists, will have been furnished.

“It will prove also that the spiritualistic conception of the immateriality of the soul is wrong. The postulates of religious creeds have not been a positive and final settlement of the question.

“The theories of all the philosophers and all the philosophies offer no final solution of the problem of continued personality after bodily death. This fact alone of a space-occupying body of measurable weight disappearing at death, if verified, furnishes the substantial basis for persisting personality or a conscious ego surviving the act of bodily death; and the element of certainty is worth more than the postulates of all the creeds and all the metaphysical arguments combined.

“In the year 1854 Rudolph Wagner, the physiologist, at the Göttingen Congress of Physiologists, proposed a discussion of a “Special Soul Substance.” The challenge was accepted, but no discussion followed, and among the five hundred voices present not one was raised in defence of a spiritualistic philosophy. Have we found Wagner’s soul substance?”

At the time these experiments were published, one of us (Mr. Carrington) issued the following criticism, which appeared in the same issue of the *Journal* :—

“. . . Taking the experiments, then, as Dr. MacDougall has described them, the question arises: Granting that the facts exist as stated, would these results prove the contention that the observed loss of weight was due to the exit from the body of some hypothetical soul substance, or may the facts (granting them to exist as stated) be explained in some such manner as to render Dr. MacDougall’s hypothesis unnecessary?

“I must say that Dr. MacDougall seems to have provided pretty thoroughly against all normal losses of weight. His papers (which I have had the privilege of reading) indicate this clearly. The only channel that need be taken seriously into account is the lungs; *i.e.* the loss of weight due to expired air. It therefore becomes a question of the amount of air the lungs may contain, and its consequent weight—granting, for the sake of argument, that every particle of air is forced out of the lungs at death. A cubic foot of air, at the ordinary temperature and at sea-level, weighs about $1\frac{1}{4}$ ounces, we are told—a statement that is confirmed by the *Encyclopædia Britannica* and other authorities. In the cubic foot there are 1728 cubic inches. Now, we know that the average capacity of the lungs of a healthy human being is about 225 to 250 cubic inches (Kirke, *Physiology*, p. 262); but let us say 300 cubic inches, to be on the safe side. This is, as nearly as possible, one-sixth ounce, granting that *all* the air is expired at death—for which we have no evidence—and that the lungs contained as much as 300 cubic inches of air. This is also a practical impossibility, in such cases as those quoted, for the reason that this repre-

sents the state of healthy lungs at the moment of the fullest inspiration. The majority of persons, however, could not inhale 200 cubic inches (the twelfth of an ounce), while consumptive patients, dying, and in the last stages of the disease, would not contain within their lungs anything like 100 cubic inches—the eighteenth of an ounce. When, therefore, Dr. MacDougall tells us that more than a whole ounce is lost instantaneously, at the moment of death, we must seek elsewhere than in this direction for the explanation of the facts.”

In saying this, however, we must not lose sight of the fact that there are certain remarkable variations in the human body, when it is alive—variations which are most difficult to account for upon normal, physiological lines. There are cases on record in which patients have been known to take on *more* weight than the food consumed by them—though all the bodily weight is supposed to be obtained from the food eaten! Cases of this character, however, might perhaps be explained as follows: The patient’s tissues are congested and hardened (obstipated, as it is called), and there is a disproportion of solids and fluids within the system. This condition has been brought about by the ingesting of too much solid and too little liquid food. When such a person is deprived of solid food for some time, but allowed plenty of water, the solid portions of these tissues are drawn upon, and a portion oxidised off, the interstices being filled in with water. In some such manner, then, we could account for these extraordinary increases in weight.

There are also remarkable *losses* in weight—hard to account for by known laws. Chief of these (and far too little attention has been paid to this question) is the astonishing loss of flesh and weight sometimes observed in those patients who are suffering great pain or mental anguish. In such cases, very frequently, a number of pounds is lost within a few days, although the patient

may be, throughout that period, eating his regular allowance of food, upon which he is accustomed to maintain, or even increase, his weight. Losses of weight of this character cannot be put down to the mere inability of the organism to assimilate the food, for the reason that far more weight is lost, very frequently, than would be lost if the patient fasted entirely, and ate nothing at all. Nor can the weight be accounted for on the grounds that a larger amount of katabolism and excretion is taking place than normally, for such is not the case. There is doubtless an altered chemical composition of the body at such times; but, so far as we know, no detailed study of this has yet been made.

Rear-Admiral George W. Melville has published a remarkable case (*The Submarine Boat*, p. 723), in which a person was incased in an air-tight coffin for one hour, no fresh air being allowed him during that period. He survived the test, but it was found that he had lost *five pounds* in weight in the time indicated—and this, be it observed, in spite of the fact that he had taken no physical exercise whatever! He had throughout remained at rest within the coffin. When this case was cited, in an attempt to offset Dr. MacDougall's results, he replied, saying that, under the circumstances, the man incased in the coffin would doubtless perspire profusely, and this would account for the observed loss. Such might possibly have been the case; but, for want of further corroboration, it is impossible to settle the matter at present one way or the other.

Dr. MacDougall's experiments are at all events highly interesting and important—whether they prove the contention made or not—and should be repeated by physicians and physiologists whenever the opportunity is presented. Certainly experiments of this nature, whether successful or not, would fail to settle the question of

immortality in any case—for the reason that, if negative results were reached, it would be open for us to believe that there might be a soul which is incapable of being weighed; and if positive results were reached, it might, on the other hand, be contended that the observed loss of weight corresponded merely with some vital or etheric principle which left the body at death, and which was in no way related to consciousness or personal identity. The experiments, therefore, cannot be said to settle the question; but they remain highly interesting nevertheless.

CHAPTER V

DEATH COINCIDENCES

1. APPARITIONS OF THE DYING.

IF death were the end of all, it would represent and necessitate the total cessation of consciousness; if it be, on the contrary, the "departure of the soul from the body," as we have so long been taught, then we should expect that, in exceptional cases, or under exceptional conditions, it might be possible for this departing soul to manifest itself to its friends, either in the immediate vicinity, or even at a distance—since there is good reason to believe that "space" has no such meaning in the spiritual world as it has here. (Nor time.) From the accounts we have read it is evident that the departing spirit sometimes retains full possession of its faculties, though it is probable that this only happens on occasion, and that, in a large number of cases, probably the majority, the shock and wrench of death produces a sort of temporary suspension of consciousness, just as a shock or accident would in this world. Yet, when we come to inquire into the literature of this subject, we find that such death coincidences, or manifestations of the departing spirit, at the moment of death, are by no means uncommon, but are, on the contrary, very numerous; and it would be impossible to question any very large number of individuals without finding one among them who had experienced something of the sort in his

life, or who knew of some one who had. When the English Society for Psychical Research began its pioneer work, in 1882, it had no notion that such a preponderance of coincidences would be found, all merging towards the moment of death; but the investigators soon found that such manifestations far outweighed all others in number and in character; and, within the first five years of the Society's work (besides all the cases printed in the *Proceedings* and *Journal* of the Society), it was enabled to publish two bulky volumes, bearing entirely on this question of death coincidences, entitled *Phantasms of the Living*. In these volumes were printed some 702 coincidental cases—in which an apparition of the dying person had been seen by others at a distance, or some other sensory, motor, or emotional effect had been noticed—coincidental with the death of the subject whose figure was seen. Putting the cases to the test of calculation, it was found that the coincidences were many times more numerous than chance could account for; and they adopted “telepathy” as the most rational explanation for these facts. The scientific world, however, contended that *not enough* evidence had been collected; and the Society accordingly set about a large international statistical inquiry, which occupied several years. *Thirty thousand* answers were received to the circular of inquiry sent out, seventeen thousand of these being English. The Report on this “Census of Hallucinations” occupies (practically) the whole of the tenth volume of the *Proceedings of the Society for Psychical Research*. After making allowances for error in every possible direction, and really overstating the case in favour of scepticism, the result was again reached, that the coincidences were many times more numerous than chance could account for. The more recent inquiry of the American Society, so far as it has gone, and the

statistical inquiry conducted some years ago by M. Flammarion, both confirm this view. (See his *The Unknown*). In all these publications many instances of the kind are to be found; and so well authenticated are they, indeed, that we feel it is unnecessary for us to do more than give one or two cases, as typical of this kind of phenomenon.

The following is a good example of the "apparition" type of death coincidence. It was printed in *Proceedings of the Society for Psychological Research*, vol. x., pp. 213, 214:—

" . . . About the 14th of September 1882, my sister and I felt worried and distressed by hearing the 'death watch'; it lasted a whole day and night. We got up earlier than usual the next morning, about six o'clock, to finish some birthday presents for our mother. As my sister and I were working and talking together, I looked up, and saw our young acquaintance standing in front of me and looking at us. I turned to my sister; she saw nothing. I looked again to where he stood; he had vanished. We agreed not to tell any one. . . .

"Some time afterwards we heard that our young acquaintance had either committed suicide or had been killed; he was found dead in the woods, twenty-four hours after landing. On looking back to my diary, I found that my marks corresponded to the date of his death."

Mr. Podmore personally interviewed the witnesses, and ascertained that the story was as represented.

The following incident is taken from M. Flammarion's book, *The Unknown*, p. 108:—

"My mother, who lived at Burgundy . . . heard one Tuesday, between nine and ten o'clock, the door of her bedroom open and close violently. At the same time she heard herself called twice, 'Lucie! Lucie!' The following Tuesday she heard that her uncle Clementin, who had always had a great affection for her, had died that Tuesday morning, *precisely between nine and ten o'clock. . . .*"

On pp. 169–72 of this work is described a remarkable case, in which the brother of the percipient was killed in the attack on the Redan. That night he (the percipient) awoke suddenly and saw:—

“Opposite to the window and beside my bed, my brother on his knees surrounded by a sort of luminous mist. I tried to speak to him, but I could not. . . . I jumped out of bed. I looked out of the window and I saw that there was no moonlight. The night was dark and it was raining heavily, great drops pattering on the window panes. My poor Oliver was still there. Then I drew near. *I walked right through the apparition.* I reached my chamber door, and as I turned the knob to open it I looked back once more. The apparition slowly turned its head towards me, and gave me another look full of anguish and of love. Then for the first time I observed a wound on his right temple, and from it trickled a little stream of blood. The face was pale as wax, but it was transparent. . . .”

Later, a letter was received, stating that a wound existed on the face of the dead man exactly corresponding to that seen in the apparition.

Various cases of *raps* at a distance are recorded—cases in which these mysterious rappings corresponded exactly to the death of some person; but no natural cause for these rappings has yet been discovered. In most cases nothing of the sort had ever been heard before or since. In the following case, which is very remarkable, a *physical* effect was noted, as will be seen. It is included in Miss Alice Johnson’s paper “On Coincidences,” *Proceedings of the Society for Psychological Research*, vol. xiv., pp. 242–44:—

“A friend of [the narrator] Mrs. F., a daughter of a well-known geologist, has related to [him] a rather striking instance of telepathy of which she was a witness.

“A few years ago, she was sitting on the rocks above the sea at Nervi, near Genoa, where she resides habitually, with an American young girl, who has since become her son’s wife. The

young lady, her gloved hands resting on her knees, was talking with Mrs. F., when all at once she gave a slight scream.

“‘What is the matter?’ asked Mrs. F.

“‘My finger has been stung.’

“She took off her glove, and discovered that a ring of hers had snapped. She looked at it with a scared look and exclaimed: ‘Oh, Mrs. F., a dear friend of mine has just died!’

“She went on to explain that the ring had been given her by a young man at the time of her leaving the United States, and that he had said, ‘If I were to die this ring would apprise you of the fact.’

“Mrs. F. pooh-poohed the matter, herself being not a believer in psychical matters. But, a few weeks later, came the news of that young man’s death. Mrs. F. could not tell [the narrator] me if it was on the very day of the breaking of the ring; but she has little doubt about it.”

Here we have a choice of two explanations. Either it may be supposed that a telepathic impulse from the dying man reached the subliminal consciousness of the percipient and produced a motor instead of a sensory effect, which led to an involuntary muscular spasm of the fingers, resulting in the breaking of the ring; or it was an effect produced by unknown means on matter at a distance—telekinetic agency. In any case the incident is a remarkable one, no matter how we may interpret it.

The following experience is signed by three persons: the lady, Mrs. S. A. C——, who had the dream; her daughter, Mrs. J. C. J——; and the latter’s husband, Mr. J. C. J——. The reporter writes: “I know Mr. and Mrs. J. C. J—— personally, and can vouch for their intelligence as witnesses”:

“It has taken some time to find dates connected with the dream I mentioned to you, hence the delay. I have at last gathered the facts as follows:—

“Mrs. D——, my father’s sister, had, with husband and family, removed from our home in Indiana to Nebraska in 1882; and in November 1885 she and her husband returned to visit the old home. They had spent but a day or two with us, when a special invitation came from friends ten miles distant, which they accepted, promising to return to us about November 13th. On November 13th, about 8 A.M., my mother, Mrs. S. A. C——, dreamed that Mary, the youngest daughter of Mr. and Mrs. D——, who had been teaching in Nebraska, was very ill and could not live, and that a message had been sent to her father and mother to come home at once. My mother was so impressed by the dream that she awoke and slept no more that night. As soon as we arose she told us of the dream and of her anxiety; but we made light of her fears, thinking it was only a slight attack of indigestion.

“However, we learned later, that at 3 A.M. on the 14th, just twenty-four hours after the dream, the message came, ‘Mary was very ill, come home at once’; and still later, that she died the evening of the 14th, many hours before her parents reached home.”

The following case is reported in M. Flammarion’s *The Unknown*, p. 100:—

“I can certify to you the truth of the following fact, which occurred in a little town in the department of the Var. My mother was sitting in a room in the lower storey of her house, either knitting or sewing, when suddenly she saw before her her eldest brother, who lived in a village in the *arrondissement* of Toulon, about twenty-five miles distant. Her brother, whom she recognised perfectly, said, ‘Adieu,’ and disappeared. My mother, much excited, hastened to her husband, and cried, ‘My brother has just died!’ She knew he was ill.

“The next day or the day after news reached them of the death of my uncle, which happened in the afternoon *precisely at the time of the apparition*. There were no telegraphs in those days. The news had been sent by letter to Aix.

“UTTE.”

The following case appears on p. 101 :—

“It has twice in my life happened to me to experience a distinct impression to have near me a person who was absent, and to mark the exact hour at which this occurred. *Both times* the impression received was found to coincide within five minutes with the death of the person whom I knew to be ill, but who I had no idea was so near his end.

“These two striking cases of telepathy have been reported in the *Journal of the Psychological Society* in London, of which I have the honour to be an associate member,

“AUG. GLARDON,
“Man of Letters at Tour de Peitz,
“Vaud, Switzerland.”

The following case is from Mr. Frank Podmore's *Apparitions and Thought Transference*, p. 265 :—

“The first Thursday in April, 1881, while sitting at tea with my back to the window, and talking with my wife in the usual way, I plainly heard a rap at the window, and, looking round, I said to my wife, ‘Why, there's my grandmother,’ and went to the door, but could not see any one ; and still feeling sure it was my grandmother, and knowing, though eighty-three years of age, she was very active and fond of a joke, I went round the house, but could not see any one. My wife did not hear it. On the following Saturday I had news my grandmother died in Yorkshire about half-an-hour before the time I heard the rapping. The last time I saw her alive I promised, if well, I would attend her funeral ; that was some two years before. I was in good health and had no trouble ; age, twenty-six years. I did not know that my grandmother was ill.

“REV. MATTHEW FROST.”

Mrs. Frost writes :—

“I beg to certify that I perfectly remember all the circumstances my husband has named, but I heard, and saw nothing myself.”

The following is an unusually interesting case:—

“It was in Milan on 10th of October 1888. I was staying at the Hôtel Ancora. After dinner, at about seven o'clock, I was seated on the sofa reading a newspaper. My wife was resting in the same room on a couch behind a curtain. The room was lighted by a lamp upon the table near which I was sitting reading. Suddenly I saw against the background of the door, which was opposite me, my father's face. He wore as usual a black surtout, and was deadly pale. At that moment I heard quite close to my ear a voice which said to me: ‘A telegram is coming to say your father is dead.’ All this only took a few seconds. . . . On the evening of the same day, at about eleven o'clock, we were going to tea in the company of several other people. . . . All at once there was a knock at the door, and the *conciérge* presented a telegram. Pale with emotion I immediately exclaimed, ‘I know my father is dead; I have seen. . . .’ The telegram contained these words: ‘Papa dead, suddenly.—OLGA.’ It was a telegram from my sister living at St. Petersburg. I learned later that my father had committed suicide on the morning of the same day.

“(Signed) E. A.”

Madame A. writes:—

“I was present at the time, and I testify to the accuracy of the account.”

The following case is from *Phantasms of the Living*, vol. ii., p. 50:—

“On February 26th, 1850, I was awake, for I was to go to my sister-in-law, and visiting was then an event for me. About two o'clock in the morning my brother walked into our room (my sister's) and stood beside my bed. I called to her, ‘There is ——.’ He was at the time quartered in Paisley, and a mail-car from Belfast passed about that hour not more than about half-a-mile from our village. . . . He looked down most lovingly, and kindly, and waved his hand, and he was gone. I recollect it all as if it were only last night it occurred,

and my feeling of astonishment, not at his coming into the room at all, but whence he could have gone. At that very hour he died."

Mr. Gurney writes:—

"We have confirmed the date of death in the *Army List*, and find from a newspaper notice that the death took place in the early morning, and was extremely sudden."

There is an interesting account in another part of the volume in which the percipient awoke suddenly, feeling that he had received a terrible blow across his face. He even put his hands to his lips, to see if there was any blood upon them. The pain persisted for some time after he had awakened. No explanation was found for this until later, when it was ascertained that his brother had been struck violently in the mouth by the boom of a sailing-boat in a storm and almost knocked overboard. The coincidence in time was also verified. This is a very striking incident.

Many other cases of a like nature could be quoted in this connection, but space does not permit; and any lengthy discussion of the point would be out of place in a work of this character. We cannot refrain from adding one or two remarks, however, on a subject that is of peculiar interest and to which we referred in the first part of this work. We refer to certain olfactory phenomena of a peculiar nature.

2. OLFACTORY PHENOMENA.

In Part I. of the present work, we gave some remarkable cases in which a certain *smell* was noted at the moment of death; and a summary of the attempts that had been made to solve this mystery. We shall now give a few cases where very much the same phenomena have been

noted under conditions that render the hypothesis previously advanced quite impossible. The theory was that some sort of chemical action went on in the body, and that this was the cause of the odour noted. Of course, if such were the case (and it may have been in the cases cited), it would be quite impossible for such smell to be noticed *beyond the limits of sense perception*; and if such an odour was noticed miles away at the time of death, and found afterwards to correspond with it, it would be pretty fair evidence that chemical action and sense-perceptions would not serve to account for *all* the facts, but that some sort of "psychic" factor entered into the case also. That this is so in a number of instances, we think we can easily prove.

There is a case recorded in the *Journal* of the American Society for Psychical Research, *e.g.* (Sept. 1907, pp. 436-9), in which the smell of violets was very plainly observed whenever the inmates of the house had good reason to suppose the son of the house (deceased) was present. This happened on several occasions, and was observed by the mother, the little boy, the eldest son, and his wife. All sensed the perfume of violets very strongly. In a case known to one of us, a family of spiritualists was in the habit of holding séances in their own family circle, no one else being present, and especially were these séances held on the anniversary of the father's death. On such occasions there was frequently a strong smell of violets manifest—so strong, we are assured, that the fragrance remained in the room for several hours after the séance had terminated. In both of these cases the person who died was especially fond of violets, and in the former case a bunch of violets was buried with the body. Mr. Myers gives an instance in which thyme was strongly smelt by a gentleman walking through a field, in which it was reported that a young woman had

been murdered, and that "any one walking in that field would smell thyme." Mr. Highton, who experienced this, was engrossed in other thoughts, and had totally forgotten the incident—at least for the time being. There are several cases known to us in which a distinct scent has been perceived at a distance by individuals—such scent corresponding to the death of the person with whose individuality this scent was closely associated.

Certainly such cases are not due to chemical combustion, or to any physical cause—whatever their real nature may be. They are mental or psychological facts. That they are hallucinatory in most cases cannot be doubted—this being borne out by a series of experiments in the transference of certain tastes from operator to percipient in thought-transference experiments. (See *Phantasms of the Living*, vol. i., pp. 51–8; vol. ii., pp. 324–31, 339, 344, 666–8). But it would seem that in some cases *real* scent may be secreted by the body—or something closely resembling it—as was the case with Stainton Moses. At some of his séances, it was asserted that scent was manufactured, and came from the top of his head, where it could be felt! Certainly it was *smelt* by all present. It was closely allied to the scent of flowers. Nor is this so inherently improbable as many might suppose. Sir William Ramsay stated that:—

"Perspiration¹ consists of caproate of glyceryl, mixed with free acid, I believe. It does not smell nice; but pure caproates are very fragrant if the right alcoholic base is combined. I

¹ It must be remembered, in this connection, that animals are enabled to follow the "scent" of a person with great precision, and often for miles. This would certainly seem to indicate that some subtle but powerful odour is emitted from the surface of the body, and that it permeates the clothing and atmosphere of the person in every case. How, otherwise, is the above fact to be accounted for—a fact so well attested that any dispute on this point is useless? It would certainly seem that each person has an "aura" of his own—physical as well as psychical. There are indications, also, that this odour is largely characterised by the char

fancy that woodruffe and verbenæ are of the same nature as turpentine, and have probably the same percentage composition. However, so far as I know, they have never been investigated.”

acter of the diet. It is a well-known fact that a carnivorous animal will not eat a carnivorous animal—will not eat a man if a horse is near by, for example. Instinct tells a carnivorous animal that the flesh of other carnivorous animals is tainted ; that it is not good food, and he will not eat it. Otherwise a dog would not only kill a cat, but would eat it too. But both a cat and a dog will eat a mouse, for the reason that the mouse is a vegetarian animal. It is the same throughout the animal world. These facts certainly seem to indicate that the character of the bodily odour is largely determined by the nature of the food ; and, in support of this, it may be said that, in the case of those persons who subsist largely on fish, the odour of their bodies is often very repellent and characteristic. They smell decidedly of fish !

CHAPTER VI

THE TESTIMONY OF SCIENCE—PSYCHICAL RESEARCH

PART I.—THE PHYSICAL PHENOMENA.

AND now we come to the final, and to many minds the most conclusive, proofs of the persistence of consciousness after the death of the body—the “Immortality of the Soul.” In the first part of this book we confined ourselves to a consideration of the physical or physiological side of death only; and for our purposes it made no difference to us whether man had a soul or no. We were studying his death and its causes as we might study that of any animal. With that we stopped. But the question could not but come up in this connection: “What becomes of the mental man after this disruption of the body—his consciousness or soul-life? Is that too annihilated, as his body is disintegrated, or does it continue to persist in some other sphere of activity?” To that question we then addressed ourselves; and we found that, although a strong *presumption* was raised in favour of the persistence of individual consciousness by the philosophical, theological, and other arguments that were advanced in its favour, none of these proved *conclusive*; we had to seek further, and obtain more direct evidence still. We accordingly turned to science—to see what that had to say upon this question, and while we found that “orthodox” science was silent on this subject, the phenomena forming the basis of so-called psychical

research are apparently real; and, taken together, form a strong case in favour of the survival of some sort of soul—something in man capable of producing these remarkable phenomena, after it has ceased its connection with the bodily organism. The series of cases we have presented form a gradual but yet logically-connected chain—showing that the soul of man leaves the body at the moment of death—being seen by others, as well as being aware of that fact itself; and that this soul is able to manifest at great distances, on occasion, at the moment of its departure, or very shortly afterwards. We endeavoured to support this testimony by actual experimental evidence—photographing and weighing the soul. All these cases, taken *en masse*, may fairly be said to raise a presumption in favour of the persistence of something in man capable of surviving the death of the body; and it only remains for us to see whether this “something” possesses memory and the personal identity we once knew. If that be proved, then a spiritual world of some sort may fairly be said to have been demonstrated.

Now, there are two types of phenomena which might prove this persistence of consciousness and personal identity. These are (1) physical phenomena; and (2) mental phenomena. In the former case we have certain material happenings—real, objective facts, and, behind them, there is often an *intelligence*—one, apparently, which is not that of the medium through whom these manifestations occur. We shall consider these first. Coming next to the mental phenomena, we shall find much more abundant and conclusive evidence in favour of personal identity. But to these we shall come in good time.

1. THE PHENOMENA OF INDEPENDENT VOICES.

The phenomena we are now about to record are so remarkable that a certain amount of scepticism is warrantable. We shall merely state the facts, however, and let the reader form his own opinion as to the causes of the phenomena. In cases of this character, the investigators sit in a room (in some cases darkened and in other cases light), and "voices" issue from the air—occasionally coming from "empty nothingness"; sometimes from a horn, which has been provided to direct and intensify the sounds. When the room is in darkness there is, of course, no evidence that the medium herself is not manipulating the trumpet and doing the talking; and we always have to assume for evidential purposes that she *is*. In light séances it can be seen that she herself is not doing the talking. In any case the fact of the independent voice—whether it exists or not—is of secondary importance for our present purposes. For us, the primary question is: Does the voice tell us anything that is evidential? Does it tell us anything which the medium could not have known? Is there proof of identity? That is the crucial problem. Assuming, for the sake of argument, that the medium actually does all the talking, in such cases, the question arises,—Where does she get the facts that are imparted? The supernormal information given is the *crux*, in cases of this character. We summarise one or two striking cases of this type in which apparently supernormal information was given. The first appeared in the *Open Court Magazine* (May–June, 1908), under the signature of Mr. David P. Abbott—a gentleman who is very well versed in all methods of trickery, and whose book, *Behind the Scenes with the Mediums*, is a classic in its way. Nevertheless, Mr. Abbott has some remarkable things to tell us of his

visit to Mrs. Blake. The following passages are from his report on the case, entitled "The History of a Strange Case: A Study in Occultism":—

"Dr. X—— stated that at his first sitting he was completely 'taken off his feet, so to speak,' and considered spirit communion as proven; but that upon subsequent occasions, he was sorry to state things had occurred to lessen this belief. He related many marvellous incidents of conversation with the voices, and stated that he had taken many friends to the lady under assumed names; *yet he had never failed to hear the voices call these persons by their right names, etc.* He also stated that the information furnished by Mrs. Blake's voices at times had seemed so marvellous that he had seriously contemplated referring her case to the Society for Psychical Research, in order that he might have an authoritative statement with regard to what her powers really consisted of. I quote a few extracts from many in his letters:—

"'Twenty-two years ago this summer, my father took me to Virginia for the purpose of entering me in college. I was an only child, had not been away from home a great deal, and was quite young; therefore he accompanied me to Blacksburg, Virginia, introduced me to the president of the school, and otherwise assisted me in getting started. It was a military school, and every new-comer was called a "rat," and this was yelled at him by the older students in chorus until it grated upon his nerves to a considerable extent.

"'As my father and myself walked up towards the college buildings over the broad campus, the word "rat" was yelled at us with depressing distinctness. We went across the campus and on beyond to a large grove of virgin forest, where we sat down upon a large log; and here my father gave me some paternal advice. He was going to leave the next morning, and I felt very sad and lonely; and it was with great difficulty that I kept back the tears that in spite of myself would now and then trickle down my cheeks. At all of this my father laughed and said that I would be all right in a few days.

"'When conversing through Mrs. Blake's trumpet with the

supposed voice of my father, the following conversation with the voice occurred. I had previously written out the questions and I have since added the answers of the voice:—

“‘Do you remember the time you took me off to college?’ I asked.

“‘Yes, as distinctly as if it were yesterday,’ the voice replied.

“‘When we walked towards the buildings, what was said to me by some of the students?’

“‘They yelled “Rat” at you.’

“‘Spell that word,’ I requested, as I desired no misunderstanding.

“‘R—a—t,’ spelled the voice.

“‘Where did we go after leaving the campus and college buildings?’ I next asked.

“‘We went to a large grove near the college buildings and sat down upon a hickory log,’ responded the voice.

“‘What did I do and say while sitting on this log?’

“‘You cried because I was going to leave you and go home,’ answered the voice. All of this was wonderfully accurate, but I do not know whether or not the log was hickory.’

“‘In another letter he says:—‘On one occasion a voice supposed to be my grandfather’s talked with me, and I asked it what had caused him to depart this life. Just previous to asking this question the voice had been full and strong; but upon asking it the voice became indistinct, and I concluded that my question had ‘put the lady out of business.’ To my surprise, in a few minutes my grandfather commenced to talk again; and I reminded him that he had not answered my question. He replied by saying that I knew perfectly well what had caused him to depart this life, and that it was not necessary to ask such unimportant questions.

“‘I replied by stating that I wanted the question answered, in order that I might be convinced as to his identity; and also to know that he had sufficient consciousness and intelligence to reply. He then stated that the immediate cause of his death was a fracture of the skull. ‘How did this happen?’ I asked.

“‘By falling down a stairway,’ answered the voice.

“ ‘In what town and house did this occur?’

“ ‘In Gallipolis, Ohio, in my son’s home,’ again responded the voice. All of this was correct.

“ I next asked my grandfather’s voice if he remembered what he used to entertain me with when I was a child. He replied that he did; that he had made little boats for me, and had floated them in a tub of water. I asked how old I was when this took place, and he replied that I was five years old. This was correct, and had occurred some thirty-four years ago. . . .

“ A loud voice of a man now broke into the conversation. It was vocal in tone, low in pitch, and had a weird effect.

“ ‘How do you do?’ said the voice.

“ ‘How do you do, sir? Who are you?’ asked Mr. Clawson.

“ ‘Grandpa,’ replied the voice.

“ ‘Grandpa who?’ asked Mr. Clawson.

“ ‘Grandpa Abbott,’ said the voice, and it repeated, hurriedly, a name that sounded like ‘David Abbott’; and then the voice expired with a sound as of some one choking or strangling, as it went off dimly and vanished. ‘David’ was my grandfather Abbott’s Christian name.

“ The lady now laid the trumpet down in her lap and said, ‘Let it rest in our hands until we regain strength.’ In a few moments she turned her chair so as to face the opposite direction, and said, ‘I will use my other ear; my arm is tired.’

“ Now, while they were resting, I determined to offer a suggestion to the lady indirectly, and to note what the effect would be. Turning to Mr. Clawson, but not calling him by name, I remarked, ‘It is strange that those we want so much do not come; that your daughter, to whom you would rather talk than to any one, does not speak to you. You have evidently talked to her, and she seems to identify herself; but is it not strange that she does not give her name correctly?’ I said this in order to convey to the lady the fact that the name which appeared to be ‘Edna’ was not the correct name of the gentleman’s daughter.

“ When next he raised the trumpet to his ear a whispered voice said, ‘Daddie, I am here.’

“ ‘Who are you?’ asked Mr. Clawson.

“Georgia, replied the voice.

“Georgia? Georgia, is this really you?’ asked Mr. Clawson, with intense emotion and earnestness.

“Yes, Daddie. Didn’t you think I knew my own name?’ asked the voice.

“I thought you did, Georgia, but could not understand why you would not tell it to me. Where do we live, Georgia?’

“In Kansas City,’ responded the voice, and then continued, ‘Daddie, I am so glad to talk to you, and so glad you came here to see me. I wish you could see my beautiful home. We have flowers and music every day.’

“Georgia, what is the name of your sweetheart to whom you were engaged?’ now asked Mr. Clawson.

“— — —.’ The reply could not be understood.

“Georgia, spell the name,’ requested Mr. Clawson.

“A—r—c, Ark,’ responded the voice, spelling out the letters and then pronouncing the name.

“Give me his full name, Georgia,’ requested Mr. Clawson.

“Archimedes,’ now responded the voice.

“Will you spell the name for me?’ asked Mr. Clawson, who wished to prevent a misinterpretation of sounds.

“A—r—c—h—i—m—e—d—e—s,’ spelled the voice.

“Where is Ark, Georgia?’ now asked Mr. Clawson. The reply could not be understood, but an inarticulate sentence was spoken, ending with a word which sounded like ‘Denver.’

“Do you say he is in Denver, Georgia?’ asked Mr. Clawson.

“No, no,’ responded the voice loudly and almost vocally, and then continued, ‘He is in New York.’ This, Mr. Clawson afterwards informed me, was correct; but he thought the gentleman was at the time out of New York City, though somewhere in that State.

“Daddie, I want to tell you something. Ark is going to marry another girl,’ now continued the voice.

“Georgia, you say Ark is going to marry another girl,’ asked Mr. Clawson.

“Yes, Daddie, but it’s all right. It’s all right now. He does not love her as he did me, but it is all right. I do not care now.’

Much more to like effect could be quoted from investigations of Mrs. Blake, did space permit. It will be seen, at all events, that, no matter what the source of the voice, much information, apparently supernormal, was given—and information suggesting the intelligence of some deceased person.

In his *Psychic Riddle*, Dr. I. K. Funk has recorded a remarkable case of apparently independent voices—though the evidence is not so good or so convincing as in the last case. But it is very striking, none the less. The medium—Mrs. Emily S. French—insists upon complete darkness, and no ray of light is admitted at any of her séances. Mrs. French is quite an old woman, and is deaf to much that passes around her. This deafness was attested by several doctors. Nevertheless, the voices in this case catch up any remark that the sitters may make, and pass comments upon it with surprising alacrity. Dr. Funk assures us that he frequently heard (so it seemed) the normal voice of the medium *at the same time* as the voice of the intelligence doing the talking. If this is so, it is very curious, to say the least. Dr. Funk devoted most of his twelve sittings, and his supplementary sitting at Rochester, to testing the hypothesis of fraud, and he details his precautions at great length. “Red Jacket,” a supposed Indian control, did most of the talking, and there was very little supernormal information volunteered. The case is most interesting, and it deserves thorough and prolonged investigation. Its nature, however, prevents our quoting it at length in this place.

The case of “Mrs. Smiley,” detailed by Hamlin Garland, in “The Shadow World,” a series of articles that appeared in *Everybody's Magazine*, beginning in April 1908, presents another interesting case of independent voice phenomena. The “Mrs. Smiley,” introduced in these studies, is a

Western woman who is well known to all the leading investigators of psychical problems; and while the semi-fictional style adopted by the author detracts from the evidential value of the experiences described, Mr. Garland's assurance that the facts are personal experiences, and as true in every particular as the reports that he has filed with the American Society for Psychical Research, may to some degree remove this objection. If we did not accept Mr. Garland's statement, we should not mention the experiments here.

In describing the precautions that were taken to prevent trickery, Mr. Garland states that he took from his pocket a spool of strong silk twist, with which he very carefully fastened the psychic's wrists. "Each arm was tied separately in such wise that she was unable to bring her hands together, and could not raise her wrists an inch from the chair. Next, with the aid of Mrs. Cameron, I looped a long piece of tape about Mrs. Smiley's ankles, knotted it about the rungs of the chair at the back, and nailed the loose ends to the floor. I then drew chalk marks on the floor about the chair legs, in order that any movement of the chair, no matter how slight, might show. Finally, I pushed the table (on which the tin horn stood) fully two feet away from the psychic's utmost reach."

After describing the physical phenomena produced through "Mrs. Smiley's" mediumship—the ringing of bells, the movement of objects, the writing, and other results that were obtained, apparently without any effort on the part of the psychic, Mr. Garland details what he terms "the supreme test"—a test that was a complete failure in one respect, though astonishingly successful in another.

We quote at length from *Everybody's Magazine*, July 1908:—

“Hardly were we settled in place when a sound came from the cone as though some one were tapping on it with the end of a lead pencil. ‘Is that you, comrade Wilbur?’ I asked.

“Tap, tap, tap, he answered vigorously.

“‘I thought I recognised your tap,’ I answered. ‘I am glad you are here, and I hope you are going to hand us out the finest possible test. Is Mr. Mitchell present?’

“To my delight the cone was instantly lifted, and the voice of ‘Mitchell’ answered me. . . . He spoke to me upon the investigation that we were pursuing. . . . He solemnly urged me to proceed in this work, and at last said, ‘Good-bye for the present,’ and fell silent.

“The cone was then deposited on the table, and ‘Maudie’ (another control) said: ‘If Mr. Garland and Mr. Fowler will go quietly up to mamma’s side, holding all the time tightly to the threads, Mr. Mitchell will do what Mr. Garland so much desires. Please be very careful not to touch mamma until I tell you. Keep as far apart as you can as you go up to her. When you reach my mamma’s side, you may put one hand on her head and one on her wrist. Mr. Mitchell says: Please have Mr. Brierly take Mrs. Fowler’s hand, so that every hand in the circle is accounted for.’

“I was now very eager and very alert. Surely no trickster would permit such rigorous control as that which we were now invited to exercise. My admiration went out towards this heroic little woman, who was enduring so much pain and suspicion for the sake of science.

“Slowly we crept to her side, being careful to touch nothing until directed by the voice of ‘Maud.’ At last the childish voice said: ‘Mr. Garland may put his right hand on top of mamma’s head, and his left hand on her wrist. Mr. Fowler may put his left hand on Mr. Garland’s, and his right hand on mamma’s wrist. Mr. Mitchell says that he will then see if the voices will not come.’

“I then said aloud: ‘Brierly, my right hand is on the psychic’s head, my left is on her wrist.’

“Fowler repeated: ‘My left hand is above Garland’s right, which is on the psychic’s head, and my own right hand is on the right wrist of the psychic. Now, Wilbur, go ahead.’

“Our challenge was almost instantly caught up. While we were thus doubly safeguarding the psychic, the cone, which was resting on the table a full yard away, rose with a sharp, metallic, scraping sound, and remained in the air for fully half-a-minute, during which I called out sharply: ‘We are absolutely controlling the psychic; her hands are motionless. Brierly, be sure of both Mrs. Fowler’s hands.’

“‘I have her hands in mine,’ he answered.

“As the cone was gently returned to the carpet, I said: ‘Fowler, that was a supreme test of the psychic. *She was absolutely not concerned in any known way with that movement.* Save for a curious throbbing, wave-like motion in her scalp, she did not move. If she lifted the horn, it was by the exercise of a force unrecognised by science.’

“‘Mitchell’ was then asked if it would not be possible to produce the voices through the cone at the same time that the psychic was being held.

“He seemed to hesitate, and at last said, ‘We will try.’ I perceived in his tone a certain doubt and indecision. Again we were permitted to hold the psychic’s wrists, and, as before, the cone was lifted and drummed upon as if to show its position high in the air, *but no voices came.* Hidden forces seemed to be struggling for escape beneath our hands, and with a sense of some baffling, incredible, externalisation of the psychic’s nerve force, I could well understand why the command had so often been given not to touch her unbidden, and not to flash a sudden light.

“At last the cone dropped upon the table, and we resumed our seats. ‘Maud’ then said: ‘Mamma will waken very soon. Mr. Mitchell will try to do what you wish.’ . . . Mrs. Smiley seemed to pass through another period of intense suffering, moaning and gasping more piteously than before. ‘Maudie’ then asked us to sing again, and put her mother back into deeper sleep. Shortly after this the tapping came again upon the cone, and ‘Wilbur’s’ strong hand grasped and lifted it, and his voice—vigorous, almost full-toned—spoke in a perfectly life-like way, and *while his voice was still sounding, the psychic sighed deeply and awoke!*

“‘Is anybody here?’ she asked, in her natural voice.

“Profoundly surprised at the sudden change, I answered, ‘Yes, Wilbur is here; at least, he was speaking but a moment ago.’ . . . Now came a completely mystifying performance, and an overthrow of my theory, for with Mrs. Smiley perfectly normal, mentally, ‘Wilbur,’ very much alive, remained at my elbow alert to perform. His activities suffered no diminution. He went about his pranks with greater vigour than before, handling the cone and whisking paper and pencil about, while Mrs. Smiley talked freely in answer to my questions, seemingly quite unconcerned about results. A singularly engrossing game of hide-and-go-seek now began. I tried every expedient to get Mrs. Smiley’s voice and that of the ‘spirit’s’ at the same time. But never did I succeed in getting ‘Wilbur’s’ voice at precisely the same moment with her own, though he followed swiftly on her speech, interjecting remarks echoing her questions.

“At last the cone dropped to the table; it was apparently taken up by another hand, and ‘Mitchell’ asked: ‘What can I do for you, Mr. Garland?’

“‘First of all, I want the privilege of going to the psychic’s chair again, in order to hold her wrists and listen at her lips. May I do so?’

“‘Mitchell’ did not reply, but, when the question was repeated, three faint taps on the cone answered ‘Yes.’

“Leaving my seat I felt my way to Mrs. Smiley’s side. ‘I am very close to the ultimate mystery, Mrs. Smiley,’ I said, as I placed my hand upon her wrist. ‘Proceed, Wilbur. Let me hear your voice now.’

“With tense expectation, I put my ear close to the psychic’s lips, and listened breathlessly. The horn soared into the air, and was drummed there as if to show that it was out of the reach of the psychic, *but no voice came from it*. This was a disappointment to me, and I said, banteringly: ‘You know this failure is suspicious, Wilbur. It seems to prove that Mrs. Smiley is only a wonderful ventriloquist, after all. If your vocal organs are independent of hers, show it.’

“No reply came to this, but, while my hands were firmly pressed upon her wrists (both sleeves still being nailed to the

chair) the loose leaves of the paper in the centre of the table were whisked away to the left. . . . But I did not forget my further test. 'Mrs. Smiley,' I said, . . . 'I want to place my hand over your lips, or to muffle you in some way. I *must* prove that you have nothing to do with the production of those voices. Will you permit this test?'

"'Certainly,' she answered, with patient sweetness. 'You may gag me in any way you want.' . . . So, taking a large kerchief from my pocket, I tied it tightly around her mouth, knotting it at the back, and then challenging the ghostly one, 'Now, Wilbur, let's hear from you. Prove your psychic's innocence!'

"A moment later the voice came from the cone, but apparently very much muffled and blurred, 'That is easy.'

"'You are not articulating well,' I rather sarcastically observed.

"Instantly the voice came out clearly, more sharply than ever before, '*I was fooling you!*' Upon lighting the gas, we found our victim as before, sitting absolutely as we had placed her. The table edge was twenty-four inches from her finger tips. The place where the cone had lain, which we had marked with chalk when the cone was first drummed upon, was thirty-six inches from one hand and forty inches from the other. But most inexplicable of all, the tangible permanent record was the seven sheets of paper that we found lying upon a couch six feet from Mrs. Smiley's left hand. *They were all written upon legibly, and pinned together with a black pin, which had been thrust through the writing.*¹ The pencil was on the carpet forty inches from Mrs. Smiley's hand. The leaves of paper, at the moment when they were grasped and lifted, had been more than forty inches from her finger tips."

2. RAPS.

There are certain cases on record in which raps have been known to occur in the presence of no professional medium, and under circumstances that are practically

¹ The italics are Mr. Garland's.

convincing. Thus, Dr. J. Maxwell, in his *Metapsychical Phenomena*, p. 278, relates a case in which raps took place out of doors, in the presence of a friend of his (not a professional medium), and under very favourable circumstances. He says:—

“The raps on the open umbrella are extremely curious. We have heard raps on the woodwork and on the silk at one and the same time; it is easy to perceive that the shock actually occurs in the wood, that the molecules of the latter are set in motion. The same thing occurs in the silk; and here observation is even more interesting still; each rap *looks* like a drop of some invisible liquid falling on the silk from a respectable height. The stretched silk of the umbrella is quickly and slightly but surely dented in; sometimes the force with which the raps are given is such as to shake the umbrella. Nothing is more absorbing than the observation of an apparent conversation—by means of the umbrella—between the medium’s personifications. Raps, imitating a burst of laughter in response to the observer’s remarks, resound on the silk, like the rapid play of strong but tiny fingers. When raps on the umbrella are forthcoming, M. Meurice either holds the handle of the umbrella, or some one else does, while he simply touches the handle very lightly with his open palm. He never touches the silk.”

This personification of the raps has been observed on several occasions. Again, Dr. Maxwell—who has made a special study of this subject—says, in his *Metapsychical Phenomena*, pp. 81–3:—

“One of the most curious facts revealed by the observation of raps is their relation to what I call personification. Each personified individuality manifests its presence by special raps. In a series of experiments that have now lasted for more than two years, I have had frequent opportunities of studying raps, personifying diverse entities. Sometimes the raps imitate a burst of laughter; this coincides with either an amusing story

related by one of the sitters, or with some mild teasing. Not only do the raps reveal themselves as the productions of intelligent action, they also manifest intelligence in response to any particular rhythm or code which might be suggested."

Whatever the cause and nature of these raps, therefore, it is certain that there is some *intelligence* connected with them; and that intelligence is independent either of the medium or of the sitter. As no other visible being is present, the intelligence apparently belongs to an *invisible* one; and what *that* may be we do not pretend to say. It will be apparent that the phenomena are at all events spiritistic *in appearance*, like many others, no matter what their ultimate explanation may be.

3. THE CASE OF D. D. HOME.

As there are comparatively few cases in which any attempt has been made to establish the question of identity by means of the so-called physical phenomena, such manifestations of psychic power, interesting though they may be to the investigator, are worthy of but little attention in a work of this character. If we were engaged in a thorough examination of the various problems of psychical research, we might feel disposed to go more deeply into the mysteries of alleged telekinesis, but when, as is the case, the interest centres entirely around the question of identity, the reports pertaining to levitations, materialisation, and other exhibitions of abnormal physical force may be disposed of with the briefest possible mention.

In the case of D. D. Home, therefore, there are comparatively few facts that need be included in these pages, for while he stands practically alone among professional

mediums, being the only producer of physical phenomena who has never been exposed, or caught in some act of trickery, the manifestations of his power have, almost without exception, been of a character in which the question of identity could not naturally enter. That his phenomena are of a most mystifying order, however, there can be no question. Even Mr. Podmore, who was none too ready to grant the existence of supernormal forces, was willing to admit that there is no valid evidence upon which to base a suspicion against this medium.¹ In the first place, Home invariably sat in the circle, side by side with the other sitters. Moreover, he always exhibited a great objection to darkness, insisting upon having as much light as possible, and, on one occasion at least, he offered to change his clothes just before the séance to prove that he had brought no mechanism, or paraphernalia concealed about his person. In fact, the most searching investigation that such men as Lord Adare and Sir William Crookes were able to make disclosed nothing that seemed to warrant the assumption that the phenomena which he produced were not genuine, at least so far as conscious fraud on the part of the medium was concerned. Even the severe scientific tests devised by these well-trained investigators produced no other result than to indicate that, as Sir William Crookes says, in his *Researches in Modern Spiritualism*, they apparently demonstrated the existence of some force which was able to move objects in a supernormal manner.

So far as the extraordinary levitations and other exhibitions of telekinesis are concerned, readers who are interested in such phenomena will find these wonders fully described in many books on psychical investigation, including Sir William Crookes' *Researches*, and the *Proceedings of the (London) Society for Psychical Research*.

¹ *Modern Spiritualism*, vol. ii., p. 230.

It is from these sources that we have obtained the following facts in regard to the famous "accordion test."

It is stated that Home took an ordinary accordion by the end furthest from the keys, and that, while holding it in that manner beneath the table, the accordion commenced to play. All who were present were permitted to look under the table, when they saw the instrument open and close, the keys rising and falling, exactly as though some unseen hands were fingering them. After describing this experiment, and assuring the reader that music was obtained even when all eyes were fixed upon the instrument, Sir William Crookes continued:—

"But the sequel was still more surprising, for Mr. Home then removed his hand altogether from the accordion, and placed it in the hand of the person next to him. The instrument then continued to play, no person touching it, and no hand being near it. The accordion was now again taken without any visible touch from Mr. Home's hand, which he removed from it entirely and placed upon the table, where it was taken by the person next to him, and seen, as now were both his hands, by all present."

As a further test, Sir William devised a wire cage, circular in shape, and composed of laths of wood, fastened together at the top and bottom, and with wire encircling it in twenty-four rounds, the openings being less than an inch apart. In other words, while this cage would hold the accordion easily, it was impossible to turn the instrument after it had been put in it, while the hand that held the accordion in the cage could in no manner reach the keys. To further prevent the possibility of outside communication, the wires that passed around the cage were charged with electricity from a battery situated in the next room. In spite of these precautions, however, the instrument continued to play. Sir William says:—

“I and two of the others present saw the accordion distinctly floating about inside the cage with no visible support. I grasped Mr. Home’s arm below the elbow, and gently slid my hand down until I touched the top of the accordion. He was not moving a muscle. His other hand was on the table, visible to all, and his feet were under the feet of those next to him.”

On another occasion,

“The accordion was held by Mr. Home in the usual position under the table. Whilst it played, Mrs. I. looked beneath and saw it playing. Mr. Home removed his hand altogether from it, and held both hands above the table. During this Mrs. I. said she saw a luminous hand playing the accordion.”

This mention of a luminous hand brings us to a very interesting phenomenon, one that has been frequently attested in Home’s case, however. We refer to the “dematerialisation” of hands while they are being held by the sitter. Sir William Crookes mentions this on several occasions, and not only casually, but very emphatically. (See *Journal of the Society for Psychological Research*, vol. vi., p. 342.) There he says: “The hands were warm and lifelike, and if retained would appear to melt in one’s grasp. They were never dragged away.” Other witnesses speak to like effect. Thus, Mr. H. D. Jencken, in a paper read before the London Dialectical Society, said: “Spirit hands are usually luminous, and appear and re-appear all but instantaneously. I have once been enabled to submit a spirit hand to pressure. The temperature was, as far as I could judge, the same as that of the room, and the spirit hand felt soft, velvety, dissolving slowly under the greatest amount of pressure to which I could submit it.” (*Report*, p. 120.) Dr. A. D. Wilson and Professor Mapes testify to like effect. (See R. D. Owen, *Debateable Land*, pp. 351–2; also Hardinge, *Modern American Spiritualism*, p. 106.)

It would seem that we have here, then, an indication of an external spiritual being; for the phenomena, if not the result of hallucination pure and simple (it certainly could not have been fraud on many occasions, for these hands were clearly seen, when Home was also seen in another part of the room), do not point to any "unknown force" as an explanation, but to an entity, having a body, and a volition of its own. Certainly the phenomena are sufficiently startling to warrant a certain amount of scepticism, but the only rational way out of the difficulty, apparently, is to suppose that hallucination of the sitters took place. This hypothesis has been advanced and defended from time to time by various writers, notably Mr. Podmore, and more recently by Miss Alice Johnson in her reply to Count Solovovo (vide *Proceedings of the Society for Psychical Research*, vol. xxi., pp. 436-515). But the objections that have been raised to the theory still hold good: (1) that several persons, all apparently normal, saw the hands at the same time; and (2) that the hands often moved various articles from place to place, and they were found to have been actually moved after the séance ended. Unless we are prepared to admit that a hallucination of a hand can move a material object, it would be very difficult to account for many of the Home phenomena on any other theory than that an actual hand of some semi-material substance was present and active, producing observed phenomena.¹

4. WILLIAM STANTON MOSES.

The case of William Stainton Moses is of particular interest, as bearing upon the question of the reality of

¹ See a criticism of the hallucination theory by one of us (Mr. Carrington) in the *Journal of the American Society for Psychical Research* December 1909, pp. 711-27.

physical phenomena, of the spiritualistic type. Stainton Moses was born in 1839, received an excellent education at Oxford, and in 1863 accepted a curacy in the Isle of Man. He continued his clerical duties for several years, being generally loved by his parishioners, and gained for himself an excellent personal reputation. Coming to London in 1870, he obtained the appointment of master of English in the University College School, which position he held until 1889. Encountering by chance Dale Owen's book, *The Debateable Land*, he read it with interest, and finally became a student of spiritualistic philosophy. He investigated various mediums, and soon found that he was possessed of mediumistic capacity himself. He then rapidly developed into a remarkable medium, continuing, however, his work at the University College for a number of years, until he resigned to become editor of *Light*, the official Spiritualistic paper.

The phenomena occurring in the presence of Moses were both physical and mental in their character. Much automatic writing was received, some of it of a distinctly evidential character. Many of these messages, apparently establishing personal identity, were published in his book, *Spirit Identity*. But, further, a great number of remarkable physical phenomena are alleged to have taken place in his presence. Raps, which intelligently answered questions; lights, varied in character, and often remarkable for their brilliancy; scents of various descriptions; cold breezes; musical sounds of all kinds (sometimes resembling the chords of an organ, at other times those of a harmonium; bells, notes of various wind instruments, horns, &c.), being some of the phenomena which are recorded to have occurred at his séances. Direct writing was received on slates and on paper. Movements of light and of heavy objects, without contact, and without

apparent cause, the supposed passage of matter through matter, direct voices, levitations, &c., formed only a part of the manifestations that occurred in this gentleman's presence. Incredible as they may appear, they have never been satisfactorily explained, and there is no reason whatever for supposing that Moses would produce these phenomena by fraudulent means. He was not a professional medium, but a gentleman moving in good social circles in London; he received no money for the sésances, which were not public, only a few of his personal friends being allowed to attend these sittings. The records of these sésances were never published in Mr. Moses' lifetime, so that the love of notoriety cannot be urged as a justifiable reason for his resorting to fraud on these occasions. Difficult as it may be to believe in their reality, it is almost equally difficult to believe that Mr. Moses resorted to a few petty tricks in order to deceive his personal friends for a number of years! As Mr. Lang so well put it, "the choice is between a moral and a physical miracle;" and there the matter may be said to rest to this day.

5. EUSAPIA PALLADINO.

So much has been written of late concerning the Italian medium Eusapia Palladino that we feel it is unnecessary to do more than refer our readers to the sources from which the information relating to this medium is drawn—chiefly Mr. Carrington's *Eusapia Palladino and her Phenomena*, M. Flammarion's book, *Mysterious Psychic Forces*, and to the *Annals of Psychological Science*.¹ We shall quote one or two typical sésances from

¹ It is extremely interesting and significant to note, in this connection, that many of the Italian investigators have progressed so far, and are now so certain of the facts, that they are treating the phenomena obtained in the presence of Eusapia Palladino as proved for science, and now speak of

each. Professor Porro, successively Director of the Observatories of Genoa and Turin, and then Director of the National Observatory of the Argentine Republic, writes concerning one of his sittings as follows:—

“The tenth sitting (the last) was one of the best attended and was perhaps the most interesting of all.

“Scarcely had the electric lights been extinguished when we remark an automatic movement of the chair upon which a lump of plaster had been placed, while the hands and feet of Eusapia are carefully controlled by me and by No. 3. However, as we wish to forestall the objection of the critics that the phenomena take place in the dark, she typtologically (that is, by taps) asks for light, and the experimenters light the electric lamp.

“Presently all the company see the chair on which the lump of plaster lies (not at all a light chair), moving between myself and the medium, without our being able to understand the determining cause of the movement.

“Madame Palladino puts her outspread hand upon the back of the chair, and her left above it. When our hands rise up, the chair rises also without contact, reaching a height of about six inches. This performance is several times repeated, with the addition of the intervention of the hand of No. 5, under conditions of light and of control which leave nothing to be desired.

“The room is again almost completely darkened . . . a current of cold air upon the table preceded the arrival of a little branch with two green leaves. We know that there are no plants in the neighbourhood of the company. It appears that we have here a case of ‘bringing in’ from the outside.

“No. 3 is greatly exhausted from the heat. And lo! a hand,

“unexplored regions of human biology” instead of mediumistic phenomena, when discussing her case! In other words, they think that the problem is now a definite biological problem, and as such comes within the recognised and legitimate field of science. They believe that these phenomena can no longer be treated as mediumistic freaks, or oddities of Nature, any more than they can be disposed of with a wave of the hand, as “all humbug.” This recognition and classification of the facts is certainly most significant.

which takes his handkerchief from his neck and with it dries the perspiration on his face. He tries to seize the handkerchief with his teeth, but it is snatched from him. A big hand lifts his left hand, and makes him rap several strokes with it on the table.

“Glams of light begin to appear, at first on the right hand of No. 5, then in different parts of the hall. They are perceived by everybody.

“The curtain is inflated as if it were pushed against by a strong wind, and touches No. 11, who is sitting in a small easy-chair a yard and a half from the medium. The same person is touched by a hand, while another hand pulls a fan from an inside pocket of his jacket, carries it to No. 5, and then to No. 11. The fan is soon returned to its owner, and is moved to and fro above our heads, to the great satisfaction of all of us. A tobacco-pouch is taken from the pocket of No. 3. The Invisible empties it on the table, and then gives it to No. 10. Various stems of plants drop upon the table.

“Transfers of the fan from one hand to another begin again. Then No. 11 believes that he ought to announce that the fan had been offered to him by a young girl who had expressed the wish that it be transferred to No. 11, then given back to No. 5. Nobody knew of this except No. 11.

“No. 5, who at present occupies the arm-chair, where formerly No. 11 was seated, a yard and a half from the medium, feels the edge of the curtain touching him, and then perceives the presence of the body of a woman whose hair rests on his head.

“The *séance* is adjourned about one o'clock.

“At the moment of parting Eusapia sees a bell on the piano; she extends her hand; the bell glides along on the piano, turns over, and falls on the floor. The experiment is renewed, in full light as before, the hand of the medium remaining several inches from the bell. . . .”

The following case is perhaps one of the best attested, and at the same time one of the most remarkable *séances* witnessed in the presence of this medium. The incident

here quoted occurred during a séance held with Eusapia, under the supervision of Professor P. Foa, Professor of Pathological Anatomy of the University of Turin, and Drs. A. Herlitzka, C. Foa, and A. Aggazzotti, assistants of Professor Mosso, the eminent physiologist. The record reads, in part, as follows :—

“A luminous interlude ensued : above Eusapia’s head, at a height of about 18 inches, all the sitters saw a bright light appear, similar to that of a small electric pocket lamp. One of us (Dr. Foa) went out of the circle, and held a photographic plate above the medium’s head to find out whether it was possible to register the radiations. A few moments later the bright light, well localised, reappeared ; immediately afterwards the toy piano, which was on the table all the time with the keyboard turned away from the medium, made a few sounds ; the sitters observed the spontaneous depression of the keys which accompanied the sounds.

“Still with the object of obtaining a record of possible radiations, one of us (Dr. Foa) held the photographic plate, wrapped in paper, over Eusapia’s head, and he felt the plate seized by a hand covered with the curtain ; he passed one hand behind the curtain, but found nothing there.

“The hand (for reasons that will appear later we apply this term to the force that acted on the plate, although no form of a hand was visible) made an effort to seize the plate by snatching it unexpectedly, and renewed this attempt repeatedly, but without success. Dr. Foa seized the hand which was covered with the curtain, and had the impression of pressing real fingers ; the fingers escaped him, however, and gave him a blow ; the plate was changed, and the invisible hand began another struggle, during which it had tight hold of the plate for several seconds. At last a sudden blow given to the plate caused it to fall on the séance table without breaking. Dr Aggazzotti, who held another plate over the medium’s head, had in his turn to struggle in order to prevent its escaping him—a struggle in the course of which his hand was even bitten !

“ At this juncture the medium told Professor Pio Foa not to be alarmed whatever might happen, and advised all present not to touch the objects which would be suspended in the air, otherwise she would be unable to restrain the movements, and might hurt somebody.

“ Table No. 1 rose in the air many inches high, and passed once over the head of Professor Foa ; returning to the ground, and, keeping all the time outside the cabinet, it turned over, and then stood up again.

“ Needless to say that the controllers were always vigilant, and that the hands and the feet of the medium were always held in our hands and under our feet. Often during the occurrence of the most important phenomena, Eusapia's legs were placed horizontally on our knees.

“ After table No. 1 had stood upright, Dr. Arullani approached it, but the piece of furniture, moving violently towards him, repulsed him ; Dr. Arullani seized the table, which was heard to crack in the struggle : it was a strong table of white wood, about 2 feet 9 inches high and 3 feet long by 22 inches broad, weighing 17 pounds.

“ Dr. Arullani asked that the hand behind the curtain should grasp his. The medium replied in her own voice, ‘ First I am going to break the table, then I will give you a grasp of the hand.’ This declaration was followed by three fresh, complete levitations of the table, which fell back each time heavily on the floor. All those who were on the left of the medium could observe, by a very good red light, the various movements of the table. The latter bent down and passed behind the curtain, followed by one of us (Dr. C. Foa), who saw it turn over and rest on one of its two short sides, whilst one of the legs came off violently, as if under the action of some force pressing upon it. At this moment the table came violently out of the cabinet, and *continued to break up under the eyes of every one present.* At first its different parts were torn off, then the boards themselves went to pieces. Two legs, which still remained united by a thin slip of wood, floated above us and placed themselves on the *séance* table.

“ The medium said, ‘ Unhappy owners of the house ! ’ As

the medium had thus kept her promise to break the table, Dr. Arullani asked for the handshake, and was invited by the medium to approach the curtain. He had hardly reached it when he felt himself hit by pieces of wood and hands, and we all heard the noise of the blows.

“One of us, who was in control, felt himself tickled under the arm, but could not see any hand, although the subjective impression was of four fingers which moved rapidly under the armpits.

“During the whole séance the condition of the medium and her power were being discussed. Dr. Arullani maintained that this force was only manifested at a few inches' distance. The medium then told him to stand upon the séance table. Dr. Arullani confined himself to kneeling upon it, and was struck on the head by a piece of wood: then two feet of the table were raised three times, the third time more violently, and the doctor was sent rolling over to the ground.

“The séance approached its close; the medium seemed very tired; she leaned her head on the shoulder of one of the controllers. A very interesting experience was yet in store for us. The medium, as well as all the sitters, who formed a chain, stood up. The table moved towards the centre of the room, and afterwards rose completely in the air. After a brief pause, during which one of us mentioned the fact that a photographic plate was fixed under the séance table, and whilst every one was standing up at some distance from the table, which was free and quite visible on all sides, the medium asked for Dr. Aggazzotti's hand, and immediately afterwards the photographic plate was seen to fall with violence on to the séance table. Dr. C. Foa and Dr. Aggazzotti saw it distinctly come out from under the table, move round the edge, and pass on to the upper surface.

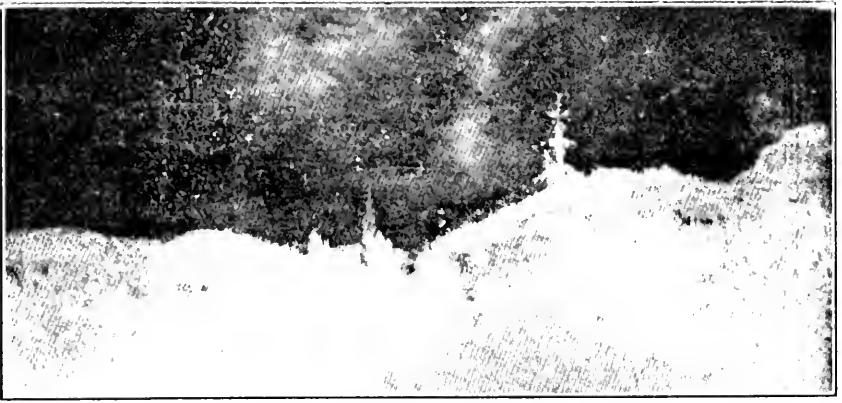
“It was 1 A.M.; the medium was asked whether the séance should be closed, but she did not reply: she was seen to be very fatigued, and we broke off the séance without further demur; the medium was placed in an arm-chair, and carried to a small adjoining sitting-room.”

On returning to the field of battle, it was found that the table was broken into small pieces of various sizes. On the indiarubber membrane, covered with lamp black, was found the mark of the stuff which had been torn only in some of the places; and on one of the plates was the impression of a thumb and fingers. Evidently, therefore, the results obtained at this sitting were objective, and cannot be attributed to hallucination.

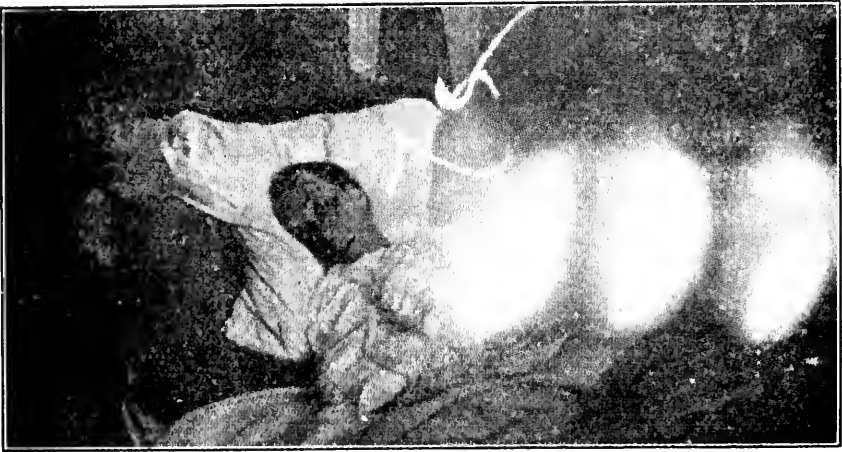
The final case we quote is one of peculiar interest, as it involves personal identity and supernormally acquired information, as well as the mere physical phenomena. It is reported at first hand, immediately after the sitting, by Dr. Joseph Venzano, whom Professor Morselli states to be "an excellent observer." He says:—

"In spite of the dimness of the light, I could distinctly see Madame Palladino and my fellow-sitters. Suddenly I perceived that behind me was a form, fairly tall, which was leaning its head on my left shoulder and sobbing violently, so that those present could hear the sobs; it kissed me repeatedly. I clearly perceived the outlines of this face, which touched my own, and I felt the very fine and abundant hair in contact with my left cheek, so that I could be quite sure that it was a woman. The table then began to move, and by typtology gave the name of a close family connection who was known to no one present except myself. She had died some time before, and on account of incompatibility of temperament there had been serious disagreements with her. I was so far from expecting this typtological response that I at first thought that it was a case of coincidence of name; but whilst I was mentally forming this reflection I felt a mouth, with warm breath, touch my ear, and whisper *in a low voice in Genoese dialect* a succession of sentences, the murmur of which was audible to the sitters. These sentences were broken by bursts of weeping, and their gist was to repeatedly implore pardon for injuries done to me, with a fullness of detail connected with family affairs which could only be known to the person in question. The phenomenon seemed so

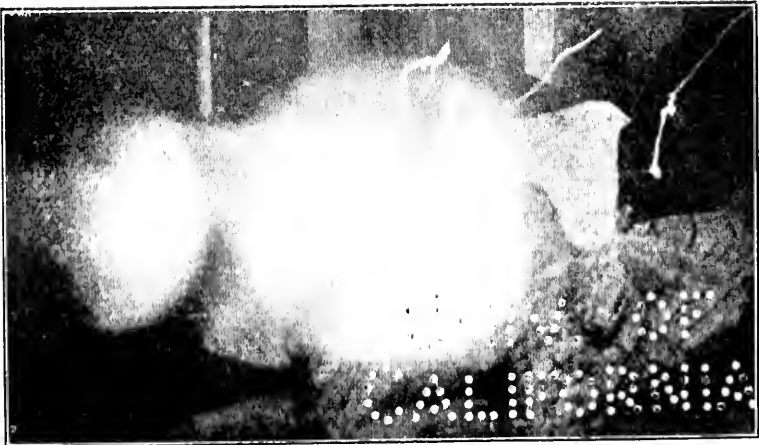
THE UNIVERSITY OF CHICAGO
LIBRARY



Photograph of André's body in the coffin, taken at 6 P.M.,
nine hours after death (p. 368).



Photograph of Madame Baraduc, taken a quarter of an hour
after death (p. 369).



Photograph of Madame Baraduc, taken at 3 P.M., a bare hour
after death (p. 370).

real that I felt compelled to reply to the excuses offered me with expressions of affection, and to ask pardon in return if my resentment of the wrongs referred to had been excessive. But I had scarcely uttered the first syllables when two hands, with exquisite delicacy, applied themselves to my lips and prevented my continuing. The form then said to me, 'Thank you,' embraced me, kissed me, and disappeared."

It will be seen that, in the above account, the medium was awake and not in a trance; and further, and still more important, she was distinctly *visible* to Dr. Venzano and to all the circle, and remained so throughout the whole of the phenomena. Whatever theory we may choose to explain these facts, it is certain that neither fraud nor hallucination alone will suffice. Certain it is also that the spiritistic interpretation is the simplest and would seem the only one capable of explaining *all* the facts. However, we leave this question of theories and interpretations for discussion at some later time, as they are somewhat out of place in a work of this character.

Not unnaturally, perhaps, we regard as amongst the most conclusive experiments, so far conducted, those in which one of us (H. Carrington) participated. In the autumn of 1908 he found himself in London, and there met the Hon. Everard Feilding and Mr. W. W. Baggally, both members of the Council of the English Society for Psychical Research. The three journeyed to Naples, and there obtained a series of sittings with Eusapia Palladino. It would be impossible in this place to detail these sittings, as the reports are extremely laborious and lengthy; we must content ourselves with a summary of the degree of control maintained throughout the sittings, and a general description of the phenomena obtained. This will at least give the reader an idea of the precautions observed and of the manifestations that occurred. (For the details of these sittings, we would

refer the reader to *Proceedings of the Society for Psychical Research*, vol. xxiii., pp. 306-569; and to the book, *Eusapia Palladino and her Phenomena*, by Hereward Carrington.)

The conditions under which the séances took place were as follows:—The sittings were held in our own rooms at the Hotel Victoria, Naples. Before each séance the rooms were carefully searched, and the instruments, &c., inspected. The room was situated on the fifth floor, the windows opening out on to the street. After the medium had entered the room, every door and window was carefully locked and bolted. On several occasions the medium was carefully searched, and nothing suspicious was found upon her person or in her clothing. In fact, she offered to wear another dress if the investigators cared to provide her with one. Confederates were certainly not present. It became simply a question of whether or not the medium could produce these results herself and unaided. It depended upon her “controllers,” then, so to hold and secure her that it was impossible for her to produce the phenomena herself.

In one corner of the séance room two thin black curtains were hung, forming a “cabinet,” in which were placed a small table containing a tea-bell, a toy piano, a tambourine, a tin trumpet, a guitar, &c. Nothing else was placed in the cabinet except some cakes of wet clay at the later séances, upon which, it was hoped, the “spirits” would impress their hands or faces. The cabinet was examined just before each séance and found to be empty. Moreover, during each sitting one of the investigators frequently lifted the curtains of the cabinet and looked inside. Nothing was visible except the phenomena which were taking place at the time!

The medium sat *outside* this curtain, and about a foot or eighteen inches from it. In front of her was placed

the séance table ; and on either side of her sat one investigator or "controller," whose duty it was to see that the hand, foot, and knee on his side were firmly held or controlled. Other sitters sat round the table in positions which enabled them to see what was taking place. The light was regulated so that it could be varied from a bright white light (sufficiently good to enable the sitters to read small print with ease) to a light so faint that one could distinguish only the faces of the sitters round the table. These preliminaries settled, the séance commenced. Let us now turn to the method of control.

The hands and feet of the medium were held away from one another and usually separated a foot or more, so that approximation or substitution was impossible. Often one hand was held in the lap, the other on the table. Frequently the whole arm was under complete control as far as the shoulder. The head of the medium was visible to all throughout the sittings. The knees were constantly held by the hands of the controllers. The feet of the medium were placed upon the feet of her controllers, on either side of her, or were held under theirs. Often they were tied to the rungs of her chair with rope. Several times one of the sitters would go beneath the table and hold her ankles in his hands, while the other controllers paid particular attention to the hands, knees, and head. On several occasions the whole body of the medium was under complete control, for, when she passed into a deep trance state, she leaned heavily against one of her controllers, who supported her by placing his arm about her. At such times her head would be in contact with the head of her controller—the temples touching. Further, on numerous occasions her hands were tied to the hands of her controllers, but in spite of all these precautions, of their constant vigilance, in spite of the fact that the observations were checked off

by mechanical apparatus which was employed for the purpose, phenomena continued to happen—as the report fully testifies.

Throughout these sittings the light was usually quite sufficient to enable the sitters to *see* the whole of the medium's body without difficulty. Her hands and head were nearly always perfectly visible. The sitters constantly dictated to the stenographer (who sat at a separate table on the opposite side of the room) just what was taking place and the manner in which the hands, feet, and knees of the medium were being held. The utmost rigour was observed in this direction; and it must be taken into account, when considering this case, that all three of the investigators were fully aware of all the methods of trickery employed by mediums in order to release their hands, feet, &c., and were fully prepared to detect it, should trickery of this kind exist. It must be remembered also, that it was sufficiently light to enable the sitters to *see* the medium distinctly. The medium submitted to all these conditions without demur, as the following extracts will show. We quote a few sample passages from the records as given *verbatim* to the stenographer at the time. These form, therefore, a contemporary record of everything that transpired at the sittings.¹

During the second séance, the following series of remarkable table levitations occurred, which were recorded as follows :—

10.54 P.M. F. : I have changed the control from my left foot to my right; my right foot is now between hers and the leg of the table.

10.58 P.M. The table tilted on the two right legs. C. : The medium's left hand is held in mine over the table, her left foot

¹ Throughout the sittings F = Feilding, B = Baggally, and C = Carrington.

being pressed on my right, and my right knee being in contact with her left knee. F. : Her right hand was on my shoulder. The table was then raised entirely, and both Carrington and she afterwards pressed on Carrington's side of the table, which went up in spite of their pressure. C. : I pushed strongly.

11 P.M. Total levitation of the table. C. : The medium's left hand pulled up my right about 4 inches above the table, the medium's left foot pressing against my right foot, my right knee pressing against her left knee. F. : The medium's right hand was partly in mine, the wrist just touching the top of the table, my left hand across both her knees, my right foot touching her right foot between it and the table leg, my face being within 6 inches of the edge of the table.

11.1 P.M. The table tilts on the two legs farthest from medium, both her hands being clearly visible and about a foot away from the table, and her fists being clenched. F. : On a line with her waist. C. : The control of the feet being the same as before, except my right hand is now also grasping her thigh. F. : My left hand across both her knees. (The medium sat well back in her chair, and her body was at least 9 inches from the table. We clearly remember the conditions of this striking phenomenon. November 23.)

11.5 P.M. Complete levitation of the table. F. : The table lifts above 6 inches, only C.'s and my hands were on the table, clasped across the middle. Complete levitation of the table. F. : Nobody's hands were on the table; it goes up all by itself. Another complete levitation of the table. C. : All hands being off the table, her right hand was free but perfectly visible, and about 6 inches off the table.

11.9 P.M. F. : Asks medium to attempt levitation whilst standing up; she agrees, but presently says that she cannot stand any longer.

11.11 P.M. Complete levitation of the table. C. : Both hands of the medium were about 8 inches above the table. I can clearly feel her left foot across my right; the leg of the table was not in contact with her skirt. Second complete levitation of the table. F. : My left hand was underneath the bottom of the leg of the table. Her right hand was off the table alto-

gether. C. : There is 9 inches between her body and the table. Partial levitation of the table.

11.13 P.M. F. : She removed her hands entirely from the table about 2 feet, and the table went up on the two legs farthest from her about 1 foot. Immediately afterwards she repeated the same, taking our hands in her lap; whereupon the table again lifted up and wriggled about without anybody touching it. F. : My hand was on her left hand all the time. C. : My right hand was on her left hand. F. : I could see right down the leg of the table.

During the sixth séance the following series of phenomena took place; they were perhaps the most striking of the whole series, and obtained under excellent conditions of control. The record stands as follows:—

C. : She now leans her head against mine. F. : She did not lean back, her face being clearly visible and motionless.

11.41 P.M. C. : I am touched by a hand on the head. F. : I saw a white thing come out from the curtains over the medium's head towards C.'s head. C. : While this was going on the medium's head was resting against mine, my right arm being around her shoulder; her left hand being visibly on mine on the table; her left foot pressing on my right. B. : Mine exactly the same as before; her right hand was resting on my left hand on the table, under the curtain; and her right foot is resting on my left foot, and her right knee is pressing against my left knee. (B. : I could tell it was her right hand by the feeling of the relative position of her hand to her fingers and feeling the thumb and the palm of her hand, and that it was her real hand by the warmth and by the responses to my squeezes. December 5, '08.)

11.44 P.M. Medium says it is coming there! (Medium said to C. : "Look, he will come there!" indicating a particular spot to the left of B. December 5, '08.) C. : I am touched on the head through the curtain twice; the medium's head resting against my head, the left hand visibly on the table in my left hand; her left knee pressing against my right knee. B. : Her

right hand is resting on my left hand on the table, and her right foot is resting on my left foot, and I still continue pressing my knee against her knee. F.: I saw something white just over the medium's head; a sort of a flash of white. The medium's head was motionless. C.: I am hit right on the head by a hand through the curtain. (C.: I felt the four fingers and the thumb this time; the hand was open, and a minute after the fingers were closed and I was again hit on the head. December 5, '08.) Control exactly the same; the medium's head against mine, and she kicked with her foot under the table in front of her. B.: My control exactly the same as before. F.: Note that I can see the position of all the three heads quite plainly. B.: A hand comes out from behind the curtain and presses me tightly on my shoulder; I felt the thumb and the four fingers, which are now pressing downwards with a very considerable force. C.: I was holding her left hand by the thumb on her left thigh, her left foot being on my right, her head pressing against my head. B.: Her right hand is resting on my left hand; I can feel both her knees with my left hand, which I have passed under the table; her right foot is on my left foot and our knees are touching. F.: I have asked the medium whether I could feel the hand also; she replied yes. F. stands to the left of C., and leans over with his left hand outstretched about $2\frac{1}{2}$ feet above and to the left of the medium's head. Immediately after: F.: I am touched by something straight on the point of my finger.

12.11 P.M. F.: I am touched again; I am taken hold of by fingers, and I can feel the nails quite plainly. (F.: My forefinger was pressed hard by three separate fingers above it and by a thumb below through the curtain. I felt the nails quite distinctly as they pressed into my finger. December 6, '08.) C.: Her head resting against my head. I am absolutely holding her left hand on the table; both her legs are around my right leg under the chair. B.: I am absolutely certain that her right hand is on my left hand on her right knee. F.: I am touched again; grasped this time as though by the lower part of a thumb and fingers. B.: I am touched gently on my hand, and at the same moment I am touched by a hand on my shoulder.

B. : Also the curtain came out as though struck violently by a hand from within. (The touches in this case on F.'s hand, which was high up, and on B.'s shoulder, who was sitting on the other side of the table with the curtain over the table and at least 3 feet from F.'s hand, appeared to be absolutely simultaneous; and immediately afterwards the curtain was thrust violently out, as though it was struck hard several times by a hand within. December 6, '08.) B. : Same control. C. : Same control. (B. : In acknowledgment of this outburst of phenomena I said, "Thank you, John"; and a hand replied by coming out from behind the curtain and patting me on the shoulder in a friendly kind of way. December 6, '08.) C. : She squeezed my left hand while this was going on.

12.20 A.M. C. : The medium has taken her two legs from around my right leg, and now has her left foot on my right foot. B. : And she places her right foot on my left foot, and I am feeling her knee with my knee. C. : The medium rests her head on my right shoulder, and is pressing against mine; I have my arm around her neck; I have her left hand in my left hand on the table. I saw the curtain blow out in front of me. B. : Medium's right hand in my left. F. : I saw something white appear on the farthest side of the cabinet from the medium, up by the door. The white thing I saw was about half way up the curtain, and about $3\frac{1}{2}$ feet from the medium. B. : My control the same as before. C. : I am touched on the head by a hand. At this moment the medium's head is pressing against my head; her left hand in my left on the table; and with my right hand I am holding the whole of her left arm. Her left foot on my right foot. B. : Medium's right hand resting on my left on the table; right foot on my left foot, which she moves backwards and forwards, and I follow with my foot. C. : My foot was motionless.

12.23 P.M. C. : I am touched plainly by a hand on the head. C. : My control the same as before. F. : I saw it also. It was a grey thing.

The ninth séance was one of the most remarkable of the whole series. Phenomena began almost at once,

and continued in spite of our utmost endeavours to prevent them. The following extract gives a good idea of the extreme rapidity with which phenomena followed one another, as well as their extraordinary character. At 12.47 A.M. we have the following record:—

12.47 A.M. F.: I ask "Carlo" to give me the tambourine (Medium said he would do so, and I moved round C. F.: 14/12/08.) B: She holds my right hand over the table in front of her, and makes gestures with it in the air, and the tambourine slid along the ground. C.: I am touched again. C.: The same thing has happened again. C.: I was touched three times with fingers on my left hand. The tambourine then jumped up about ten to twelve times inside the curtain, apparently trying to get to the edge of the curtain, and was then pushed outside the curtain. C.: I am grasped very firmly by a hand through the curtain on the left lap. I felt the medium's right hand on my left on the table at the same moment that the tambourine was kicking about the inside of the cabinet. B.: I am holding her hand on the table. I can see it quite clearly.

12.51 A.M. Medium wishes to touch C., which she does. C.: I was grasped just above the left elbow by four fingers and a thumb, which pressed very hard indeed. C.: I am touched on the left side by a hand. I am holding *both* medium's hands in both of mine, and she is squeezing tightly. Her right foot pressing strongly on my left foot in contact with my right. B.: I was holding the wrist of her left hand with my right hand on the table in full view of us all and perfectly visible. My right knee against her left knee. My right foot under her left foot. C.: I am holding *both* medium's hands in both of my hands, one being clearly visible and one on the table under the curtain. Absolute control of right foot and leg.

1.0 A.M. C.: I am touched on the face by a hand through the curtain as the medium kicks to and fro. C.: I am again touched on the face by a hand, medium having both her legs round my left leg, her right hand holding my left on

the table in the middle under the curtain. B.: Her left hand holding my right hand on the table, which I see clearly.

These extracts will at least serve to indicate that fraud was apparently impossible, and that, to all appearances, the phenomena were real. Yet, if real, what a complex problem is before us! And, short of some spiritistic theory—how adequately account for the facts?

5. EUSAPIA PALLADINO'S AMERICAN SÉANCES.

Eusapia Palladino visited America in 1909–10, under the management of Mr. Carrington, and gave a large number of séances, which were attended by scientific men and members of the S.P.R. While fraud was detected on several occasions, the séances were on the whole good, and afforded strong confirmatory evidence of the supernormal character of these manifestations.

It would be impossible in this place to give any detailed account of these sittings—(the report of which was published in the *Annals of Psychical Science*, 1910–11)—but the following summary, written by Mr. Carrington, will give a fair idea of the evidence, as it appeared to him, after witnessing more than thirty séances:—

“Every one who has studied Eusapia's phenomena knows that practically every séance (for some reason) commences with table levitations—this, whether they are wanted or not! It seems the necessary programme, and it is almost invariably carried out. Seeing them time after time, one can obtain a very fair idea of their nature and reality. And I may say that I now consider these levitations as well established as any other physical facts. They are not open to the objection to which most psychical phenomena are subjected—that they cannot be repeated or induced and studied experimentally, as one would study other physical facts—for they can be induced

and studied in just this laboratory manner. I have probably seen several hundred of these levitations, now, under every conceivable condition and in excellent light, and I consider them so far established that, as Count Solovovo said, the burden of proof is now on the man who asserts that they are *not* real; not upon the man who asserts that they *are*. I have seen levitations take place time after time in a brilliantly-lighted room, when Eusapia's feet were clearly seen, when her knees were held, and no part of her clothing was in contact with the table, when her feet had been tied with rope to the feet of her chair, when both Eusapia's feet were held under the table by a third controller, when the 'stocks' apparatus was in use, when the controllers on either side of her passed their hands to and fro repeatedly between the medium's legs and body and the table, when her hands were off the table altogether, when the medium was standing up. These levitations, too, were not all of them of the sudden, almost instantaneous character seen by us in Naples. We have had levitations lasting twenty and twenty-five and thirty seconds, and even longer, as timed by the watch on the stenographer's table. These levitations, too, some of them, have been two feet or more from the floor. On two occasions the table rose to a height of about two feet, remained up for several seconds, fell *almost* to the floor—without touching it, however—and then rose again to its former height. On at least one occasion the table rose so high that Eusapia had to stand, with her hands raised above her head, in order to keep them on the top of the table. In this position Eusapia walked five or six feet away from the cabinet, the table still suspended in the air, before it fell with a crash to the floor. During nearly all these levitations the controllers had ample time, as a rule, to pass their hands between the table and the medium's body, in order to prove that no hook or similar attachment was possible, as Mr. W. S. Davis suggested, and, in fact, publicly stated *was* the case!

“The ‘curtain phenomena,’ seen in America, were of the usual variety seen before, and presented nothing of particular interest. It is curious to note that, throughout a long course of

sittings, the bulging of Eusapia's dress was noticed only on one occasion. The breeze from Eusapia's forehead was noted, in all, five or six times, and I have learned one rather interesting thing in this connection. It is this. After a good séance this breeze is strong, and after a poor séance it is altogether lacking—or so feeble that it can hardly be detected. On three occasions Eusapia gave a sort of 'after-sitting' to three or four of us who had remained (after the other sitters had departed), and the most startling phenomena I have ever seen occurred at these 'informal' séances. A strong breeze was *always* found to issue from E. P.'s scar after these sittings, though none had been noticed after the regular or 'formal' séance given earlier the same evening.

“Of transportation of objects without apparent cause we have had many examples, and under excellent conditions. The small table from the cabinet has repeatedly been placed on the séance table, when both Eusapia's feet were well controlled; and in several instances, when her feet had been tied with rope to the feet of her controllers, or to the rungs of her chair. On one occasion, the small table was slowly lifted out of the cabinet, beyond and round the left-hand curtain, in a light sufficiently good to *see* that the medium was not touching it. The table rose to a height of nearly four feet from the floor, rapped five times against the wooden partition, forming the 'wall' on that side of the room, turned upside down, and fell to the floor. It was between three and four feet from Eusapia at the time, and, as I have said, it was light enough to see that nothing was touching it. While this was in progress, both her hands were separately accounted for, and I was holding both her feet under the table in my hands.

“At nearly every one of our séances we have had one or more of the musical instruments played upon. The music-box has been played upon for several seconds together—the handle being turned twelve or fourteen times, to judge by the sound. Ample time was afforded for the controllers to ascertain that they were holding separate hands. The tambourine has been played upon for almost a minute—it being seen to play over the medium's head, then beyond the left-hand curtain; again over

the medium's head, over the head of the left-hand controller, again over the medium's head, again beyond the left curtain, and finally it was thrown to the floor in the cabinet. The small bell has repeatedly been rung for several seconds together—a hand being seen ringing it.

“One of the most remarkable manifestations, however, was the playing of the mandolin, on at least two occasions. The instrument sounded in the cabinet first of all—distinct twangings of the strings being heard, in response to pickings of Eusapia's fingers on the hand of one of her controllers. The mandolin then floated out of the cabinet, on to the séance table, *where, in full view of all, nothing touching it, it continued to play for nearly a minute*—first one string and then another being played upon. Eusapia was at the time in deep trance, and was found to be cataleptic a few moments later. Her hands were gripping the hands of her controllers so tightly that each finger had to be opened in turn—by the aid of passes and suggestion.

“At the second séance an incident occurred which cannot be explained by any normal means—even granting, for the sake of argument, that Eusapia had succeeded in releasing one hand; and as such incidents are rather rare, it should be recorded. One of the sitters was standing behind the right-hand controller, and about five feet from Eusapia. The medium seemed to be well controlled. Suddenly, immediately in front of this sitter, about on a level with his eyes, appeared in space the small flageolet, which had been placed on the table in the cabinet. (No one saw how it got into its present position; but there it was, suspended in space, about five feet from Eusapia, and certainly too far for her to have reached with her right hand, even had it been free, and had she been standing up.) As a matter of fact, however, her right hand was *not* free, and every one could see her *seated* in her usual place at the table. Here, then, we have an example of a phenomenon that could not have been produced by the medium's hand (even supposing it to be free), because the flageolet was seen to be far beyond her reach. It remained in this attitude long enough for Mr. B. to reach out his hand and take the flageolet—after his attention had been drawn to it. Certainly it remained suspended

in space for several seconds, without visible means of support.

“The hands and faces seen during our séances here were of the same general character as those seen at Naples. Some would appear to be fleecy, gaseous, evanescent; some, on the contrary, would seem to be perfectly solid and human, and, were it not for the fact that Eusapia’s hands were held securely, and frequently *seen* lying upon the table at the time, one would swear that they were her own hands and arms performing the ‘touchings.’ As it was, she appeared to develop a ‘third arm,’ which issued from her shoulder, and seemed to recede into it. There were one or two rather remarkable demonstrations of this. As before, ‘touchings’ were frequently experienced when nothing could be seen touching the sitter. On such occasions there was a clearly-lighted space between Eusapia and the sitter who received the touches. On the other hand, Eusapia’s ‘materialised’ hands frequently remained visible for several seconds together; and in one case a hand rested on the right controller’s back while she counted eleven.

“On one or two occasions, *faces* were seen by some of the sitters (I personally never saw one), and at another time an *entire form* was seen standing behind one of the sitters. On this occasion, the controller on the right had received a touch on his shoulder, and looking round saw a distinct form standing behind him. As he looked, the form slowly disintegrated and vanished—disappearing like a wisp of smoke into the cabinet. This process of ‘dematerialisation’ took several seconds.

“We have secured at least one print of ‘spirit fingers’ in clay, placed in the cabinet. It must be acknowledged that the conditions pertaining to this experiment were not evidentially perfect. It would be hard to say *why* not, as the controllers seemed satisfied throughout that they had constant control of the medium’s hands. Nevertheless, the impression did not induce in me a feeling of complete confidence. At the same time it must be acknowledged that we found it impossible, when experimenting after the séance, to imitate the marks we found on the clay. For, whereas the ‘spirit fingers’ were *smooth*, any impression made by our own fingers was rough—the fingers

pulling away some of the clay. The *texture* of the touch, so to say, was different. A photograph of this clay is given in my report on the American séances.

“We also obtained an imprint on a photographic plate, which had been wrapped in several thicknesses of black paper, and placed in the cabinet. It will be remembered that Professor Lombroso gave an example of this in his book *After Death—What?* p. 84 (Fig. 35). The phenomenon is of such rare occurrence that this new confirmation of the fact cannot fail to be of interest. The plate was provided by Dr. Frederick T. Simpson, of Hartford, Conn., who placed it in the cabinet. It was brought to New York wrapped, and taken out of Dr. Simpson’s bag just before the séance. When developed, the impression of three fingers was found on the plate. (An illustration of this is also given in my report.) There is no normal explanation of this fact, as every precaution was taken. The photographer who wrapped the plate took an impression of his own fingers later, and they are about three times the size of those upon the plate. Whatever their interpretation, they cannot be explained by normal means.

“Readers of our Naples Report will remember that, on one occasion, the rope fastening Eusapia’s left leg was untied. Mr. Feilding’s amusing comments on this incident will also be remembered. In one of our séances a white hand appeared, remained visible to all, and untied both Eusapia’s hands and one of her feet. [They had all been fastened with rope.] First of all, the left wrist was untied. Eusapia said that ‘it was not her fault,’ and asked to be tied up again. This was done, even more securely than before. A white hand then appeared, and untied the knots on both Eusapia’s wrists and her left ankle, coiled up the rope and threw it at one of the spectators. The whole operation took more than a minute, during which time, it need hardly be said, the controllers had ample time to verify their control, in response to my urgent and repeated entreaties to do so! The controllers on this occasion were well-known business men, extremely sceptical in the ordinary walks of life. They had to admit, however, that there was no doubt as to the reality of this phenomenon.

“Intelligent action has been shown on several occasions. Once, a gentleman seated to the left of Eusapia had his cigar-case extracted from his pocket, placed on the table in full view of all of us, opened, a cigar extracted, and placed between his teeth. It was light enough at the time to *see* that no one was touching the case, which was lying on the table.

“Incidents of this kind could be multiplied indefinitely. The shorthand reports of some of these séances read like fairy tales. On the other hand, of course, we had our bad séances. Some points of great theoretical interest have come up during this American series of sittings.

“To sum up the effects of these séances upon my own mind, I may say that, after seeing nearly forty séances, there remains not the shadow of a doubt in my mind as to the reality of the vast majority of the phenomena occurring in Eusapia Palladino's presence. And I refer not only to the table levitations, raps, and curtain phenomena, but to movements of objects without contact, playing upon musical instruments without apparent cause, and the ‘materialisation’ of hands and arms, which perform intelligent and complicated actions. It appears incredible to me that, inasmuch as I have had no difficulty, in the past, in seeing the *modus operandi* of fraudulent spiritualistic phenomena in one, or at most, two séances, that, after seeing thirty-six séances, I should be unable to detect the trick—if trick there were; and, further, that the oftener I saw the phenomena, the more convinced I became that *no* trick had been employed, and that the phenomena were genuine! I can but record the fact that further study of this medium has convinced me more than ever that our Naples experiments and deductions were correct, that we were not deceived, but that we did, in very truth, see præternormal manifestations of a remarkable character. I am as assured of the reality of Eusapia Palladino's phenomena as I am of any other fact in life; and they are, to my mind, just as well established.” (See Appendix C.)

PART II.—THE MENTAL PHENOMENA.

We have just presented a mass of material, selected from a much larger quantity, tending to show that the spirit of man is capable of producing certain material changes in the physical world. Although many of the phenomena seem to suggest some spiritistic interpretation, it may be said that the physical phenomena do not *prove* it; and more conclusive evidence will have to be forthcoming before we can definitely accept spiritism as a working hypothesis. We accordingly turn to the mental phenomena, to see whether any such evidence is forthcoming. We think that we are safe in asserting that the evidence now becomes very striking—even forcing some sort of acceptance of the facts, and necessitating an explanation of the observed phenomena. We propose in this section, therefore, to lay before the reader a summary of the most striking evidence so far obtained of the operation of an independent intelligence,—other than that of the medium,—possessing a mind, will, and memory of its own—in fact, all the attributes of a personality. Only by such evidence can the persistence of consciousness be proved. To this evidence we accordingly turn.

1. THE SUBLIMINAL CONSCIOUSNESS.

Whether or not the powers of the mind afford any evidence for the survival of the soul is a question that is much in dispute. Some authors, Professors Jastrow and Münsterberg, *e.g.*, claim that such faculties as we have good evidence for do not warrant any such conclusion; others—notably Myers—assert that they do—at least, if the reality of certain facts be admitted, for which

there is good evidence. In the marvellous powers of the subconscious mind—the “subjective mind” of Hudson, the “subliminal consciousness” of Myers—evidence is seemingly afforded that the human mind is not destined to assert its sway upon this earth alone. It is certain that, if powers are possessed by man for which there is no use, such powers would long ago have passed out of existence—the result of the selective process of evolution. If man’s mind, then, seems to possess faculties which are useless in this world, but which might possibly be of some use in some *other*, supersensible world, then surely, here is good evidence that the mind of man is not merely the result of terrene evolution, but is destined for higher things. The flashes of genius, the extraordinary powers manifested under hypnotic suggestion, especially the supernormal faculties of telepathy, clairvoyance, &c., are of practically no use in this life of ours, but are supposed to be the normal methods of communication in the next life. The extensive and accurate memory possessed by the mind—the “latent memory” that Sir William Hamilton so strongly insisted upon—is another indication that the mind is destined to utilise these thoughts and memories at some time in the future—*for otherwise why are they so carefully preserved?* Mr. Myers is, of course, the great apostle of this doctrine, having made it the central theme of his magnificent book, *Human Personality*. His conception is, perhaps, most clearly stated in the *Proceedings of the Society for Psychical Research*, vol. vii., p. 301. There he said:—

“I suggest, then, that the stream of consciousness in which we habitually live is not the only consciousness that is in connection with our organism. Our habitual or empirical consciousness may consist of a mere fraction from a multitude of thoughts and sensations, of which some at least are equally conscious with those that we empirically know. I accord no primacy to my

ordinary waking self, except that among my potential selves this one has shown itself the fittest to meet the needs of common life. I hold that it has established no further claim; and that it is perfectly possible that other thoughts, feelings, and memories, either isolated or in continuous connection, may now be actively conscious, as we say, 'within me'—in some kind of co-ordination with my organism, and forming some part of my total individuality. I conceive it possible that at some future time, and under changed conditions, I may recollect all; I may assume these various personalities under one single consciousness, in which ultimate and complete consciousness the empirical consciousness which at this moment diverts my hand may be only one element out of many."

As is well known, Myers thought that the powers of the subliminal consciousness were, in a way, good evidence for "survival"; however, as the point is so much in dispute, we will not press it unduly.

2. CLAIRVOYANCE.

The phenomena classed under the general head of *clairvoyance* are of peculiar interest, for our present purposes, in showing (apparently) the possibility of separation of soul and body. In many cases of induced mesmerism, what is called "travelling clairvoyance" results; that is, a state in which the mind of the mesmerised subject seems to be transported, or sent away on long journeys, at the end of which it is enabled to see certain events that are taking place and scenes that the subject has never beheld in the body. The following account by Professor De Morgan is a good example of this, which we quote somewhat in full:—

"I have seen a good deal of mesmerism, and have tried it myself on — for the removal of ailments. But this is not the point. I had frequently heard of the thing they called clairvoy-

ance, and had been assured of the occurrence of it in my own house, but always considered it as a thing of which I had no evidence, direct or personal, and which I could not admit until such evidence came.

“One evening I dined at a house about a mile from my own—a house in which my wife had never been at that time. I left it at half-past ten, and was in my own house at a quarter to eleven. At my entrance my wife said to me, ‘We have been after you,’ and told me that a little girl whom she mesmerised for epileptic fits (and who left her cured), and of whose clairvoyance she had told me other instances, had been desired in the mesmeric state to follow me to — Street, to —’s house. The thing took place at a few minutes after ten. On hearing the name of the street, the girl’s mother said :

“‘She will never find her way there. She has never been so far away from Camden Town.’

“The girl in a moment got there. ‘Knock at the door,’ said my wife. ‘I cannot,’ said the girl; ‘we must go in at the gate.’ (The house, a most unusual thing in London, stands *in* a garden; this my wife knew nothing of.) When she had been made to go in and knock at the door, or simulate, or whatever the people do, the girl said she heard voices upstairs, and being told to go up, exclaimed, ‘What a comical house! there are three doors,’ describing them thus (diagram given). (This was true, and is not usual in any but large houses.) On being told to go into the room from whence the voices came, she said, ‘Now I see Mr. De Morgan, but he has a nice coat on, and not the long coat he wears here; and he is talking to an old gentleman, and there are ladies.’ This was a true description of the party, except that the other gentleman was not *old*. ‘And now,’ she said, ‘there is a lady come to them, and she is beginning to talk to Mr. De Morgan and the old gentleman, and Mr. De Morgan is pointing at you and the old gentleman is looking at me.’ About the time indicated I happened to be talking to my host about mesmerism, and having mentioned what my wife was doing, or said she was doing with the little girl, he said, ‘Oh, my wife must hear this,’ and called her, and she came up and joined us in the manner described. The girl then proceeded to describe the room: stated

that there were two pianos in it. There was one (piano), and an ornamental sideboard, not much unlike a pianoforte to the daughter of a poor charwoman. There were two kinds of curtains, red and white, and curiously looped up (all true to the letter), and that there were wine and water and biscuits on the table. Now my wife, knowing that we had dined at half-past six, and thinking it impossible that anything but coffee could be on the table, said, 'You mean coffee.' The girl persisted, 'Wine, water, and biscuits.' My wife, still persuaded that it must be coffee, tried in every way to lead her witness and make her say *coffee*. But still the girl persisted, 'Wine, water, and biscuits,' which was literally true, it not being what people talk of under the name of a glass of wine and a biscuit, which means sandwiches, cake, &c., but strictly wine, water, and biscuits.

"Now all this taking place at twenty minutes after ten, was told to me at a quarter to eleven. When I heard that I was to have an account given, I said, 'Tell me all of it, and I will not say a word'; and I assure you that during the narration I took the most special care not to utter *one syllable*. For instance, when the wine, water, and biscuits came up, my wife, perfectly satisfied that it must have been coffee, told me how the girl persisted, and enlarged upon it as a failure, giving parallel instances of cases in which clairvoyants had been right in all things but one. Now all this I heard without interruption. Now that the things happened to me as I have described at twenty minutes after ten, and were described to me at a quarter to eleven, I could make oath. The curtains I ascertained the next day, for I had not noticed them. When my wife came to see the room she instantly recognised a door, which she had forgotten in her narrative.

"All this is no secret. You may tell whom you like and give my name. What do you make of it? Will the never-failing doctrine of *coincidence* explain it?"

We next give a case of spontaneous clairvoyance, in which a distant scene was apparently visited in a dream. The experience is recorded by Mrs. Alfred Wedgwood the daughter-in-law of Mr. Hensleigh Wedgwood, who

was an English savant of some reputation and the brother-in-law of Charles Darwin. The narrative is given in her own language:—

“I spent the Christmas holidays with my father-in-law in Queen Anne Street, and in the beginning of January I had a remarkably vivid dream, which I told to him the next day at breakfast.

“I dreamt I went to a strange house standing at the corner of a street. When I reached the top of the stairs I noticed a window opposite with a little coloured glass, short muslin blinds running on a brass rod. The top of the ceiling had a window veiled by gathered muslin. There were two small shrubs on a little table. The drawing-room had a bow-window, with the same blinds; the library had a polished floor, with the same blinds.

“As I was going to a child’s party at a cousin’s whose house I had never seen, I told my father-in-law that I thought that that would prove to be the house.

“On January 10, I went with my little boy to the party, and, by mistake, gave the driver a wrong number. When he stopped at No. 20, I had misgivings about the house, and remarked to the cabman that it was not a corner house. The servant could not tell me where Mrs. H. lived, and had not a blue-book. Then I thought of my dream, and as a last resource I walked down the street looking up for the peculiar blinds I had observed in my dream. These I met with at No. 50, a corner house, and, knocking at the door, was relieved to find that it was the house of which I was in search.

“On going upstairs, the room and windows corresponded exactly with what I had seen in my dream, and the same little shrubs in their pots were standing on the landing. The window in which I had seen the coloured glass was hidden by the blind being drawn down, but I learnt, upon inquiry, that it was really there.”

3. PHANTASMS OF THE DEAD.

As we have previously pointed out, apparitions that do not coincide either with any death or illness of the agent will have to contend with the objection that they are mere empty hallucinations; and we have to depend upon the content of the apparition, as it were, in order to establish the fact that they are anything more than the ordinary hallucinations with which we are familiar. When an apparition furnishes information previously unknown to the percipient, however, there is very fair evidence for the fact that an independent intelligence is operative; and if this bears upon the personal identity of the person deceased, there is evidence of a sort that he is there in reality—initiating, or in some way regulating, the observed phenomena. Mr. Myers, in his paper, "On Recognised Apparitions Occurring more than a Year after Death" (*Proceedings S.P.R.*, vol. vi., pp. 13–65), enumerated a number of cases of this character, and we quote one by way of illustration:—

"When my old friend, John F. Harford, who had been a Wesleyan lay preacher for half a century, lay dying, in June of 1851, he sent for me, and when I went to his bedside he said, 'I am glad you have come, friend Happerfield; I cannot die easy until I am assured that my wife will be looked after and cared for until she may be called to join me in the other world. I have known you for many years, and now want you to promise me to look to her well-being during the little time she may remain after me.' I said, 'I will do what I can, so let your mind be at rest.' He said, 'I can trust you,' and he soon after, on the 20th day of the month, fell asleep in the Lord. I administered his affairs, and when all was settled there remained a balance in favour of the widow, but not sufficient to keep her. I put her into a small cottage, interested some friends in her case, and I saw that she was comfortable. After a while Mrs.

Harford's grandson came, and proposed to take the old lady to his house in Gloucestershire, where he held a situation as schoolmaster. The request seemed reasonable. I consented, providing she was quite willing to go; and the young man took her accordingly. Time passed on. We had no correspondence. I had done my duty to my dying friend, and there the matter rested. But one night as I lay in bed wakeful, towards morning, turning over business and other matters in my mind, I suddenly became conscious that there was some one in the room. Then the curtain of my bed was drawn aside, and there stood my departed friend gazing at me with a sorrowful and troubled look. I felt no fear, but surprise and astonishment kept me silent. He spoke to me distinctly and audibly in his own familiar voice, and said, 'Friend Happerfield, I have come to you because you have not kept your promise to look to my wife. She is in trouble and in want.' I assured him that I had done my duty, and was not aware that she was in any difficulty, and that I would see about her first thing, and have her attended to. He looked satisfied and vanished from my sight. I awoke my wife, who was asleep at my side, and told her what had occurred. Sleep departed from us, and, on arising, the first thing I did was to write to the grandson. In reply he informed me that he had been deprived of his situation through persecution, and was in great straits, insomuch that he had decided on sending his grandmother to the Union. Forthwith I sent some money, and a request to have the old lady forwarded to me immediately. She came, and was again provided with a home and had her wants supplied. These are the circumstances as they occurred. I am not a nervous man; nor am I superstitious. At the time my old friend came to me I was wide awake, collected, and calm. The above is very correct, not overdrawn.

"G. HAPPERFIELD."

The case we are now about to give is a very complicated one, being a combination of apparitions, dreams, premonitions, and mediumistic phenomena. It was investigated at the time, and more or less vouched

for, by the Marquis of Bute, Dr. Ferrier, and Mr. Andrew Lang. Mr. Myers also took special pains to investigate the case, and interview Mrs. Claughton personally. He stated that she was "a widow living in good society, cheerful, active, has seen much of the world, and a good observer, being in no sense morbid or hysterical." In the original report, published in vol. xi. of the *Proceedings*, there are three long narratives signed by the gentlemen whose names are given above, and the case covers considerable space. Here we must be brief and summarise it, giving chiefly the facts bearing upon personal identity. The general description of the phenomena is as follows:—

"Mrs. Claughton visits a house reputed haunted. She there twice sees a phantasm that she is able to describe—the description suiting a deceased lady unknown to her who had lived in that house. There is external evidence to the fact that she twice saw this phantom and was greatly impressed. The phantom appeared to speak at some length, and made many statements of facts unknown to Mrs. Claughton. Some of these were such as could be verified, and were found correct. Others related to an expedition which Mrs. Claughton was enjoined to make to a village, here called Meresby, of which she had not previously heard. Certain persons whom she would find there were described by name and with other details. Certain incidents of her future journey thither were also described. Mrs. Claughton went to Meresby, and found all as foretold. She there received (as had also been foretold) additional communications, and she then obeyed certain orders as to the communication of facts to survivors. That she made the journey, and certain subsequent visits, is proved by external evidence."

Mrs. Claughton's first experience was as follows:—Living in a house she knew to be haunted, she was awakened one night by footsteps of a person coming downstairs. The steps stopped at the door. The sounds

were repeated twice more at an interval of a few moments. Mrs. Claughton rose, lit the candle, and opened the door. There was no one there. She noticed the clock outside was 1.20. She shut the door, got into bed; read, and, leaving the candle burning, went to sleep. Woke up, finding the candle spluttering out. Heard a sound like a sigh. Saw a woman standing by the bed, she had a soft white shawl around her shoulders, held by the right hand towards the left shoulder, bending slightly forward. She said, "Follow me." Mrs. Claughton rose, took the candle, and followed her out of the room, across the passage, and into the drawing-room. She had no recollection as to opening the doors. The housemaid, next day, declared that the drawing-room door had been locked by her. On entering the drawing-room, Mrs. Claughton, finding the candle on the point of extinction, replaced it with a pink one from the chiffonier near the door. The figure went nearly to the end of the room, turned three-quarters round, said, "To-morrow," and disappeared. Mrs. Claughton returned to the bedroom, where she found the elder child (not the one in bed) sitting up. It asked, "Who is the lady in white?" Mrs. Claughton thinks she answered the child, "It is only me—mother; go to sleep," or the like words, and hushed her to sleep in her arms. The baby remained fast asleep. She lit the gas, and remained awake for some two hours, then put out the light and went to sleep. Had no fear while seeing the figure, but was upset after seeing it. Would not be prepared to swear that she had not walked in her sleep. Pink candle partly burnt in her room next morning. Does not know if she took it burnt or new.

The next night the figure again appeared to Mrs. Claughton. The latter was sitting up dressed, with the gas burning. She (the figure) bent down over Mrs. Claughton,

made a certain statement, and asked Mrs. Claughton to do certain things. Mrs. Claughton said, "Am I dreaming, or is it true?" The figure said, "If you doubt me you will find that the date of my marriage was. . . ." The date of a marriage in India was then given, which Mrs. Claughton was able to verify the following Thursday from Dr. Ferrier. After this Mrs. Claughton saw a man standing on Mrs. B.'s left hand, tall, dark, well-made, healthy, sixty years old or more, ordinary man's clothes, kind, good expression. A conversation ensued between the three, in the course of which the man stated himself to be George Howard, buried in Meresby churchyard (Mrs. Claughton had never heard of Meresby nor of George Howard), and gave the date of his marriage. These dates and entries in Mrs. Claughton's pocketbook were seen and verified by Mr. Myers. He, Howard, desired Mrs. Claughton to go to Meresby and verify these dates from the registers, and, if found correct, to go to the church at 1.15 A.M. and wait at the grave therein of Richard Hart. When Mrs. Claughton had done all this she should hear the rest of the history. Towards the end of the conversation Mrs. Claughton saw a third phantom. The three then disappeared. Time, 1.20 A.M.

Next day Mrs. Claughton found that Meresby existed, but took no steps to go there. Friday night Mrs. Claughton dreamt that she arrived at five, after dusk, and that a fair was going on. The next day she missed the proper train, and did *not* arrive in Meresby until dusk. She found and interviewed Joseph Wright, whom George Howard had described. She also verified dates in registers. After that she slept, and had a dream of a terrifying character, whereof has full written description. Dark night, hardly any moon, a few stars. To church with Joseph Wright, 1 A.M., with whom searched the interior, and found it empty. At 1.20 was locked in

alone, having no light; had been told to take Bible, but had only church service, which she had left in the vestry in the morning. Waited near grave of Richard Hart. Felt no fear. Received communication, but does not feel free to give any detail. No light. History begun at Blake Street then completed. Was directed to take another white rose from George Howard's grave, and give it personally to his daughter. About 1.45 Joseph Wright knocked, and let Mrs. Claughton out. Picked rose, and sent as directed. Home, to bed, and slept well for the first time since seeing first apparition. When delivering rose to daughter recognised strong likeness to her father—apparition previously seen. The wishes expressed to her were not illogical nor unreasonable, as dreams often appear, but clear, connected, and of natural importance.

4. HAUNTED HOUSES.

We have seen from the foregoing that there are numerous cases on record in which apparitions, both of the living and of the dying, have appeared to friends and relatives at great distances, at times coinciding with either the illness or the death of the person whose presence the figure represented. In such cases it was generally possible to trace the time-connection between the apparition seen and the bodily or mental illness of the agent; and, in that manner, we were enabled definitely to ascertain that there is some time-connection between the two events—either due to chance or to some causal agency. When, however, we turn to phantasms of the dead, we have no such time-connection to guide us, for the reason that we are enabled to see, as it were, only one end of the line; and although the agent, in these cases, might be actively endeavouring to impress the

thoughts of his living friend, we have no definite *proof* of the fact; and all such cases must consequently be treated as simple hallucinations, unless additional external evidence be forthcoming of the reality of the figure seen, or its cause. Now, in cases of *haunted houses*, we have apparent instances of "localised" apparitions—where the haunting is connected, that is, with some *locality* rather than with some *person*; and in the majority of such cases, every person visiting that locality (at least, every one who is at all sensitive), sees the figure, or hears sounds, similar to those experienced by others.

There are certain facts which, if established, would indicate that some external intelligence is at work in such cases, and that they are not mere empty hallucinations. Some such proofs would be the following:—(1) That the *same* figure was seen by several persons at the same time, and described by them in identical language. (2) That several persons in succession, each individually, saw the same figure in the same locality. (3) Cases in which a figure has been seen, and the features distinguished, but unrecognised at the time; later, however, the seer has been enabled to identify the apparition as a former occupant of the house by selecting a photograph of that person from among a number shown him.

Let us now briefly summarise one or two cases of this character, in order that the reader may form some idea of the nature of the evidence, before turning to the theoretical explanation. One most interesting case of this kind is published in *Proceedings of the Society for Psychical Research*, vol. viii., pp. 311–32, entitled, "The Record of a Haunted House." In this case Miss Morton, who drew up the report, saw a figure many times in the house, and heard its footsteps. Either figure or footsteps were also seen or heard by her sister Mrs. K.,

the housemaid, her brother, and another little boy, who were playing outside, her sister E., her sister M., Miss Campbell, W. H. C. Morton, F. M. K., Mrs. Brown, Mrs. Twining, and others. Sometimes a number of these witnesses would hear the footsteps of the phantom *at the same time*—generally at night—and open their doors leading into the hall simultaneously. Miss Morton herself was a very calm and careful investigator. Not only did she endeavour to ascertain any normal cause for these phenomena, but she experimented in every way possible along psychical lines. For instance, she, on several occasions, fastened fine strings across the stairs at various heights, before going to bed, but after all others had gone up to their rooms. They were fastened in such a manner that the slightest touch would displace them, but yet would be quite invisible at night. Speaking of this test, she says: “I have twice, at least, seen the figure pass through the cords leaving them intact.” She also saw the figure disappear several times; saw it walk through doors that were shut, and on several occasions, when trying to touch or grasp the figure, found that it invariably evaded her clutch. There is also strong evidence of the peculiar behaviour of dogs and other animals while in this house. Thus:—

“Twice I remember seeing this dog suddenly run up to the mat at the foot of the stairs in the hall wagging his tail, and moving his back in the way dogs do when expecting to be caressed. It jumped up, fawning, as it would do if a person had been standing there, but suddenly slunk away with its tail between its legs and retreated, trembling, under the sofa.”

A case of remarkable interest is that investigated by Miss X., and to which she devoted a whole book, entitled, *The Alleged Haunting of B—— House*. Miss X., who is highly sensitive, and herself a psychic, spent several weeks

in this house, keeping throughout a minute diary of all events of interest. The first night Miss X., and Miss Moore, her friend, were awakened by a sound which they described as metal struck with wood. The vision called up before the mind by the sound was that of "a long metal bar struck at intervals with a wooden mallet." It will be seen from this description that the sound was by no means small in volume; and, in fact, both Miss X. and her friend, as well as the servants, were instantly awakened by it. The next night the sound as of a man reading aloud was heard. These sounds continued in frequency and in violence for some time; and, a little later on, figures, mostly of nuns, were seen by Miss X., and other inhabitants of the house. Animals also saw the figures in this case, and on some occasions the dog would "point" and run to the figure, expecting to be caressed upon reaching it—only to find nothing there,—when it would immediately signify its astonishment by prolonged barking and howling. The inmates of the house tried on several occasions to imitate the sounds which they heard, by striking the pipes, knocking the fire-irons together, knocking upon the roof, &c. But in no case could they make as much noise as the haunting influence made each night! Many attempts were made at automatic writing and at crystal gazing, during the occupancy of the house, but with no very definite results. Many spontaneous phenomena of great interest occurred, however, of which the following is a sample:—

"I had an experience this morning which may have been purely subjective, but which should be recorded. About 10 A.M., I was writing in the library, face to light, back to fire. Mrs. W. was in the room, and addressed me once or twice; but I was aware of not being responsive, as I was much occupied. I wrote on, and presently felt a distinct, but gentle push against my chair. I thought it was the dog, and looked down, but he was

not there. I went on writing, and in a few minutes felt a push, firm and decided, against myself, which moved me on my chair. I thought it was Mrs. W., who, having spoken and obtained no answer, was reminding me of her presence. I looked backward with an exclamation—the room was empty. She came in directly, and called my attention to the dog, who was gazing intently from the hearth-rug at the place where I had expected (before) to see him.”

The end of the stay in this house was quite unpleasant. The phenomena, it is true, became less frequent, and less aggressive, as the weeks went by, but Miss X. was forced to write on May 3rd :—

“The general tone of things is disquieting, and new in our experience. Hitherto, in our first occupation, the phenomena affected one as melancholy, depressing, and perplexing, but all now, quite independently, say the same thing,—that the influence is evil and horrible,—even poor Spooks (dog) was never terrified before, as she has been since our return here. The worn faces at breakfast are really a dismal sight” (p. 210).

Many cases of a like nature could be cited, but space does not permit. It is evident to any impartial student of the records that supernormal phenomena *do* undoubtedly occur in haunted houses, and the question narrows itself down to their *interpretation*. The supernormal nature of the facts once granted, this question becomes one of deep interest.

Various theories have been advanced from time to time to explain these facts. Some have thought that a sort of atmosphere exists in and about a house of this nature, permeating it as its physical atmosphere might, and affecting the minds and senses of all inhabitants of that house, sensitive enough to perceive this influence. Others have thought that the figures seen represented

actual spiritual forms or bodies (which is the popular interpretation of the facts). Still others have contended that thought-transference between the living would account for these phenomena, the first percipient experiencing a simple hallucination (subsequent figures representing, on this theory, but a recurrence of the hallucination), and when this tenant moved, and others took his place, the phantom would be handed on, as it were, by telepathy, from the original occupant! A fourth class of thinkers holds that a species of telepathy from the dead is the best hypothesis to explain the facts. On this theory we have the analogies of hallucination and telepathy to guide us: the figure would be an hallucination, and have no external existence, any more than do the figures in a feverish dream; but it was initiated, nevertheless, by some external source or mind, and for that reason cannot be classed as purely *subjective*. Telepathy from the mind of the dead person would explain many of the facts, but it is very doubtful if it would explain them *all*. In view of the evidence we have presented for the existence of a spiritual, or ethereal, or semi-material body, it is to many of us far easier to conceive that real entities are operative within the house than to imagine any such complicated hypothesis. The fact that various figures are seen; the fact that animals behave in the manner they do, in such houses; the fact that on some occasions it is reported that two independent witnesses have seen the same figure from a different angle, and described it as they would, if they were viewing a real figure—all this would seem to indicate that some ethereal body is present in at least some instances. What the final verdict may be on cases of this character it is hard to say. The only thing that remains definite and clear is that all cases of haunted houses should be investigated carefully by trained

experts, and the results impartially recorded. Were this done, we might hope that, in the course of three or four hundred years, some definite progress would be made in this field of research!

5. PLANCHETTE WRITING.

The case we are about to give is reported by Mr. Hensleigh Wedgwood (the cousin and brother-in-law of Charles Darwin, and himself a well-known savant), and the automatic writing was obtained through the instrumentality of his own wife. It comes, therefore, from an exceptionally authentic source, and, no matter how we may choose to interpret these facts, the *bona fides* of the witnesses can hardly be questioned.

Planchette Writing in the Normal State.

This case appeared originally in the *Journal of the Society for Psychological Research*, but was reprinted in the *Proceedings*, vol. ix., pp. 93-7. It runs as follows:—

“‘A spirit is here to-day who we think will be able to write through the medium. Hold very steady, and he will try to draw.’

“We turned the page, and a sketch was made, rudely enough of course, but with apparent care.

“‘Very sorry can’t do better. Was meant for test. Must write for you instead.—J. G.’

“We did not fully understand the first drawing, taking it for two arms and hands clasped, one coming down from above. Mr. Wedgwood asked the spirit of J. G. to try again, which he did.

“Before the drawing he wrote: ‘Now look.’ We did, and this time comprehended an arm and sword.

“‘Now I will write for you if you like.’

“Mr. W.: ‘What did the drawing represent?’

“‘Something that was given me.’

“I said, ‘Are you a man or a woman?’

“‘Man, John G.’

“Mr. W.: ‘How was it given to you?’

“‘On paper and other things. My head is bad from the old wound I got there when I try to write through mediums.’

“Mr. W.: ‘We don’t know J. G. Have you anything to do with us?’

“‘No connection.’

“Mr. W. said he knew a J. Giffard, and wondered if that was the same.

“‘Not Giffard. Gurwood.’

“Mr. W. suggested that he had been killed in storming some fort.

“‘I killed myself on Christmas Day, years ago. I wish I had died fighting.’

“‘Were you a soldier?’

“‘I was in the army.’

“‘Can you name what rank?’

“‘No, it was the pen that did for me, and not the sword.’

“The word *pen* was imperfectly written, and I thought it was meant for *fall*. I asked if this was right?

“‘No.’

“Mr. W.: ‘Is the word *pen*?’

“‘Yes, pen did for me.’

“We suggested that he was an author who had failed, or had been maligned.

“‘I did not fail. I was not slandered. Too much for me after . . . pen was too much for me after the wound.’

“‘Where were you wounded, and when did you die?’

“‘Peninsula to first question.’

“We were not sure about the word Peninsula, and asked him to repeat.

“‘I was wounded in the head in Peninsula. It will be forty-four years next Christmas Day since I killed myself. Oh, my head . . . I killed myself. John Gurwood.’

“‘Where did you die?’

“‘I had my wound in 1810. I cannot tell you more about myself. The drawing as a test.’

“ We asked if the device was intended for his crest.

“ ‘ I had it, seal.’

“ ‘ Had it anything to do with your wound?’

“ ‘ It came from that, and was given me. Power fails to explain. Remember my name. Stop now.’ ”

Later, the following was obtained :—

“ ‘ Sword—when I broke in, on the table with plan or fortress—belonged to my prisoner; I will tell you his name to-night. It was on the table when I broke in. He did not expect me; I took him unawares. He was in his room, looking at a plan, and the sword was on the table. Will try and let you know how I took the sword to-night.’

“ In the evening after dinner :—

“ ‘ I fought my way in. His name was Banier’ (three times repeated). ‘ The sword was lying on the table, by a written scheme of defence. Oh, my head! Banier had a plan written out for the defence of the fortress. It was lying on the table, and his sword was by it.’

“ To a question: ‘ Yes; surprised him.’

“ Now, when these facts came to be verified, the following was found. None of those having their hands on the board knew anything whatever about these facts, and considerable letter-writing had to be gone through, in order to verify them.

“ When I came to verify the message of the planchette, I speedily found that Colonel Gurwood, the editor of the Duke’s despatches, led the forlorn hope at the storming of Ciudad Rodrigo, in 1812, and received a wound in the skull from a musket ball which affected him for the remainder of his life. In recognition of the bravery shown on that occasion he received a grant of arms in 1812, and the Duke of Wellington presented him with the sword of the Governor, who had been taken prisoner by Captain Gurwood.

“ The services thus specified were symbolised in the crest, ‘ Out of a mural coronet, a castle ruined in the centre, and therefrom an arm in armour embowed, holding a scimitar.’

“ In accordance with the assertion of the planchette, Colonel Gurwood killed himself on Christmas Day, 1845, and the

Annual Register of that year, after narrating the suicide, says: 'It is thought that this laborious undertaking (the editing the despatches) produced a relaxation of the nervous system and consequent depression of spirits. In a fit of despondency the unfortunate gentleman terminated his life.'

In such a case as the above, the absurdity of attempting to explain the facts by any theory of telepathy should be apparent. There is only one rational explanation of the incident,—if we rule out conscious fraud, as we must in this case, owing to the high social position of the recorders. That explanation is spiritism.

6. THE CASE OF MRS. PIPER.

The primary question that concerns us in this place is the truth of *personal identity*—since only in that manner can persistence of consciousness, or what is usually known as "the immortality of the soul," be proved. In order that the reader may understand the problem aright, it is necessary for him to realise, first of all, the position and strength of materialism. That doctrine tells us that consciousness is a mere function or product of brain-activity, and that, when this organ ceases to function, consciousness must come to an abrupt termination—as, of course, would be the case at death. Just as digestion, circulation, secretion, &c., do not continue after the disintegration of the organs upon which these functions depend; so, it is contended, consciousness cannot persist after the destruction of the brain—upon the functional activity of which *it* depends. Consciousness, in short, is supposed to be intimately bound up with nervous activity, and with the nervous system, and there is no evidence, it is claimed, for the activity or persistence of any consciousness, except in connection with such nerve activity. And, outside of

the facts classed under the general heading of psychic research, it will be seen that there is no such evidence—at least none that would appeal to the scientific man. To those who are content to rely upon faith, or to whom any of the arguments we have advanced appeal as sufficiently conclusive to warrant belief in survival, we have, of course, no further word to say. But there are a large number of critics—and among these may be classed most scientific men—who feel that such evidence is *not* conclusive, and that facts will have to be adduced, answering the position of materialism, if that doctrine is ever to be overthrown. It will be seen at once that the only way to meet this objection is to produce such facts; and they consist, primarily, in proofs of the fact that an individual consciousness—one known to us previously, let us say—does continue to exist after the death of the body. The evidence desired in order to prove this, and the *only* evidence that ever will prove it, is the establishment of the identity of the deceased person; and it will be seen that this can only be done by obtaining specific facts and details from that consciousness, which were known to it when alive, but which were presumably in the possession of no *other* consciousness. If we could get in touch, directly or indirectly, with what claimed to be such a consciousness, therefore, and it could produce for us certain facts known only to it when alive (which facts we were enabled afterwards to verify), then we should have fairly good evidence for the belief that such an individual intelligence was operative in the case before us. When once the facts pass beyond the limits of chance, guessing, inference, telepathy, and clairvoyance, and when the honesty of the medium has been proved, there would seem to be no other alternative than to accept the doctrine of spiritism, as at least a thinkable and working hypothesis. Now let us see what the facts

are that have been obtained by investigations of this nature.

The most famous medium through whom we have obtained messages of this character is Mrs. Piper—well known to all students of psychic research. We shall summarise a small part of the evidence that has been obtained through the instrumentality of this medium—after first describing the conditions under which the communications are received.

Mrs. Piper passes into trance (the reality of which has been attested frequently by physicians and others), in which state she remains for about two hours. (See Appendix D.) During that time the voice speaks, or more frequently the hand writes—the *content* of the message being, it will be seen, the problem to be solved in this case, and not the *method* of its production. The writing is read at the time by the sitter, who asks questions of the medium's hand (not ear), which comes up to his mouth for the purpose. When this hand converses with a spirit, so-called, it is raised into space, and is extended at arm's length, slightly elevated. The hand then comes down, and writes upon a pad of paper the information that is received. In this manner the messages are obtained.

The First English Experiments.

Mrs. Piper was taken to England in November 1889, so that the group of eminent investigators in that country—Sir Oliver Lodge, Professor Walter Leaf, Professor Henry Sidgwick, Mr. F. W. H. Myers, and others—might test the powers that had proved so mystifying to American students of psychical research. As Mr. Myers says, every precaution was taken to make fraud impossible:—

“Professor Lodge met her on the Liverpool landing-stage, November 19, and conducted her to a hotel, where I joined her

on November 20, and escorted her with her children to Cambridge. She stayed first in my house; and I am convinced that she brought with her a very slender knowledge of English affairs and English people. The servant who attended on her and on her two young children was chosen by myself, and was a young woman from a country village, whom I had full reason to believe to be trustworthy, and also quite ignorant of my own or my friend's affairs. For the most part I had myself not determined upon the persons whom I would invite to sit with her. I chose these sitters in great measure by chance; several of them were not residents in Cambridge; and, except in one or two cases where anonymity would have been hard to preserve, I brought them to her under false names—sometimes introducing them only when the trance had already begun.”

In the report made by Sir Oliver Lodge, a description of the precautionary measures adopted at other times is given.

“Mrs. Piper's correspondence was small,” he says, “something like three letters a week, even when the children were away from her. The outsides of her letters nearly always passed through my hands, and often the insides, too, by her permission.

“The servants were all, as it happened, new, having been obtained by my wife through ordinary local inquiries and registry offices, just about the time of Mrs. Piper's visit. Consequently they were entirely ignorant of family connections, and could have told nothing, however largely they had been paid. The ingenious suggestion has been made that they were her spies. Knowing the facts, I will content myself with asserting that they had absolutely no connection with her of any sort. . . .

“In order to give better evidence, I obtained permission, and immediately thereafter personally overhauled the whole of her luggage. Directories, biographies, *Men of Our Time*, and such-like books were entirely absent. In fact, there were scarcely any books at all. . . . Strange sitters frequently arrived at

11 A.M., and I admitted them myself straight into the room where we were going to sit; they were shortly after introduced to Mrs. Piper under some assumed name."

Although the report specifies other similar methods that were adopted to anticipate, and, if possible, prevent fraud, these are sufficient to indicate that the tests received, such as they were, are of some value from an evidential point of view.

At the first sitting with Sir Oliver Lodge, Mrs. Piper gave a correct description of Mrs. Lodge's father, but the name was incorrectly given as "Uncle William," a mistake that was subsequently rectified. An "Aunt Ann" was also described correctly, both as to her personal appearance and characteristics. The name was also given, and the fact was mentioned that she had been the one to care for Professor Lodge after the death of his mother. Professor Lodge was also asked if he still possessed "the little old-fashioned picture of her, on a small card," and she seemed pleased when he said that he had kept it. She also announced that she was now caring for Professor Lodge's child, who had died when very young (a fact that Mrs. Piper may or may not have known), but the failure to state the sex of this child correctly at the first attempt throws the shadow of doubt upon the test. The immediate cause of "Aunt Ann's" death was also given incorrectly.

At the second sitting Mrs. Lodge's father again professed to appear, although he seemed to find great difficulty in making himself clear. At last Phinuit took the matter in hand:—

"'He says,' said the control, 'you have got something of his. He says if you had this it would help him. . . . It's a little ornament with his hair in it.' Mrs. Lodge immediately recognised the ornament referred to. It was a locket containing some strands of hair, but she had never known whose hair it

contained. Upon the appearance of the locket it was identified, and the statement was made that it had been given by the father to Mrs. Lodge's mother. The name 'Alexander' was given as that of the father. Both statements were correct. After some rather rambling statements, Phinuit took affairs in his own hands again. 'He had an illness and passed out with it,' said the control. 'He tried to speak to Mary, his wife, and stretched out his hand to her, but couldn't reach, and fell and passed away. That's the last thing he remembers in this mortal body.'"

It was also stated that he had had trouble with his right leg; that it was due to a fall; that it was below the knee; and that it gave him pain sometimes. In describing him further, Phinuit stated that he had much trouble with his teeth; that he travelled a great deal; and wore a uniform with "big bright buttons" on it.

All these statements were absolutely correct. He had been a captain in the merchant service, and, as the natural consequence, travelled almost continuously. There *were* big bright buttons on his uniform. On one of his trips he had fallen down the hold and broken his right leg below the knee, and this sometimes pained him severely. He also suffered severely from toothache; and the facts attending his death were very accurately described.

Inquiries were made regarding "Uncle William," whose name had first been given instead of that of the father, and Phinuit announced:—

"'Never saw a spirit so happy and contented. He was depressed in life—had blues like old Harry, but he's quite contented now. He had trouble there [prodding himself in lower half of the stomach, and me over bladder]. Trouble there, in bowels or something. Had pain in head; right eye funny. Pain down here, abdomen; stoppage urine. Had an operation, and after it was worse, and with it passed out.'"

Although the name of "Uncle William" was given at the first sitting, it was not until a subsequent occasion

that the full name, William Tomkinson, was produced. It was then stated that he was an old man with white hair and beard, and the trouble with the bladder was again insisted upon. In verification of these facts, Professor Lodge says that he used to have just such severe fits of depression as Phinuit described: "His right eye had a droop in it. He had stone in bladder, great trouble with urine, and was operated on towards the end by Sir Henry Thompson."

At the second sitting Mrs. Lodge's father's name was given in full, "Alexander Marshall," with more particulars concerning the injury to his leg by a fall "through a hole in the boat." Mention was also made to "two Florences," with the information that one painted and the other did not; that one was married and the other was single, and that it is "the one who doesn't paint who is married." This was true, as Professor Lodge had two cousins of the name of Florence, and the description fitted exactly. Phinuit continued, however, by saying that the married cousin had a friend named "Whiteman," who had something the matter with her head. As this information was unintelligible to all the sitters, Professor Lodge wrote to this cousin and learned that the lady's friend was "Whytehead," but that, so far as known, she was in good health. Apparently the "head trouble" was a confusion resulting from the termination of the name.

In the course of these sittings Professor Lodge and others received several communications indicating supernatural knowledge of earthly affairs. Some were of too personal a nature to be given to the public. At one sitting, however, a gentleman (Mr. G. H. Rendall) was introduced as "Mr. Roberts." During the experiment he placed a locket in Mrs. Piper's hand—a locket containing a miniature head of a first (step) cousin, named "Agnes," who had died of consumption in 1869. This picture was

faced by a ring of hair, but, as the locket remained closed, there was no ordinary way in which Mrs. Piper could have ascertained these facts. Instantly Phinuit announced that the object was associated with an old friend, and the name "Alcese" was given, incorrectly, of course, although the pronunciation is explained by the fact that this control, assuming to be a French physician, frequently spoke with a French accent. When he was informed that he had made a mistake in the name, he excused himself by saying that "It is the cough she remembers—she passed out with a cough," and he immediately gave the name as "Agnese," nor was he able to give a better interpretation, even using the name "Anyese" during the remainder of the sitting. While much of the information given was of a character that could not be regarded as particularly evidential, he gave a number of facts that were surprisingly correct. Thus, he announced that "She's got greyish eyes and brown hair"; "she passed out with a cough"; "when she passed out she lost flesh, but she looks better now—looks more like the picture you have in here" (indicating the locket), "rather fleshier." Then he added: "There was a book, when she was in the body, connected with you and her—a little book and some verses in it." And, finally, "That's her hair in there" (pointing to the locket again).

As a matter of fact every statement was practically correct, even in regard to "the book," for Mr. Rendall had, as a keepsake, her "Roundell Palmer's *Book of Praise*." There was some confusion and error in the subsequent communications, with a few facts of evidential value, the particulars of which may be found in Sir Oliver Lodge's reports.

The most important experiment, however, occurred at one of the early sittings. It is quoted entire:—

“It happened that an uncle of mine in London, now quite an old man, and one of a surviving three out of a large family, had a twin brother who died twenty or more years ago. I interested him generally in the subject, and wrote to ask if he would lend me some relic of this brother. By morning post on a certain day I received a curious old gold watch which this brother had worn and been fond of; and that same morning, no one in the house having seen or knowing anything about it, I handed it to Mrs. Piper when in a state of trance.

“I was told almost immediately that it had belonged to one of my uncles—one that had been mentioned before as having died from the effects of a fall—one that had been very fond of Uncle Robert, the name of the survivor—that the watch was now in possession of this same Uncle Robert, with whom he was anxious to communicate. After some difficulty and many wrong attempts, Dr. Phinuit caught the name Jerry, short for Jeremiah, and said emphatically, as if a third person was speaking: ‘This is my watch, and Robert is my brother, and I am here. Uncle Jerry, my watch.’ All this at the first sitting on the very morning the watch had arrived by post, no one but myself and a shorthand clerk, who happened to have been introduced for the first time at this sitting by me, and whose antecedents are well known to me, being present.

“Having thus got ostensibly into communication through some means or other with what purported to be a deceased relative whom I had, indeed, known slightly in his later years of blindness, but of whose early life I knew nothing, I pointed out to him that to make Uncle Robert aware of his presence it would be well to recall trivial details of their boyhood, all of which I would faithfully report. He quite caught the idea, and proceeded during several successive sittings ostensibly to instruct Dr. Phinuit to mention a number of little things such as would enable his brother to recognise him. Reference to his blindness, illness, and main facts of his life were comparatively useless from my point of view; but these details of boyhood two-thirds of a century ago were utterly and entirely out of my ken. My father was one of the younger members of the family, and only knew these brothers as men.

“ ‘Uncle Jerry’ recalled episodes such as swimming the creek when they were boys together, and running some risk of getting drowned ; killing a cat in Smith’s field ; the possession of a small rifle and of a long peculiar skin, like a snake-skin, which he thought was now in the possession of Uncle Robert.

“ All these facts have been more or less completely verified. But the interesting thing is that this twin brother, from whom I got the watch, and with whom I was in a sort of communication, could not remember them all. He recollected something about swimming the creek, though he himself had merely looked on. He had a distinct recollection of having had the snake-skin, and of the box in which it was kept, though he does not know where it is now. But he altogether denied killing the cat, and could not recall Smith’s field.

“ His memory, however, is decidedly failing him, and he was good enough to write to another brother, Frank, now living in Cornwall, an old sea captain, and ask him if he had any better remembrance of certain facts, of course not giving any inexplicable reason for asking. The result of this inquiry was triumphantly to vindicate the existence of Smith’s field as a place near their home, where they used to play, in Barking, Essex ; and the killing of the cat by another brother was also recollected ; while of the swimming of the creek, near a mill-race, full details were given, Frank and Jerry being the heroes of that foolhardy episode.

“ Some of the other facts given I have not been able to get verified. Perhaps there are as many unverified as verified. And some things appear, so far as I can make out, to be false. One little thing I could verify myself, and it is good, inasmuch as no one is likely to have had any recollection, even if they had any knowledge, of it. Phinuit told me to take the watch out of its case (it was the old-fashioned turnip variety), and examine it in good light afterwards, and I should see some nicks near the handle, which Jerry said he had cut into it with his knife.

“ Some faint nicks are there. I had never had the watch out of the case before, being, indeed, indeed, careful neither to finger it myself nor to let any one else finger it.

“ I never let Mrs. Piper in her waking state see the watch till quite towards the end of the time, when I purposely left it lying

on my desk while she came out of the trance. Before long she noticed it, with natural curiosity, evidently becoming conscious of its existence for the first time."

The Sittings of Dr. Leaf.

On the occasion of this visit to England, several sittings were given under the supervision of Dr. Walter Leaf. At these experiments similar precautions were taken, a full description of which are given in Dr. Leaf's report. While some of the communications that were obtained evidenced a knowledge of personal matters that were certainly foreign to Mrs. Piper's conscious intelligence, all tests are here excluded, with the exception of those that indicate the appearance of a separate individuality. As none of these experiences were so convincing as those that contributed to the success of Sir Oliver Lodge's sittings, it will be unnecessary to describe them with so much attention to detail.

On one occasion, when Dr. Leaf and a Mr. Clarke had withdrawn from the room, leaving Mrs. Piper with Mrs. Clarke, Phinuit mentioned that a cousin of Mrs. Clarke was present. He then continued:—

"“There was something the matter with his heart and with his head. He says it was an accident. He wants me to tell you it was an accident. He wants you to tell his sisters. There's M. and E., they are sisters of E. And there is their mother. She suffers here (pointing to abdomen). E. told me. His mother has been very unhappy about his death. He begs you for God's sake to tell them that it was an accident—that it was his head—that he was hurt there (making motion of stabbing heart); that he had inherited it from his father. His father was off his mind—you know what I mean—crazy. But the others are all right and will be.”"

In a note that follows Mrs. Clarke says:—

"A striking account of my uncle's family in Germany. The

name and facts are all correct. The father was disturbed in his mind for the last three years of his life in consequence of a fall from his horse. The son committed suicide in a fit of melancholia, by stabbing his heart, as described. . . . The most important events—my uncle's . . . death and my cousin's suicide . . . were known to only two persons in England besides my husband."

The most interesting, if not the most important communication, occurred at another sitting.

" 'Here's M.,' exclaimed Phinuit, 'not the M. who hurt her ankle, but—another. She is your aunt. . . . She is in the spirit. . . . She is here and wants to speak to you.' 'What does she say about her husband?' Mrs. Clarke asked. 'She says he has changed his life since. She does not like it that he married again . . . she does not like him to have married again so soon. He married her sister. Two brothers married sisters. Her husband has children now. There are two boys. And there are Max and Richard, or Dick, as they call him; they are with your uncle's children. Now what do you think of this? Don't you think I can tell you many things? You just ask me anything you like and I'll tell you. . . . Shall I tell you how you ran away (chuckling) with that man—that boy, I mean. You were a little devil to do that. It worried your mother almost to death.' "

In her notes Mrs. Clarke explains these disclosures:—

"This is an accurate description of the family of another uncle. His wife died childless, and he soon after married her sister, by whom he had children. His brother had previously married a third sister.

"When five years old I rambled off with two boys, staying hours away from home, an event which in my family is jestingly referred to as my running away."

At a sitting at which Mr. F. W. H. Myers was present, Phinuit said, speaking to Mr. Myers:—

" 'Timothy is the nearest spirit you have got to you; some call

him Tim; he is your father. Timothy was your grandfather also. Your father tells me about S. W.—stay, I can't get that—I must wait. Your mother had trouble in the stomach; she is in the spirit world. Your father had trouble in heart and head.' Myers' father passed away from disease of the heart."

It is stated in an explanatory note that, "except the allusion to 'S. W.,' which is not recognisable, the above is all true, if the 'trouble in heart and head' be taken to refer to Mr. Myers' father, as seemed to be intended."

Mr. Myers then asked Phinuit if he could tell what his father did in his earth-existence, and what now interested him. Phinuit replied:—

"'He is interested in the Bible—a clergyman. He used to preach. He has a Bible with him; he goes on reading and advancing. He is living with your mother just the same as on earth. He has been in the spirit-world longer than she has. Your mother is a little nervous. I can't get her to come near. Your father has a graceful, solemn manner, as he had on earth. He had trouble with his throat—irritation (points to bronchial tubes). The boys used to call him Tim at college.'"

It is stated that all statements that could be verified were found to be correct. Some confusion was exhibited regarding a picture of Mr. Myers' father "in the hall," for while it was admitted that it was not a photograph, Phinuit seemed somewhat unable to determine whether it was a crayon or an oil painting. It was finally stated that the father's dress was more like the ecclesiastical garb which he wore in an oil painting hanging in Mrs. A.'s sister's house, a fact which could not have been known to Mrs. Piper.

Professor William James, in a long letter printed at the end of this report, stated that:—

"Taking everything I know of Mrs. P. into account, the result is to make me feel as absolutely certain as I am of any personal fact in the world that she knows things in her trances which

she cannot possibly have heard in her waking state, and that the definite philosophy of her trances is yet to be found."

Dr. Hodgson's First Report.

In Dr. Hodgson's first report there are many items of interest that should be recorded, chiefly occurring in connection with the control,—Dr. Phinuit. The following is a typical example of the evidence obtained in those days, before the character of the control changed, the Emperor group assumed control, and the automatic writing developed:—

"January 5th, 1888, I was told, 'Here is somebody who says he is your grandfather. He is tall, wears glasses, and is smooth shaven.' ('Which grandfather?') 'He gives his name F.' ('Yes, it must be my grandfather F., if smooth shaven.') 'Well, it is. But do you mean that your grandfather E. wears a beard?' ('Yes.') 'I think you must be mistaken.' ('No, I am sure that he did.') 'I never see him so, and I see him often.' (My grandfather E. died before my birth, but I had been sure that he had been described to me as full-bearded, like his son. But my father, when appealed to, disappointed me. 'No, you are wrong,' he said. 'I am like him in figure and features, but not in cut of beard. He was always smooth shaven.'")

There were three prophecies recorded, one from a deceased friend, giving her name, and saying that another friend of Miss W.'s, giving his name, would marry soon. The "communicator" was the deceased wife of the person named, her surviving husband. Miss W. exclaimed that it was preposterous, and would not believe that it was her friend who was communicating. But the prediction was insisted on, and Miss W. had finally to admit that the communications were characteristic of her friend, but attached no importance to the prediction. But the prophesied marriage occurred in a few months.

The last prediction is very interesting, and should be quoted in full. Miss W. says:—

“In the spring of 1888, an acquaintance, S., was suffering torturing disease. There was no hope of relief, and only distant prospect of release. A consultation of physicians predicted continued physical suffering, and probably mental decay, continuing perhaps through a series of years. S.'s daughter, worn with anxiety and care, was in danger of breaking in health. ‘How can I get her away for a little rest?’ I asked Dr. Phinuit, May 24, 1888. ‘She will not leave her father,’ was the reply, ‘but his suffering is not for long. The doctors are wrong about that. There will be a change soon, and he will pass out of the body before the summer is over.’ His death occurred in June 1888.”

From time to time various tests have been made by the aid of sealed letters. An individual has written a letter, sealed it, and sent it to the Society, where it remains until the death of that person. During the life of the writer of the letter no other living consciousness is in possession of its contents, we may suppose; and after the death of that person, and until the letter was opened, *no* living consciousness at all was in possession of its contents. Now, if the writer of such a letter purported to communicate, and, by means of automatic writing, gave the contents of such letter, it would be good evidence of the presence and identity of that person. At all events, in order to offset the spiritistic interpretation of the facts, we should have to assume, among other things, that the contents of the letter were passed on telepathically to other living minds during the lifetime of the writer of the letter; and, after the death of the writer, this knowledge was obtained from *their* minds by Mrs. Piper, through some telepathic process unknown to us—for any of which assumptions there is not the slightest particle

of evidence, experimental or otherwise. At all events, several such letters have been written, and a few of them tested, while a number yet remain in the offices of the Society, awaiting the death of the writer. Most of the cases so far tested have been practical failures, but there is some reason for this, even assuming the spiritistic hypothesis to be true. Many persons might write a letter containing what seemed to them important material at the time, but might totally forget its contents. To give an incident of this character. About eight years ago, a sister-in-law of a friend of ours wrote a letter of this nature, and gave it to us to take to a medium, to see if she could tell its contents without breaking the seal of the envelope in which it was enclosed. It concerned an incident which at that time seemed very important to her, and one that she could never forget! At the present day, however, she has not only forgotten the contents of the letter, but has totally forgotten the fact that she ever wrote one! Were she to die, therefore, and were we to ask her about this letter, she would be not only unable to tell its contents, but would deny having written any such letter at all! Doubtless it is the same in other cases. The contents of the letter would naturally be forgotten; and when we take into account, in addition to this, the tremendous difficulties experienced while communicating, it would seem quite natural to expect very little conclusive evidence—even were the spiritistic hypothesis true.

There is one incident, however, which is quite striking, and which certainly deserves mention in this place. The incident is thus summarised by Dr. Hyslop in his *Science and the Future Life*, pp. 189–91 :—

“Miss Hannah Wild and her sister, Mrs. Blodgett, had frequently talked over the possibility of spirit return, and the former promised to write a letter, whose contents she

would reveal after death, if any such thing as communication with the dead were possible. It was some time, however, before she was persuaded to write the letter. One day, about a week before she died, she said, 'Bring me pen and paper. If spirit-return is true, the world should know. I will write the letter.' She wrote the letter, and enclosed it in a tin box, and when she handed it to her sister, she said, 'If I can come back it will be like ringing the city hall bell.' She spoke about the letter often. Miss Hannah Wild died July 28, 1886. Towards the latter part of the same year, Mrs. Blodgett saw in a paper a notice of the Society for Psychical Research, in which the name of Professor James was mentioned, and it led to correspondence, and her telling him what she had for a test. Professor James proposed trying Mrs. Piper, and the letter was sent to him properly sealed. Some articles that had been worn by Miss Wild were sent to Professor James, and by him to Mr. J. M. Piper, where Mrs. Piper was living at the time, and the nature of the test explained without giving any names. The letter remained in the possession of Professor James.

"At this first experiment, Mrs. Blodgett not being present and her name not being known, Phinuit obtained the name of Hannah Wild, and perhaps some perception of her connection with the *Woman's Journal*, in which she was interested, and to whose pages she had contributed; also the name of her sister, Bessie (Mrs. Blodgett), to whom she was to give the test, and some impression to the then recent marriage of her sister. Beyond these facts practically nothing correct was obtained. Mrs. Piper had numerous sittings for the purpose of getting the details of what Phinuit gave as the death-bed letter, and he was confident that he had been conversing with the spirit of Hannah Wild; yet the description of her personal appearance was almost entirely wrong. Phinuit's letter contained no hint of the substance of the real letter which Mrs. Blodgett had forwarded to Professor James for comparison with Phinuit's statements, and the numerous circumstances referred to in Phinuit's letter had scarcely any relation to the life of Hannah Wild. They were chiefly a

tissue of incorrect statements. The result so far suggested that, however Phinuit succeeded in obtaining the names and other impressions which proved to be more or less correct, he at least did not get them from the 'spirit' of Hannah Wild.

"The next experiment was made with both Mrs. Blodgett and Dr. Hodgson present, Dr. Hodgson taking notes. The sitting had been arranged before, and no names were mentioned, so that Mrs. Piper apparently had no normal knowledge of the relation of the sitter to the letter whose contents it was desirable to obtain. At the first shot came the following:—

"'You have a sister here, and did you ever find out about that letter? Anna. Hannah. Hannah Wild. She calls you Bessie Blodgett. You were in an audience, and a message was thrown to you. She'll tell you all about that. How's the Society—the women, you know? Moses. He's in the body. I want to tell you about that letter.'

"The pertinence of some of the incidents will here be apparent without comment. The name Moses seems not to have been recognisable by Mrs. Blodgett. She had been at Lake Pleasant, where a 'medium,' John Slater, had said, pointing to Mrs. Blodgett in a large audience, 'Lady here who wants to have you know she is here. Henry, the lame man, is with her. She wants to know about the big silk handkerchief. Says she will tell you what is in that paper very soon.' The name Henry was also alluded to here, at this sitting with Mrs. Piper, and Mrs. Blodgett says, 'This Henry was my mother's only male cousin, and she had lived with him all her life till she was married. He was lame.'

"A little later in this sitting with Mrs Piper came the question purporting to come from Hannah Wild. 'Do you remember I told you it would be like ringing church bells?' With the substitution of 'church bells' for 'city hall bell,' the reader will recall this was the statement made by Hannah Wild living, when she handed the letter in the box to her sister; but when asked just after this allusion to tell the contents of the letter, the reply was irrelevant. Five attempts to obtain the contents of the letter were entire

failures, though in the process of the experiments a large number of true incidents were given through Mrs. Piper, such as those here indicated. But most of them, at least, were known to Mrs. Blodgett, and little was given that she did not know, while other living persons knew what was unknown to her.¹

Dr. Hodgson's Second Report.

Coming to Dr. Hodgson's second report, we find a tremendous mass of evidence presented which we can but summarise briefly. The following passages will give the reader an idea of the nature of the evidence, as well as its complications. Theoretical explanations we reserve until later :—

G. P. : Don't you want me to give,—please give me mother's letter. (Mrs. Howard had received a letter from Mrs. Pelham, which was then given to the hand.) Oh, I see father is not well.

Mrs. Howard : She says that in the letter.

G. P. : I am sorry, but it cannot be helped. Where is it she says in that letter she is going?

Mrs. Howard : First to New York, and then perhaps to come here, George, to see you.

G. P. : Oh, I am sorry I asked you now (crumpling letter in hand); going to dispose of it all right; then it will be far better.

Mrs. Howard : Let us see that word again, George.

G. P. : For father, since he is so delicate.

Mrs. Howard : Now what is the place they are going to dispose of,—what does it say in the letter, George? Tell me the name.

G. P. : The house and——

Mrs. Howard : I can't read that. Write it again. The house and what?

¹ This resembles another case very closely, in which the communicator stated certain facts—none of which were true. It was afterwards ascertained, however, that the patient had made precisely these same statements in the delirium of death; see p. 510.

G. P. : The property in——

Mrs. Howard : Wait a minute. Have another sheet.

G. P. : N.Y.

Mrs. Howard : What is the name of the place, George? If you remember the name write it down.

G. P. : (Scrawl.)

R. H. : Can't read that, George.

Mrs. Howard : Never mind, George. Take the letter and read it, and then write it down. Wait a second; be patient.

G. P. : (Crumpling letter.) (Scrawl.)

R. H. : Take your time, George; capital letters, George; capital letters.

G. P. : I do wish Hodgson would be more patient.

R. H. : I think I am patient, George. I am telling you to be patient.

G. P. : He exasperates me.

R. H. : All right, George. I will keep entirely silent if you like.

G. P. : In the extreme. Fire away, Mary. Go.

Mrs. Howard : Now, George, I want you, if you remember the name of that place in New York, that country place that is going to be disposed of—I want to know the name of it. Yes, here is the letter, and if you can give me the name, write it down.

G. P. : Well, why do you confuse me so? Why don't you let me go on and tell you what she says?

Mrs. Howard : Yes.

G. P. : Without interrupting me so often (crumpling letter again). Why don't you answer?

Mrs. Howard : George, you know there is a question she wants me to ask you in that letter.

G. P. : Potomac.

Mrs. Howard : Yes, it is on the Potomac. That is all right. (Some confusion here. The town Z., which had been mentioned by G. P. in a previous sitting, and which was the place referred to, was on the Hudson, and this was well known to Mrs. Howard. Washington, where his father lived in the winter, is on the Potomac.—R. H.)

G. P. : What is it, Hodgson ?

R. H. : Nothing, George, nothing. I am listening.

G. P. : Why don't you say your say ?

R. H. : I have said my say. Now I am letting Mrs. Howard.

Mrs. Howard : George, I want to ask you a question. Just read what she says there, something about what she has been doing.

G. P. : I prefer you (Hodgson) to ask, for evidential purposes, for she knows.

Mrs. Howard : Yes, I do.

R. H. : Well, but she knows what questions to ask, George, and I don't. It is all right if she asks ; never mind if she does know.

G. P. : Those . . . oh, all right.

R. H. : Now Mrs. Howard will ask.

Mrs. Howard : I want to know, George, what you have seen your mother doing.

G. P. : I simply see the letter and tell you for test.

R. H. : Well, George, I am going to look at this letter again, and ask a test that nobody knows here at all. She says that you perhaps saw her.

G. P. : Please look, but I tell you all I can any way whether you ask or not.

R. H. : Yes ; well, there is a question, George, if you will wait just a minute, I want to ask, because your mother asks it.

G. P. : She has asked me what she has been doing.

Mrs. Howard : Yes, that is true.

G. P. : Well, she has been shaking up my things a little—I mean my clothes ; it is a simple thing, but it will go for a test. (I believe that this was ascertained by Mrs. Howard to be correct, but she has not filled up the spaces for her notes to this sitting.—R. H., 1896.)

R. H. : First rate, George ; we will find out from her about this.

(He is told that Marte is coming the next time, and requested to find out the name of Marte's father in the spirit. Some remarks about Marte, and the difference between him and Y. Z.)

G. P. : . . . Ask me anything you like.

Mrs. Howard : Well, he said at the last sitting that he had something for Orenberg.

G. P. : Well, it was this he wrote you, Jim, about me.

Mrs. Howard : Yes.

G. P. : And wanted to know what I had to say. (Orenberg had written for information about the sittings.—J.)

Mrs. Howard : Go on ; yes.

G. P. : Well.

Mrs. Howard : If we had gotten that before the letter, it would have been interesting.

G. P. : All I want is to convince him that there is a real existence after the liberation of the spirit from the——

Mrs. Howard : Wait a minute ; I can't see.

G. P. : Material organism.

R. H. : Material organism.

G. P. : Good, Hodgson ; if you can read this you do mighty well.

R. H. : Well, I think you are doing mightier well to write it, George.

G. P. : Well, I wish you knew how many . . .

R. H. Write that word over again. Difficult ?

G. P. : Oh no, . . . stumbling blocks there are, Hodgson.

R. H. : Well, perhaps I shall know them some day, George, when I come to try it myself.

G. P. : Yes ; then you will be glad to congratulate me for what I have done.

Dr. Hodgson says in speaking of this:—

“It is only by more or less prolonged conversations that glimpses into personalty may be obtained in inquiries of this sort, and the evidence in relation to G. P.'s identity rests not a little upon the characteristics of his mental make-up, including not only his intellectual, but his emotional qualities, his affections, his weaknesses, his sympathies and antipathies, and his loyalties. In the badgering (this is really the nearest term to suggest the actual fact) to which I had subjected him in the persistence of the inquiry which I made in connection with Y. Z.'s question, I had touched unwittingly the very core of

that loyalty to his friends which was highly characteristic of the living G. P., and which apparently led (by my association) Y. Z. to the manifestation against myself of a certain amount of annoyance—followed, be it noted, by a desire to remove the dissatisfaction produced in me by his remarks.”

Again, a graphic and most interesting passage is that given on pp. 321–22 :—

“It was during this sitting that perhaps the most dramatic incident of the whole series occurred. Mrs. Howard was supporting Mrs. Piper’s head, I was following the writing, and Mr. Howard was sitting some distance away smoking a long pipe, when the following conversation occurred :—

G. P. : Now what will I do for you ?

R. H. : Well, George, is there anything that you would like to give us—any special message that you thought it would be desirable for us to have, or anything about philosophy? we should be glad to have that!

Mr. Howard : Well, George, before you go to philosophy—you know my opinion of philosophy—

G. P. : It is rather crude, to be sure.

Mr. Howard : Tell me something; you must be able to recall certain things that you and I know. Now, it makes no difference what the thing is; tell me something that you and I alone know. I ask you because several things I have asked you have failed to get hold of.

G. P. : Why did you not ask me this before ?

Mr. Howard : Because I did not have occasion to.

G. P. : What do you mean, Jim ?

Mr. Howard : I mean, tell me something that you and I alone know—something in our past that you and I alone know.

G. P. : Do you doubt me, dear old fellow ?

Mr. Howard : I simply want something—you have failed to answer certain questions that I have asked. Now, I want you to give me the equivalent of the answers to those questions in your own terms.

G. P. : What were they ?

Mr. Howard : The questions were about where we dined—

and that you did not remember. Now tell me something you do remember.

G. P. : Oh, you mean now.

Mr. Howard : Tell me something now that you remember that had happened before.

G. P. : Well, I will. About Arthur ought to be a test. How absurd. . . . What does Jim mean? Do you mean our conversations on different things, or do you mean something else?

Mr. Howard : I mean anything. Now, George, listen for a moment ; listen, listen.

G. P. : I know.

Mr. Howard : I mean that we spent a great many summers and winters together, and talked on a great many things, and had a great many views in common, went through a great many experiences together. Now (G. P. commencing to write), hold on a minute.

G. P. : You used to talk to me about . . .

The transcription here of the words written by G. P. conveys, of course, no proper impression of the actual circumstances ; the inert mass of the upper part of Mrs. Piper's body turned away from the right arm, and sagging down, as it were, limp and lifeless over Mr. Howard's shoulder ; but the right arm, and especially hand, mobile, intelligent, deprecatory, then impatient and fierce in the persistence of the writing which followed, contains too much of the personal element in G. P.'s life to be reproduced here. Several statements were read by me and assented to by Mr. Howard, and then was written 'private,' and the hand gently pushed me away. I retired to the other side of the room, and Mr. Howard took my place close to the hand, where he could read the writing. He did not, of course, read it aloud, and it was too private for my perusal. The hand, as it reached the end of each sheet, tore it off from the block book, and thrust it wildly at Mr. Howard, and then continued writing. The circumstance narrated, Mr. Howard informed me, contained precisely the kind of a test for which he had asked ; and he said that he was 'perfectly satisfied, perfectly.' After this incident there was some further conversation with reference to the past that seemed especially natural, coming from G. P."

Dr. Hyslop's First Report.

We come next to Dr. Hyslop's series of sittings, the account of which occupies 650 pages, or the entire sixteenth volume of the *Proceedings*. We can, of course, refer to but one or two incidents here. An interesting passage is the following:—

“On February 5, 1900, after a spontaneous reference to my Aunt Eliza and some pertinent conversation about her, my father said again spontaneously: ‘What I would now ask is, that Eliza should recall the drive home and—let me see a moment—I am not sure but it was one of the shafts; but the wagon broke, some part of it, and we tied it with a cord. I remember this very well.’ Inquiry showed the incident false in relation to my aunt mentioned in the message. She said that no such incident had ever occurred in their lives.

“My uncle did not try to communicate personally after this date until June 2, 1902. I then asked him if he remembered what we did just after father passed out, and the reply came, ‘You are thinking of that ride; I guess I do not forget it.’ But he became too confused to continue, and the next day when he appeared I put the question about the ride just after father passed out. After saying, ‘Your father told you before, but had it on his mind, Eliza,’ he referred immediately to a ride that we had taken to father's grave to see a gravestone that I had ordered placed there. This was correct, but was not the incident I had in mind. From my attitude on one of the incidents mentioned in this connection, he apparently came to the conclusion that we were not thinking of the same things, and said: ‘I think we are thinking of different things. Let me think. You don't mean the Sunday afternoon, do you?’ I replied that I did. Immediately he mentioned that we had a breakdown; that we broke the shaft; that we mended it with a piece of harness; that the horse was a red one; that we got home late in the evening; and that it was a dog that frightened the horse. There were a number of slight errors in the messages. The thing that frightened the horse was a negro boy with a goat and wagon.

“The facts were these:—My father died on Saturday at

my uncle's home. The next morning, Sunday, a telegram arrived, which we had to deliver at once, and we hastened to deliver it in the country with a buggy and horse. On the roadside we met a negro boy with a goat and wagon, which frightened the horse, and it shied, overturning the buggy, dragging it over us, and injuring both of us rather badly; broke the shaft, which we had to mend with a string or a piece of harness; and we arrived home late in the evening, having promised each other that we would say nothing about it, so that it would not 'leak out,' so to speak. But we were so badly hurt that we could not conceal it longer than the next morning."

The following incident, summarised in *Science and a Future Life* (Putnam's Sons), pp. 227-8, certainly deserves mention. Dr. Hyslop writes:—

"My uncle, James McClellan, in his 'Communications,' just after giving the name of my father as 'John James McClellan,' it being only John McClellan, said, 'I want to tell you about his going to the war, and about one of his fingers being gone before he came here.'

"Inquiry showed that John McClellan, the father of James McClellan, my uncle, had not been in any war, and had not lost a finger before he died. But I found that a John McClellan, no relative of mine but probably a distant relative of my uncle from another branch of the McClellans, and who lived in the same county, was mentioned in the history of that county as having been commissioned as an ensign in the war of 1812. Earlier in the sittings in connection with the name John and associated with the name of Robert McLellan, who was a communicator, was the name Hathaway, and three of the Williams family. I had great difficulty in running down the incidents. But I found finally that this John McClellan, who had been an ensign in the war of 1812, had lost a finger there; that he had died some years before I was born, and that Hathaway was the name of his son-in-law's cousin; and this son-in-law's son remembers that the Williamses had been mentioned in connection with John McClellan, who had lost a finger. He was known prior to his death as 'Uncle John McClellan.' In the

earlier references to the name John there was one by my father in which he was once called 'Uncle John,' and then a mention of the university where my father had sent me, and where I had known the John McClellan who was my uncle's brother, but who was neither mine nor my father's uncle. The old 'Uncle John McClellan' had lived near my mother's birthplace, and might have been known to her in her early days."

Experiments since Dr. Hodgson's Death.

The following account of the experiments made by Dr. Hyslop with Mrs. Piper, and other mediums, since the death of Dr. Richard Hodgson, has been condensed from the official reports as published in the *Journal of the American Society for Psychological Research*, in the issues of February, March, and April 1907. As abridged, Dr. Hyslop's narrative is as follows:—

"In accordance with a previous promise, I summarise here some results of experiments since the death of Dr. Richard Hodgson. They of course implicate Mrs. Piper, but I do not mean to confine the phenomena to what has occurred through her. The reason for this is apparent. The scientific sceptic would not easily be convinced by any alleged messages from Dr. Hodgson through that source. It is not that any suspicion of Mrs. Piper's honesty is to be entertained at this late day, as the past elimination of even the possibility of fraud as well as the assurance that she has not been disposed to commit it, are sufficient to justify ignoring it. But a far more complicated objection arises, and this is the unconscious reproduction of knowledge acquired in a perfectly legitimate way. Dr. Hodgson had been so long associated with Mrs. Piper that we cannot know, without having his own *ante-mortem* statement, what he may casually have told her about himself and his life.

"One incident of great importance occurred in my first sitting after Dr. Hodgson's death. After he had referred to some discussions which he and I had over my Report on the Piper case in the spring of 1900, and had made some reference to his posthumous letter, he suddenly broke out with the

statement: 'Remember that I told Myers we would talk nigger talk.' I saw at a glance, owing to my familiarity with phenomena of this kind, that something was wrong, and I said, speaking to Mrs. Piper's hand, as we always do: 'No, you must have told that to some one else.' The reply from Hodgson was: 'Ah, yes, James. I remember it was Will James. He will understand. Do you remember the difficulties we had in regard to our hypothesis on the spiritistic theory?' I knew nothing of this, and wrote to Professor James, who was in California at the time, to ascertain whether any such remark had ever been made to him by Dr. Hodgson. The statement was pertinent, as I knew that Dr. Hodgson and I had talked with Professor James on the mental conditions of communicators, but I did not know whether any such definite incident had occurred between them. Professor James replied that he did not recall any incident of the kind. When he returned to Cambridge late in the spring, the incident was told him again by his son, and Professor James again denied all recollection of the matter. At lunch with Mr. Piddington the same day he was telling his guest what his opinion was of the trance personalities in the Piper case. Professor James did not believe them to be spirits, but secondary personalities of Mrs. Piper, suggested by her knowledge of the same personalities in the case of Stainton Moses and the development of Dr. Hodgson's influence during his experiments. In the process of thus explaining his opinion he said to Mr. Piddington that he had several times told Dr. Hodgson that, if he would only use a little tact, he could convert their deific verbiage into nigger minstrel talk, and then he suddenly recalled what had been said in the communications and wrote me the facts."

"On another occasion Dr. Hodgson remarked, through Mrs. Piper:—'Remember one thing, and keep this on your mind. I shall avoid referring to things of which you are thinking at the time as much as possible and refer to my own memories. I have seen too much not to understand my business.' It is interesting to remark the allusion to not telling me what I was thinking of at the time. I doubt if any other communicator than Dr. Hodgson would think of this point. He was so

familiar with the objection to the spiritistic hypothesis from telepathy that he was always on the look-out for the facts that told against this objection, and here it turns up as a habit of thought which few would manifest.

“There were a number of allusions to Dr. Hodgson in the automatic writing of Mrs. Smead before she knew of his death, which had been carefully concealed from her by Mr. Smead, and one or two apparitions of him associated with a frequent apparition of myself. At one sitting the name of my father was associated with that of Dr. Hodgson.

“I come now to a set of incidents which are perhaps as important as any one could wish. I had an arrangement for three sittings beginning March 19th (1906). Previous to this I arranged to have a sitting with a lady whom I knew well in New York City. She was not a professional psychic, but a lady occupying an important position in one of the large corporations in this city. This sitting was on the night of March 16th, Friday. At this sitting Dr. Hodgson purported to be present. His name was written, and some pertinent things said with reference to myself, though they were not in any respect evidential. Nor could I attach evidential value to the giving of his name, as the lady knew well that he had died. I put away my record of the facts, and said nothing about the result to any one. I went on to Boston to have my sittings with Mrs. Piper.

“Soon after the beginning of the sitting Rector, the trance personality usually controlling, wrote that he had seen me ‘at another light,’ that he had brought Hodgson there, but that they could not make themselves clear, and asked me if I had understood them. I asked when it was, and received the reply that it was two days before Sabbath. The reader will see that this coincides with the time of the sitting in New York. Some statements were then made by Rector about the difficulty of communicating there, owing to the ‘intervention of the mind of the light,’ a fact coinciding with my knowledge of the case, and it was stated that they had tried to send through a certain word, which in fact I did not get.

“When Dr. Hodgson came a few minutes afterwards to

communicate, he at once asked me, after the usual form of his greeting, if I had received his message, and on my reply that I was not certain, he asked me to try the lady some day again. As soon as the sitting was over, I wrote to the lady without saying a word of what had happened, and arranged for another sitting with her for Saturday evening the 24th.

“At this sitting one of the trance personalities of the Piper case, one who does not often appear there, appeared at this sitting with Miss X., as I shall call her, and wrote his name, if that form of expression be allowed. Miss X. had heard of this personality, but knew that Rector was the usual amanuensis in the Piper case. Immediately following the trance personality whose name was written, Dr. Hodgson purported to communicate and used almost the identical phrases with which he begins his communications in the Piper case—in fact, several words were identical, and they are not the usual introduction of other communicators. After receiving this message I wrote to Mr. Henry James, Jr., without saying what I had gotten, and asked him to interrogate Dr. Hodgson when he got a sitting to know if he had recently been communicating with me, and if he answered in the affirmative, to ask Dr. Hodgson what he had told me. About three weeks after, Mr. James had his sitting, and carried out my request. Dr. Hodgson replied that he had been trying to communicate with me several Sabbaths previously, and stated with some approximation to it the message which I had received on the evening of the 24th.

“The reader will perceive that these incidents involve cross-references with another psychic than Mrs. Piper, and though I am familiar with the methods by which professional mediums communicate with each other about certain persons who can be made victims of their craft, it must be remembered that we are not dealing with a professional medium in Miss X., and that we cannot call Mrs. Piper this in the ordinary use of the term. I can vouch for the trustworthiness of Miss X., and think that the ordinary explanation of the coincidences will not apply in this instance.

“The next day after the sitting just mentioned, when Dr.

Hodgson came to communicate, he asked me if I remembered anything about the cheese we had at a lunch in his room. At first I thought of an incident not connected with a lunch, but with an attempt at intercommunication between two mediums, in which a reference to cheese coming from Dr. Hodgson was made; but as soon as the mention of a lunch was made which had no relevance to what I was thinking of, I recalled the interesting circumstance that once, and only once, I had had a midnight lunch with Dr. Hodgson at the Tavern Club, when he made a Welsh rarebit and we had a delightful time.

“Another incident is still more important as representing a fact which I did not know and which was relevant to a mutual friend who was named and who knew the fact. At this same sitting Dr. Hodgson sent his love to Prof. Newbold, of the University of Pennsylvania, and told me to ask him if he remembered being with him near the ocean on the beach. I inquired of Prof. Newbold if this had any pertinence to him, and he replied that the last time he saw Dr. Hodgson was in the previous July at the ocean beach.”

On the occasion of one of Dr. Hyslop's sittings with Mr. Quentin, a psychic whose work is doubtless familiar to readers of the current literature upon this subject, another opportunity to test the cross-references presented itself. “I had previously made arrangements to have an experiment with another psychic in Boston,” says Prof. Hyslop, “and as soon as I got the chance I indicated it, and the following is the record. I was at the sitting with Mrs. Piper.

“(Now, Hodgson, I expect to try another case this afternoon.)’

“‘S M I T H.’ [Pseudonym.]

“‘(Yes, that's right.)’

“‘I shall be there, and I will refer to *Books* and give my initials R. H. only as a test.’

“‘(Good.)’

“‘And I will say *books*.’

“I was alone at the sitting with Mrs. Piper. She was in a trance, from which she recovers without any memory of what happens or has been said during it. Three hours afterward I went to Mrs. Smith, who did not know that I had been

experimenting that day with Mrs. Piper. After some general communications by the control, and a reference to some one who was said to be interested in Dr. Hodgson, came the following. In this case it was not by automatic writing as with Mrs. Piper, but by ordinary speech during what is apparently a light trance.

“Beside him is Dr. Hodgson. It is part of a promise to come to you to-day as he had just been to say to you he was trying not to be intense, but he is intense. I said I would come here. I am. I thought I might be able to tell different things I already told. Perhaps I can call up some past interviews and make things more clear. Several things were scattered around at different places. [I have several purported communications from him through four other cases.] He says he is glad you came, and to make the trial soon after the other.’

“[I put a pair of Dr. Hodgson’s gloves which I had with me in Mrs. Smith’s hands.]

“You know I don’t think he wanted them to help him so much as he wanted to know that you had them. You have got something of his. It looks like a book, like a note book, with a little writing in it. That is only to let you know it.’

“At this point the subject was spontaneously changed, and I permitted things to take their own course. A little later he returned to the matter, and the following occurred:—

“‘There is something he said he would do. He said: “I would say like a word.” I said I would say—I know it’s a word [last evidently the psychic’s mind.] Your name isn’t it? [apparently said by psychic’s mind to the communicator.] I said I would say:—Each time the word slips. [Pause.] I am afraid I can’t get it. It sounds——Looks as if it had about seven or eight letters. It is all shaky and wriggly, so that I can’t see it yet.’

“‘Can’t you write it down for him so I can see?’ [apparently said to the communicator.] C.: [psychic shakes her head.] [Pause.] Psychic’s fingers then write on the table.] ‘Would it mean anything like “Comrade”?’ (‘No.’) He goes away again. (‘All right. Don’t worry.’) [Pause.] ‘Let me take your other hand.’ [Said to me. I placed my left hand

in the psychic's.] No good. [Pause.] 'I'm trying to do it. I know that he has just come from the other place, and kept his promise to say a word.'

"The reader will notice that I got the reference to books, the promise to say a word, and an apparent attempt to give the other promised message, which was not successful. It is noticeable that the word 'initial' has seven letters in it.

"The message is not so clear as the most exacting critic might demand, but we must remember that we are not dealing with well established methods of communication involving perfect command over the mental and cosmic machinery for this purpose. The main point is that there is a coincidence of personality and message in the case where it was not previously known that any such reference to books would be relevant.

"I should add in this connection another important incident which will strengthen the coincidence involved in the facts just told. I had another experiment the same evening with another young lady who is not a professional, and with whose mother I had been in correspondence for some time. I had arranged some time before to have a sitting for that evening. I did not give the slightest hint that I was to be in Boston for any other business, and no one of the family was informed of my arrival two days previously or of my intentions of having sittings with Mrs. Piper and Mrs. Smith. When I arranged to go out to the house with the mother, I made it appear that I had arrived from New York only a half-hour before. Hence it was not known to the mother or to the young lady that I had had any other experiments that day.

"At the experiment with Mrs. Piper I had used a pair of old gloves which Dr. Hodgson had worn—the same being used for purposes which experimenters in this field understand—and I had placed the same articles in the hands of Mrs. Smith when I got the reference to books. When I had my experiment with the young lady mentioned later in the evening of the same day, it was some time before I placed the same gloves in her hands. When I did she paused a few minutes, made a general remark, and then said: 'I get books in connection with these.'

"The coincidence again is apparent, and whether it is to

have any causal significance will depend upon the judgment of each reader who is capable of estimating the character of such phenomena.

“I shall pass now from incidents involving ‘cross-reference’ to those which do not, and confine myself to what came through Mrs. Piper on October 10th. They may be more specific than the type which I have just illustrated, and must be adjudged by the reader according to his tastes.

“After the description of the incidents connected with some Ouija board experiment, Dr. Hodgson, through the automatic writing of Mrs. Piper, said:—

“‘Do you remember a joke we had about George’s putting his feet on the chair and how absurd we thought it?’

“‘(‘George who?’)

“‘Pelham, in his description of his life here.’

“‘(‘No, you must have told that to some one else.’)

“‘Oh, perhaps it was Billy. Ask him.’

“I knew what ‘Billy’ referred to. This was the name by which he had always called Professor Newbold, and so I made inquiry of him regarding the pertinence of the incident. He replied that he and Dr. Hodgson had laughed heartily at some statements of George Pelham, when he was trying to communicate after his death, about the way he did when he was communicating. He claimed that he was in the medium’s head and his feet on the table while he was trying to communicate through her hand. The description is ludicrous enough, but the incident, perhaps, is good enough to prove identity, and the best part of its value is that I did not know the facts.

“There are just three hypotheses which are capable of discussion in connection with such facts. They are (1) Fraud; (2) Telepathy; and (3) Spirits.

“Secondary personality would not be presented as an alternative by any one who knows what that phenomenon is. Secondary personality, in respect of the contents of its mental action, claims to be limited to the normal action of the senses, and is distinguished from fraud in that its whole character is unconscious, while fraud is properly conscious deception by the normal subject. If fraud in this case be excluded from view, there can

be no doubt that such facts as have been enumerated are supernatural, whatever the specific explanation. But secondary personality never assumes the supernatural acquisition of knowledge. It is limited to what has been obtained in a normal manner by the subject. Hence it is excluded from view by virtue of that fact. As to fraud, that has been excluded from consideration in the Piper case for fifteen or twenty years, and only unintelligent men would talk about it any longer.

“I should be ashamed, as one who has tried to be scientific, to advance telepathy as an explanation of any such facts. Any man who knows what he means by the use of this term would not venture to suppose it an explanation. Really scientific men, who know what they are talking about, would not, in the light of the evidence, have the temerity to propose it as an adequate theory of phenomena involving such a system of ‘cross references’ illustrative of the personal identity of deceased persons and nothing else. I do not think the hypothesis worthy of serious defence. It is an hypothesis worthy only of intellectual prudes. I should much prefer fraud as an explanation; for we have analogies and experiences enough to make that intelligible; but for the kind of telepathy necessary to cover such facts we have no adequate scientific evidence whatever.

“As to the third hypothesis, namely, that of spirits, I shall not undertake any dogmatic defence. It is obvious to me that it is the most rational hypothesis after eliminating fraud from such matters, and my own stand in various publications would indicate what position I would preferably assume.”

Mr. Piddington's Report.

One of the latest reports of the trance phenomena of Mrs. Piper is that by Mr. J. G. Piddington—issued as volume xxii. of the *Proceedings of the Society for Psychological Research*. It contains a lengthy account of a series of experiments in what has been called “cross-correspondences,” or “concordant automatisms.” This series is very important, not only because a careful record was

kept of the proceedings—every word spoken, &c.—but because an entirely new method of obtaining evidential material was adopted and carried into execution. This idea was really that of the controls themselves, who seemed to realise full well the difficulty of supplying information to the sitters which could not in some way be explained as due to telepathy, and they consequently proposed the following method:—That some sentence or sign should be given through the hand of one medium, and that this same word, or sign, or sentence should be given through the hand of another medium, as soon thereafter as possible, at some distance from the original experiment. The idea was to prove that the same intelligence was operative in the two places—a third and independent intelligence separate from that of either medium. Further, in order to complicate matters, it was resolved that these cross-references should be as difficult and as roundabout as possible. Instead of the message being clearly given in both cases, that is, it was to be given in an evasive form. Thus, if one medium wrote, “To be or not to be,” and another medium wrote “Shakespeare,” and if another medium were to write “Hamlet,” all these three communications would obviously refer to the same thing, and originate from the same source—especially if the intelligence drew attention to these words, and told the sitters that these words were part of the cross-correspondences, and that the rest, the key, was to be found in the automatic writings of some other medium. This was the idea proposed by the intelligences, and later carried into operation by them. It will be seen that the idea was a splendid one, inasmuch as it practically shut off thought-transference entirely; for not one of the mediums—even had she known what was in her automatic script—would have known what the key-word was, and hence could not possibly

have transferred it to another medium by thought-transference—any more than she could have communicated it by fraud, granting that a possible hypothesis. Fortunately, we do not have to consider this seriously in the case, since all the automatists—with the exception of Mrs. Piper, who has now established her own reputation—are ladies whose social standing cannot be questioned. Let us briefly examine some of these cross-references, then, and see how far they serve to prove the existence of a third, independent intelligence.

On 16th January 1907, it was proposed to “Mr. Myers,” communicating through Mrs. Piper, that he should visit other mediums, and give through their hands some clear sign of his identity—say, a triangle within a circle. A circle with a triangle within it appeared in Mrs. Verrall’s script on January 28, at the foot of a remarkable communication embodying a successful cross-correspondence. Mrs. Holland’s script also contained undoubted attempts at this figure on May 8.

Another somewhat striking incident is the following, which we sum up in a few words:—

“On February 4, Mrs. Verrall wrote a script containing Mrs. Sidgwick’s name, the word ‘library,’ and Frederic Myers’ initials; and at 11.7 A.M. on February 6, began to write a script in which the word ‘library’ appeared three times; and on no other occasion during the period under review did the word ‘library’ occur again in her script. On February 6, between 11.32 and 11.37 A.M. (as near as I can calculate), Myers_p (Myers communicating through Mrs. Piper)¹ said he had referred to a ‘library matter’ through Mrs. Verrall; and on February 11, that he had persistently repeated the word ‘library’ to Mrs. Verrall, also his own name and Mrs. Sidgwick’s; and, to the best of my recollection and belief, the word ‘library’ was not mentioned

¹ Throughout Myers_p = Myers communicating through Mrs. Piper; Myers_v = through Mrs. Verrall; and Myers_h = through Mrs. Holland.

on any other occasion in Mrs. Piper's trance during the whole period of the English sittings except in connection with this episode" (p. 57).

On January 23, 1907, the following occurred through the hand of Mrs. Verrall:—

"That gives the words, but an anagram would be better. Tell him that—rats, star, tars, and so on. Try this. It has been tried before, RTATS re-arrange these five letters, or again tears

stare

seam

same

and so on. . . ."

Now, in going through Dr. Hodgson's MSS. after his death, Mr. Piddington discovered several papers containing the words star, rats, tars, arts—and adds that this seems to have been a favourite anagram of Dr. Hodgson's. Here, then, we have a *soi-disant* Dr. Hodgson after death writing the very words he was so fond of in life, and which no one had seen until after his death!

The next incident is summed up by Mr. Piddington as follows:—

"Mrs. Verrall draws an arrow on February 11. Hodgson on February 12 says he has given an arrow to Mrs. Verrall, and on February 17 Miss Verrall draws an arrow. In view of these coincidences the words which follow the drawing of the three arrows in Mrs. Verrall's script—'tria convergentia in unum'—become possessed of a strange pertinency" (p. 85).

The next incident is of less evidential value, but we quote it, as one of the present writers was indirectly concerned in its production. On February 19, 1907, Mr. Piddington suggested to the Piper controls that the words "giant" and "dwarf" be given through Mrs.

Verrall's hand. It was promised that a trial would be made, and the matter was referred to on several subsequent occasions, the controls finally stating that they had succeeded in "getting 'dwarf' through"—that is, that Mrs. Verrall had written it. A careful search of the script, however, failed to disclose any sign of the word, and the experiment was set down as a complete failure. When one of us (H. Carrington), however, had sittings with Mrs. Piper in January 1908, Rector again stated that he had given "dwarf" through Mrs. Verrall's hand. This second claim caused another careful search through the script, and it was then found that "little men" had been given through Mrs. Verrall's writing on February 20, 1907—one day after the request was made. This queer roundabout method of giving the required word was quite typical of Mrs. Verrall's automatic writing.

Again, summing up another remarkable cross-correspondence experiment, Mr. Piddington says (p. 139):—

"In this concordant episode of Mrs. Piper's trance and Mrs. Verrall's script, the controlling influence in both cases claims to be one and the same personality, namely, Frederic Myers. Let us, however, ignore this claim, and continue to use the symbols Myers_p and Myers_v. The case will then stand thus: To Myers_p a question is put which could have been answered by Frederic Myers. Myers_p gives various answers to it—all intelligent, and all but one provably correct. Before Myers_p gives his first answer, Myers_v showed knowledge of what the answer of Myers_p will be. Besides this, Myers_p shows that he knows Myers_v had previously shown knowledge of his (Myers_p) answer. One of the facts comprised in this first answer cannot be proved to have been known to Frederic Myers, but there are good grounds for thinking that it might well have belonged to that body of specialised and characteristic knowledge with which his mind was stocked. The facts involved in the remainder of the answer given by Myers_p were all known to Frederic Myers;

and they emerged in a manner which indicates that the intelligence responsible for their emergence was as intimately conversant with the closing chapters of *Human Personality* as Frederic Myers, its author, must have been."

Indeed, on pp. 242-3 of this report, Mr. Piddington is forced to say:—

"The concatenation or mosaic of ideas which I am about to describe, I regard not as the result of telepathic cross-firing casually exchanged between the automatists, but as the work of a single directing intelligence, or of a group of intelligences acting in concert; and I consider that this directing intelligence manifested itself chiefly in the communications of Myers_p, Myers_v, and Myers_n. Of the problem of the real identity of this directing mind—whether it was a spirit or group of co-operating spirits, or the subconsciousness of one of the automatists, or the consciousness or subconsciousness of some other living person—the only opinion which I hold with confidence is this: that if it was not the mind of Frederic Myers, it was one which deliberately and artistically imitated his mental characteristics."

The report closes with an account of a most remarkable test, which we must summarise very briefly. A test question was put to Myers_p, in Latin, and Latin so difficult in structure that no one, not a scholar, would be likely to ascertain its meaning, even with the aid of a dictionary. Mrs. Piper knows little or no Latin. If, then, Myers_p understood its purport, it would be good evidence that some intelligence other than that of Mrs. Piper was active—Myers while living, of course, being a fine Latin scholar.

The test question, or rather message, given to the trance personalities, translated into English, reads as follows:—

"We are aware of the scheme of cross-correspondences which you are transmitting through various mediums; and we hope you will go on with them.

“Try also to give A. and B. two different messages, between which no connection is discernible. Then as soon as possible give to C. a third message which will reveal the hidden connection.”

It is obvious that this must have been first of all understood (in the Latin form) by the communicating intelligence before it could have been acted upon; then the request must have been carried out as suggested, in order to insure a success.

Roughly speaking, and without going into the mass of evidence that has been presented in this case, it may be said that Myers, seemed to have obtained a fairly complete grasp of the contents and meaning of the Latin message, and to have acted upon it. Although a clear tri-statement was at no time made, the report seems to indicate, clearly enough, that a single intelligence was operative in all three cases, and that it not only understood the question, but answered it as best it could in the manner suggested. For the details of this remarkable incident we must refer the reader to the report itself.

*Later Statements by Professor William James and
Sir Oliver Lodge.*

In June 1909, appeared Part lviii. of the *Proceedings of the Society for Psychical Research*, containing reports on the trance phenomena of Mrs. Piper by Professor William James and Sir Oliver Lodge. Space does not permit our quoting from these records in any detail. The general conclusions of the writers must suffice. The character of the records was very similar to those which had gone before—the “controls” being Richard Hodgson, in the one case, and a group of intelligences in the other, mostly relatives of the sitters. In his report, Professor James comes out quite squarely, for the first time, in

favour of the spiritualistic hypothesis, saying (pp. 120-1):—

“It is enough to indicate these various possibilities, which a serious student of this part of nature has to weigh together, and between which his decision will fall. His vote will always be cast (if ever it be cast) by the sense of the dramatic probabilities of nature, which the sum total of his experience has begotten in him. *I myself feel as if an external will-to-communicate were probably there*; that is, I find myself doubting, in consequence of my whole acquaintance with that sphere of phenomena, that Mrs. Piper’s dream life, even equipped with ‘telepathic’ powers, accounts for all the results found. But if asked whether the will-to-communicate be Hodgson’s, or be some mere spirit-counterfeit of Hodgson, I remain uncertain and await more facts—facts which may not point clearly to a conclusion for fifty or a hundred years.”

Sir Oliver Lodge, in summing up his report, says:—

“On the whole, they (the messages) tend to render certain the existence of some outside intelligence or control, distinct from the consciousness, and, so far as I can judge, from the subconsciousness also, or Mrs. Piper or other mediums. And they tend to render probable the working hypothesis, on which I choose to proceed, that that version of the nature of the intelligences which they themselves present and favour is something like the truth. In other words, I feel that we are in secondary or tertiary touch—at least occasionally—with some stratum of the surviving personality of the individuals who are represented as sending messages. . . .

“The old series of sittings with Mrs. Piper convinced me of survival, for reasons which I should find it hard to formulate in any strict fashion, but that was their distinct effect. They also made me suspect—or more than suspect—that surviving intelligences were in some cases consciously communicating—yes, in some few cases consciously; though more usually the messages came in all probability from an unconscious stratum, being

received by the medium in an inspirational manner analogous to psychometry" (pp. 282, 284).¹

Dr. Hyslop's Second Report.

In May 1910, Dr. Hyslop published his second voluminous report on the mediumship of Mrs. Piper, in the *Proceedings* of the American Society for Psychological Research. It would be impossible for us to summarise this here, as the facts are spread over some 800 pages. Detailed reports are given of sittings with Mrs. Piper, and also other mediums—Mrs. Keeler, Miss W., Mrs. Chenoworth, &c.—some of which sittings offered apparent cross-references to the Piper sittings formerly held, and added other points of interest. The character of the facts and of the main arguments adduced were similar to those formerly advanced; the striking and original portion of the report being the lengthy chapter devoted to the "Conditions Affecting Communication." In this chapter, Dr. Hyslop had discussed in a scholarly and original way many of the physiological and psychological problems that surround the process of "communicating"—granting, for the sake of argument, that such communication takes place. The record must be read in the original to be appreciated or thoroughly understood.

It will be seen that the superficial appearance, at all events, of these phenomena, is that the spirit of the departed person is actually communicating at the time, with more or less difficulty, in a more or less fragmentary manner. The difficulties in the way of communicating must be great indeed, and the wonder is, not that we receive so little, but that we receive any messages whatever. As Mr. Andrew Lang so wittily remarked, "The

¹ Further details of this series of sittings may be found in the *Proceedings of the Society for Psychological Research*, vol. xxiv., part ix.

miracle of Balaam's ass was not that it said anything in particular, but that it said anything at all!" It is the same here. The difficulties experienced by all communicators must be immense; and for this reason doubtless, so little clear and consecutive information is given. As we have indicated our own views of these difficulties in another place, however, we will not dwell upon them here.

In a work of this sort it is, of course, impossible to attempt any direct *proof* of survival—the data we have presented above will merely give the reader an idea of the nature and character of the evidence, and especially of the means whereby such evidence is obtained. We desire only to indicate that by such *methods*, and by such methods only, will any direct proof of the immortality of the soul be obtained. The results may as yet be inconclusive—*the method of obtaining them is the important factor to insist upon*. While, to many minds, the evidence so far published is insufficient to warrant a belief in the existence of "spirits," it is at least sufficiently strong to show us that there is here a case for investigation; one, moreover, that presents great possibilities; and which, if the conclusions be established, would definitely defeat materialism. (See Appendix H.)

7. OTHER TRANCE MEDIUMS.

The Case of Mrs. Smead.

It must not be supposed that, because we have devoted so much space to the Piper case, that it is the *only* one of the kind that we have any record of. On the contrary, there are many cases of the same character; but in them the phenomena are not so clear and well defined, and the cases have not been under scientific observation for so long; and for these reasons the phenomena

cannot be given the same weight as in the better-attested case. But, if only to show the similarity in the type of the phenomena, we quote here one or two incidents, coming through other mediums, which will serve to indicate that the same general character of phenomena appears in all.

Thus, in the case of Mrs. Smead, the following incident occurred. The sitting was held on the anniversary of the sitter's wedding-day—a fact certainly unknown to the medium, or to any one but the sitter herself. Yet her husband appeared at the sitting and apparently communicated as follows:—

“ . . . ‘Yes, you know we used to talk about it [pause] and [pause] happier on [pencil ran off sheet]. So it should be only to you to-day, my love. I do not want to talk to any one else. We went alone that day and on the cayes [southern pronunciation for ‘cars,’ often spelled ‘cyahs,’ pause and apparent excitement]. You know [pause] your mother did not want to part with her daughter, but we were so happy. (‘Who else was at our wedding?’) [Confusion and scrawls in which apparent attempts at the letter ‘o’ are evident] *ouch* [common expression among the negroes, but was a specially common one with an old negro servant of the family. He prepared the wedding luncheon.]

“ ‘He says, Law missie. [Mrs. B. again broke down sobbing.] Don't cry [pause]; it is no time for weeping, but you must be like as that other day [pause] yes [pause]. We do not want you to weep. (‘Oh, is that Amos?’) [excitement] yes, they know [pause] . . . [apparently something about going.] It is time, this friend says. No, I will kiss my sweatheart [sweetheart] and go [pause] I would talk more now, but I must go. I do not want to go . . . go. Keep my words for your comfort; for you know my love. I cannot want you to give it to to to [?] [erased apparently] yes, others, my words. I said not my love. C, [pause, pencil goes back and begins again, superposing on C.] Capten. [His name was Captain Benton.] ”¹

¹ *Proceedings*, American S.P.R., vol. i., pp. 621-2.

The Case of Mrs. Thompson.

One very interesting and promising case of trance phenomena, which the Society was unable, unfortunately, to follow up, was that of Mrs. Thompson, reports on whose phenomena were published in vols. xvii. and xix. of the *Proceedings*. In these sittings a number of striking incidents occurred, among many not so remarkable. In the sittings of Dr. van Eeden, for example, very strong proofs of identity were forthcoming. In his report to the Society he says:—

“. . . For instance, the young man who had committed suicide gave as proofs of his identity Dutch names and places which were not at all in my mind at the moment. This might have been unconscious telepathy. At the same time proper names were given which I had never heard myself. I did not even know such names existed. Yet later, in Holland, I came across people who bore these very names, though their connection (if any) with the young man I could not find out. . . .

“My personal impression [of the value of the evidence] has varied in the following manner. During the first series of experiments, in November and December 1899, I felt a very strong conviction that the person whose relics I had brought with me, and who had died fifteen years ago, was living as a spirit and was in communication with me through Mrs. Thompson. A number of small particulars, which will be found in the notes, produced on me, when taken *en bloc*, the effect of perfect evidence. To regard these all as guesses made at random seemed absurd: to explain them by telepathy forced and insufficient.

“But when I came home, I found on further inquiry inexplicable faults and failures. If I had really spoken to the dead man, he would never have made these mistakes. And the remarkable feature of it was that all these mistakes were in those very particulars which I had not known myself, and was unable to correct on the spot. . . .

“Consequently, my opinion changed. There were the facts, quite as certain and marvellous as before. I could not ascribe them to fraud or coincidence, but I began to doubt my first impression that I had really dealt with the spirit of a deceased person; and I came to the conclusion that I had dealt only with Mrs. Thompson, who, possessing an unconscious power of information quite beyond our understanding, had acted the ghost, though in perfect good faith. . . .

“But on my second visit, in June 1900, when I took with me the piece of clothing of the young man who had committed suicide, my first impression came back, and with greater force. I was well on my guard, and if I gave hints, it was not unconsciously, but on purpose; and, as will be seen from the notes, the plainest hints were not taken, but the truth came out in the most curious and unexpected ways. . . .

“Up to the sitting of June 7th, all information came through Nellie, Mrs. Thompson’s so-called spirit-control. But on that date, the deceased tried, as he had promised, to take the control himself, as the technical term goes. The evidence then became very striking. During a few minutes—though a few minutes only—I felt absolutely as if I were speaking to my friend himself. I spoke Dutch and got immediate and correct answers. The expression of satisfaction and gratification in face and gesture, when we seemed to understand one another, was too vivid to be acted. Quite unexpected Dutch words were pronounced, details were given which were far from my mind, some of which, as that about my father’s uncle in a former sitting, I had never known, and found to be true only on inquiry afterwards. . . .”

Mrs. Thompson, it need hardly be said, is entirely ignorant of the Dutch language. Dr. van Eeden’s next remarks are very interesting and important—enabling us to understand much of the difficulty and confusion that exists, in cases of this character. He says:—

“But being now well on my guard, I could, exactly in this most interesting few minutes, detect, as it were, where the

failures crept in. I could follow the process and perceive when the genuine phenomena stopped and unconscious play-acting began. In hardly perceptible gradations the medium takes upon herself the rôle of the spirit, completes the information, gives the required finish, and fills in the gaps by emendation and arrangement. . . .

“We see how recklessly and carelessly the spirit-control, Nellie, enters into explanations about things of which she evidently understands nothing, though she referred to them spontaneously herself. And we see, moreover, how easily and imperceptibly the rôle of any spirit is taken up by the medium, after the genuine information has ceased. . . .

“At this present moment it is about eight months since I had my last sitting with Mrs. Thompson in Paris, and yet when I read the notes again, it is impossible for me to abstain from the conviction that I have really been a witness, were it only for a few minutes, of the voluntary manifestation of a deceased person.”

CHAPTER VII

ON THE INTRA-COSMIC DIFFICULTIES OF COMMUNICATION

WE have now brought forward and presented for the reader's consideration a number of striking examples of the apparent communication of a deceased person with the living, through the instrumentality of a medium's organism; and we think that the evidence, supported as it is by great masses of material of like character, is sufficiently strong to warrant our belief in the persistence of individual consciousness and personal identity; and this renders some form of spiritism necessary, as a working hypothesis. Granting that communication between this world and another is open to us on occasion—*how*, we know not—it becomes a problem for science to study this process of communication, and endeavour to ascertain something about it. There must be tremendous difficulties in the way of any sort of communication—this being evidenced by the rarity of the phenomena. The facts once admitted, however, we should set ourselves to work, in an effort to find out all that we can concerning them—their meaning, and interpretation—and to discover, if possible, the difficulties that prevent a greater facility for intra-cosmic communication.

We have but little material of our own to add in this connection in the way of original suggestions, and shall for the most part refer to the opinions of Drs. Hodgson and Hyslop, who have studied Mrs. Piper and the trance

state longer and more closely than any one else who has so far published a report on a case of this type. There are many facts to be taken into consideration in cases of this character, the chief of which is the prejudice of the reader, which is sure to colour his viewpoint largely in his consideration of all such phenomena. He expects to hear certain things, if "spirits" are to talk at all; and if he does not hear the things he anticipates, he immediately comes to the conclusion that no spirit has been there at all! In other words, he insists on dictating *what* the intelligence shall say to him; and is not content to receive whatever they find it possible to give. Only when this attitude is abandoned, and more sympathetic open-mindedness is shown, will progress be made in this field.

The chief objection raised, of course, by all, or nearly all, is the apparent *triviality* of the facts stated, or told, by the communicating intelligences. "If spirits are really there," we often hear, "why do they not tell us something really worth while—something that we do not know?" The triviality of the incidents repels most investigators, and causes them to conclude that no spiritual intelligence is really present at all. This, however, is quite an unjustifiable conclusion, as can easily be shown.

In the first place, we have no reason to suppose that "spirits" have any more knowledge of certain things than we ourselves possess. Only the traditions of theology cause people to cling to the idea that spirits are in possession of a great amount of illumination and intelligence unknown to us. In reality, this conception is contrary to all that we know of continuity and evolution; and everything would lead us to suppose that spirits, leaving the body, would start in another world just as they left off here—no better and no wiser; and

that any progress they might make would be due to their own effort and labour in the next life. We should even have to assume that, for some time at least, immediately following physical death, the spirit would be in possession of far *less* intelligence, possess less mental life, than it did here, for the simple reason that the shock to consciousness, which death would surely occasion, would render anything like the full manifestation of its powers quite impossible. (This seems to be especially the case with suicides; they take a very long time to recover, and they are not clear, mentally, for weeks and even months after death.) However, all spirits do ultimately return to their normal condition, to all appearances, sooner or later. We only make these remarks to indicate that we must not expect any great intellectual brilliancy or illumination from spirits soon after death.

Again, it has been proved abundantly that ordinary persons, even here in this life, deliberately choose trivial incidents to identify themselves to others. They do not indulge in grand spiritual exhortations, but in trivial, personal incidents. And, when we come to think of it, only such incidents can ever prove personal identity. Suppose we are speaking to a *soi-disant* spirit, through a medium. He claims to be so-and-so. How do we know that it is he? Simply by getting him to relate certain specific but trivial incidents connected with his own past life, and known to no one else, but which can afterwards be verified. He could never prove his identity by any amount of scientific teaching or spiritual exhortation. All such material we should have to assume, came from the subliminal consciousness of the medium; and, until personal identity is established, we have no proof whatever that any intelligence, other than that of the medium, is operative. But if we obtain certain specific facts bearing on the personality of the deceased, and

seeming to indicate that his personality is active, and can accept it as truth; then we have some sort of evidence that he is really there—for, otherwise, how account for the statements? And when we take into consideration the well-known fact that persons will deliberately choose trivial incidents to identify themselves to others in this life, we are forced to conclude that the only way to settle this question of spirit intercourse is to prove personal identity by means of trivial, personal incidents—just such incidents as that person would choose, were he alive.

Another difficulty that we have to contend with is this. It is probable that the conditions are so different on the “other side” that the communicating intelligences find it difficult, if not impossible, to describe things to us as they are, or to make us understand and appreciate them. Were a deaf man to try to explain the visible world to a blind man; or the blind man the nature of sound to a deaf man, each would find his task next to an impossibility. He would have no language with which to express his thoughts and ideas; and, however hard he might try, it is improbable that the other would ever have any real conception of that which the other described. It is probably the same in this case. When spirits undertake to explain to us the nature of the next life, and what goes on there, they have no language with which to express their thoughts, and we can never get a clear idea of what their world may be like. Again and again this is stated to be the case by those communicating; and it is certainly possible, not to say probable, that such *is* the case.

Still another difficulty, in obtaining any glimpses of intelligence from across the border, is this. It is probable that they on the other side do not see us and come into *direct* contact with our material world, any more than we

do with theirs. We can see a spiritual world only occasionally, fitfully, through the instrumentality of specially gifted seers ; and there is evidence which seems to indicate that they must have "mediums" on the other side, corresponding to our mediums on this side, to permit of communication at all ! Thus, communication is not an easy process, but a difficult and tedious one ; and it is probable that "spirits"—granting that they exist—do not come into much closer personal contact with us than we do with them.

Still another difficulty in communicating is the fact that the nervous mechanism of the medium, which the spirit supposedly controls, is unfamiliar to the operating intelligence ; and he or she has to learn to use it before any clear and systematic messages can be sent or received. We find no difficulty in operating *our own* nervous mechanism, when in health, because it is educated to our needs, and we understand it thoroughly ; but it must be remembered that, even in this life, such education is a long and a tedious process, and that very little is required to bring about a condition which prevents the proper operation of that nervous mechanism. How much greater must be the difficulty experienced by a spirit in working, or operating, through the nervous mechanism of *another* organism entirely ! It is a wonder that anything clear and systematic is obtained at all !

There is yet another difficulty to be overcome before any clear messages are received from the other side ; and, to some, this difficulty is the greatest of all. Both Dr. Hodgson and Dr. Hyslop take this view, which is now very widely accepted in certain directions. The difficulty is this. It is probable, both from the contents of the messages and from actual statements made by the communicators, that the intelligence has to pass into a more or less abnormal or dream-like state of conscious-

ness, *while communicating*. However normal such an individual may be, in his ordinary life (so to speak), he must enter this sort of dream-like or trance condition, to communicate; and this would, of course, befog his mind, and render the so-called communications confused and uncertain. Dr. Hodgson first pointed this out, and insisted very strongly upon this fact in his Second Report (*Proceedings of the Society for Psychical Research*, vol. xiii., pp. 284-582). He then clearly indicated the difficulties which we should expect "spirits" to experience, who are really communicating with us. Dr. Hyslop has lately defended and extended this view, and, in his latest book, *Psychical Research and the Resurrection*, he says:—

"One good illustration of this abnormal mental condition on the part of communicators is found in an incident told me by Dr. Hodgson before his death, and which I have mentioned elsewhere in another periodical. It was the incident of a communicator telling through Mrs. Piper a circumstance which he said had represented some act of his life. But inquiry showed that no such act had been performed by him when living. But it turned out that *he had made the same statement in the delirium of death*. It is especially noticeable in certain forms of communication of the 'possession' type that the last scenes of the deceased are acted over again in their first attempts to control or communicate. The mental confusion relevant to the death of my father was apparent in his first attempt to communicate through Mrs. Piper, and when I recalled this period of his dying experience, this confusion was repeated in a remarkable manner with several evidential features in the messages. Twice an uncle lost the sense of personal identity in the attempt to communicate. His communications were in fact so confused that it was two years before he became at all clear in his efforts. He had died as the result of a sudden accident. Once my father, after mentioning the illness of my living sister and her name, lost his personal identity long enough to confuse

incidents relating to himself and his earthly life with those that applied to my sister and not to himself. The interesting feature of the incident was that, having failed to complete his messages a few minutes previously, when he came back the second time to try it again, Rector, the control, warned me that he was a little confused, but that what he wanted to tell me certainly referred to my sister Lida. Then came the message, claiming experiences for himself, when living, that were verifiable as my sister's. On any theory of the facts a confused state of mind is the only explanation of them, and when associated with incidents of a supernormal and evidential character they afford reasonable attestation of the hypothesis here suggested."

The following quotation further exemplifies this view:—

"At this point Dr. Hodgson read over the automatic writing to indicate that he had got the message and how he understood it. The communications then went on:—

"Your thoughts do grasp mine. Well now you have just what I have been wanting to come and make clear to you, H., old fellow."

"('It is quite clear')."

"Yes, you see I am more awake than asleep, yet I cannot come just as I am in reality, independently of the medium's light."

"('You come much better than the others.') 'Yes, because I am a little nearer and not less intelligent than some others here.'"

"At one of Dr. Hodgson's later sittings the same communicator, George Pelham, used the word 'prisoned' in a passage in which 'prisoning' was in Dr. Hodgson's view the more correct term, and he suggested the correction. George Pelham broke out with the reply:—

"See here, H., "Don't view me with a critic's eye, but pass my imperfections by." Of course I know all that as well as anybody on your sphere. I tell you, old fellow, it don't do to pick [out] all these little errors too much when they amount to nothing in one way. You have light enough and brain enough,

I know, to understand my explanations of being shut up in this body [that of the medium], dreaming as it were and trying to help on science. . . .’

“We have only to study dreams and deliria in order to understand the influences which tend to produce confusion and fragmentary messages. If accidents and shocks in life which are less violent than death disturb the memory, as we know they do; the student of abnormal psychology, being perfectly familiar with the phenomena in numerous cases, would expect that so violent a change as death would disturb memory and reproduction still more seriously. Add to this the mind’s freedom from the body with all the physiological inhibitions cut off, and we might well expect less control of the processes which recall the past in the proper way for illustrating one’s identity. This disturbance might not last indefinitely. The individual might fully recover from it in a normal spiritual life, though the time for this recovery might vary with individuals and with the circumstances of their death. But the recovery of a normal mental balance in the proper ethereal environment on the ‘other side’ would not of itself be a complete guarantee of its retention when coming into terrestrial and material conditions to communicate. We may well suppose it possible that this ‘coming back’ produces an effect similar to the amnesia which so often accompanies a shock or sudden interference with the normal stream of consciousness. The effect seems to be the same as that of certain kinds of dissociation which are now being studied by the student of abnormal psychology, and this is the disturbance of memory which makes it difficult or impossible to recall in one mental state the events which have been experienced in another. G. P. showed always an impressively marked and characteristic personality. Hart, on the other hand, did not become so clear till many months later. I learned long afterwards that his illness had been much longer and more fundamental than I had supposed. The continued confusion in his case seemed explicable if taken in relation with the circumstances of his prolonged illness, including fever, but there was no assignable relation between his confusion and the state of my own mind. . . .

“ But the proper evidence for this dream life or semi-trance and somnambulic condition will be found in incidents which also contain supernormal facts. I quote one of remarkable interest. A man who had had sittings with Mrs. Piper before his death, some time after his decease, which took place in Paris, turned up as a communicator without Mrs. Piper having known of his death. He had always been perplexed by the confusion and fragmentary nature of the messages of his deceased friend George Pelham. When he himself became a communicator, it was some time before he was able to communicate clearly. When he could communicate he delivered the following message to Dr. Hodgson:—

“ ‘What in the world is the reason you never call for me? I am not sleeping. I wish to help you in identifying myself. I am a good deal better now.’

“ (‘You were confused at first.’)

“ ‘Very, but I did not really understand how confused I was. I am more so when I try to speak to you. I understand now why George spelled his words to me.’

“ The allusion to George Pelham’s spelling out his words is an evidential incident, as it was verifiable. He recognised after death the explanation of confusions which he could not understand while living. A similar though not evidential passage came from this George Pelham himself. It represents the point of view which I am advancing to account for the curious nature of the messages, and was perhaps the communication which suggested the theory to Dr. Hodgson. I quote it from the latter’s report:—

“ ‘Remember we share and always shall have our friends in the dream life, *i.e.* your life so to speak, which will attract us for ever and ever, and so long as we have any friends *sleeping* in the material world;—you to us are more like as we understand sleep, you look shut up as one in prison, and in order for us to get into communication with you, we have to enter into your sphere, as one like yourself asleep. This is just why we make mistakes as you call them, or get confused and muddled, so to put it, H.’

“ The general supposition which, to the mind of Dr. Hodgson

and myself, explains the persistent triviality and confusion of the messages is that *the communicating spirit at the time of communicating (not necessarily in his normal state in the spirit world) is in a sort of abnormal mental state, perhaps resembling our dream life or somnambulant condition.* We cannot determine exactly what this mental condition is at present and may never be able to do so, but it can be variously compared to dream life, somnambulism, hypnosis of certain kinds, trance, secondary personality, subliminal mental action, or any of those mental conditions in which there is more or less of disintegration of the normal memory. Ordinary delirium has some analogies with it, but the incidents are too purposive and too systematic in many cases to press this analogy to any general extent. But the various disturbances of the normal consciousness or personality in the living offer clear illustrations of the psychological phenomena which we produce as evidence of spirits when these phenomena are supernormally produced.

“ But this hypothesis does not explain all the confusion involved. There is the more or less unusual condition of the medium, mental and physical. The medium through which the messages purport to come is in a trance condition, and when not a trance the condition is one which is not usual, and perhaps in the broad sense may be called abnormal, though not technically this in any important sense. This condition offers many obstacles to perfect transmission of messages. It is illustrated in many cases of somnambulism in which the stream of consciousness goes on uninhibited, and when this is suppressed, as it is in deep trances, the difficulty is to get systematic communications through it. Add to this the frequently similar condition of the communicator, according to the hypothesis, and we can well imagine what causes triviality and confusion. The student of abnormal psychology will recognise the applicability of this view at once, even though he is not prepared to admit that it is a true theory.

“ There are two aspects of such an hypothesis which have to be considered. They are its fitness or explanatory character, and its evidential features. They are quite distinct from each other. The hypothesis might fit and yet have no evidence that

it was a fact. I think, however, that all who are familiar with abnormal mental phenomena will admit without special contention that the hypothesis will explain the triviality and confusion of the alleged messages, but they will want to know what evidence exists for such a view. It is to this aspect of the theory that we must now turn.

“Dr. Hodgson had discussed this supposition in his report on the Piper case in 1898. It is therefore not new, and some incidents in his communications seem to point to the influence of this view on his messages. I shall quote one passage from his report in illustration of the hypothesis and of some of his evidence for it:—

“‘That persons just deceased,’ says this report (p. 377), ‘should be extremely confused and unable to communicate directly, or even at all, seems perfectly natural after the shock and wrench of death. Thus in the case of Hart, he was unable to write the second day after his death. In another case a friend of mine, whom I may call D., wrote, with what appeared to be much difficulty, his name and the words, “I am all right now. Adieu,” within two or three days after his death. In another case F., a near relative of Madame Elisa, was unable to write on the morning after his death. On the second day after, when a stranger was present with me for a sitting, he wrote two or three sentences, saying, “I am too weak to articulate clearly,” and not many days later he wrote fairly well and clearly, and dictated also to Madame Elisa, as amanuensis, an account of his feelings at finding himself in his new surroundings. Both D. and F. became very clear in a short time. D. communicated later on frequently, both by writing and speech.’”

We think that, were we to assume the truth of some such theory as the above—and there is a great deal of evidence in its favour—we could account for nearly all the difficulties involved, and could see why it is that more definite information is not received from the “other side.”

There are doubtless other difficulties also which the communicating intelligence would have to overcome, some of which have been pointed out in the before-mentioned report. But for the sake of our present purposes the above will at least suffice to illustrate the enormous difficulties which we should expect any surviving "spirit" to have to overcome were he to attempt to send "messages" to those still in the body.

CHAPTER VIII

CONCLUSIONS

WE now approach the termination of a task which has been, for both of us, a labour of love and of keen intellectual enjoyment.

In the First Part of this volume, we studied death from its purely physical or physiological side; summed up what was known of death, and advanced our own separate theories as to the nature of the change which we see before us. Whether true or not, such speculations are not, we hope, without value — if only because of the impulse they may give others to speculate in this direction. If we have succeeded, in any way, in formulating a definite theory or conception of the nature of life and of death, that, too, is not without its interest to science.

In Part II. we considered the varied speculations in which man has indulged since he began to consider these great questions; and found that, although the common arguments afford a strong *presumption* in favour of conscious survival, they none of them *prove* it, or warrant our belief on such grounds alone.

Part III. we devoted to a discussion of the scientific *evidence* (or, rather, a very small part of it) for “survival” — the strength of which the reader must decide for himself. Taken *en masse*, we cannot help feeling that we have here a great quantity of material, all evidence of the supernormal and pointing to “spiritism” as its most intelligible interpretation — which must accordingly be

looked upon as a rational theory, and accepted provisionally as a "working hypothesis." It may not be absolutely proved by the evidence in the case, but every theory has a right to be tested—and a right to win acceptance, if it be found to fit into and satisfactorily explain all the facts.

The nature of death is likely to remain unsolved for many years to come—so long as we are ignorant of the nature of life. When the one is isolated, and its innermost "essence" known, then we shall know and understand the other. But in this field, as in all others, there must be pioneers—the first crude attempts must be made to solve the problem. We can but hope that our book may in some way have helped to solve it—may, perhaps, be a starting-point for future work by qualified experts. The world-old problem, "If a man die, shall he live again?" might, perhaps, be answered, were we to study minutely and carefully enough the evidence bearing upon this all-important subject—DEATH.

APPENDICES

APPENDIX A

On "Vampires."

FOR several centuries there has existed a belief in *vampires* in certain parts of the world, especially in Silesia, in Moravia, and along the frontier of Hungary. Even to this day such stories are circulated among the people, and implicitly credited by them. It is asserted that certain persons, who have died, have the power of returning from time to time (generally at night) and sucking the blood of living persons; and that in this manner they are enabled to maintain themselves in a state, if not of life, certainly one very different from death. They are supposed to be enabled to maintain this sort of intra-cosmic existence so long as they can find fresh blood with which to supply themselves. Preferably they attack young persons who are full-blooded and possess an abundance of vitality. Occasionally these persons wake during the process, and frightful have been some of the fights that are said to have taken place between mortal and vampire! Sometimes one and sometimes the other would be victor. More commonly, however, the person so attacked would not wake, and then he or she would rise in the morning pale, emaciated, weak, and exhausted, for no apparent reason. This went on, as a rule, until that person died, when another would be attacked in like manner. This would continue until the vampire was finally caught, exhumed, his head cut off, and his heart cut out or impaled; when, with a fearful shriek, he would finally give up the ghost. When the body of the vampire was impaled, fresh blood would gush out. The body would be so full of blood, on occasion, that it could scarcely contain it all; and it would be found dripping from the lips, or even exuding from the eyes, ears,

and pores of the skin! Any one bitten by a vampire would become one himself when his turn came to die. Such was the gruesome belief held for several hundred years in parts of Europe, and which is even yet not extinct.

In a curious old work entitled *The Phantom World*, its author, Augustine Calmet, a priest, attempted to find a rational explanation of these stories, and his ingenious speculations will be found in vol. ii. of that treatise. He says:—

“ I lay down at first this principle, that it may be that there are corpses which, although interred some days, shed fluid blood through the pores of their body ” (p. 41).

Although this can hardly be said to be so, it is almost the case, on occasion, as may be seen by referring to the discussion under “ Putrefaction,” pp. 37–8. However, our author goes on:—

“ I add, moreover, that it is very easy for certain people to fancy themselves sucked by vampires, and that the fear caused by that fancy should make a revolution in their frame sufficiently violent to deprive them of life.”

The author was evidently well aware of the power of “ suggestion ”! Returning to the original theme, however, he continues:—

“ I now come to those corpses full of fluid blood, and whose hair, beard, and nails had grown again. One may dispute these parts of the prodigies, and be very complaisant if we admit the truth of a few of them. All philosophers know well enough how much the people, and even certain historians, enlarge upon things which appear but a little extraordinary. Nevertheless, it is not impossible to explain their cause physically. Experience teaches us that there are certain kinds of earth which will preserve dead bodies perfectly fresh. The reasons for this have been often explained without my giving myself the trouble to make a particular recital of them. . . . As to the growth of the nails, the hair, and the beard, it is often perceived in many corpses. While there yet remains a good deal of moisture in the body, it is not surprising that some time we see some augmentation in those parts which do not demand a vital spirit. . . .

“The fluid blood flowing through the canals of the body seems to form a greater difficulty, but physical reasons may be given for this. It might very well happen that the heat of the sun, warming the nitrous and sulphurous particles which are formed in those earths that are proper for preserving the body, those particles having incorporated themselves in the newly-interred corpses, ferment, decoagulate, and melt the curdled blood, render it liquid, and give it the power of flowing by degrees through all the canals. . . . As to the cry uttered by the vampires when the stake is driven through their heart, nothing is more natural; the air which is there confined, and thus expelled by violence, necessarily produces that noise in passing through the throat. . . .”

The figures of the vampires that were seen, Calmet considers to be apparitions, occasionally helped out by dreams and other morbid phenomena. Considering the fact that this author lived and wrote in 1751, his speculations may be considered quite remarkable.

Vampires are, however, not unknown in these days. In an article on “Vampires” in *The Occult Review*, June 1908, Dr. Hartmann described a method of what might be termed natural vampirage. He said:—

“In the Bible it is claimed that when David grew old, a young girl was given to him to supply him with vitality; and not very many years ago certain institutions based upon this principle were existing in France. Young girls were supplied to old men or women as bedfellows. Usually the old person (after having had to submit to certain precautionary measures) had to sleep between two girls, a fair-haired and a dark one, for which privilege he had to pay a certain sum. All of these girls soon lost vitality, some of them died, and these establishments were finally closed by order of the police.”

If popular opinion is correct in its assumption that vitality may thus be transferred from the young to the old, it is easy to understand that there may be a great deal of truth in the theory that it is not healthy for children to sleep in the same bed with old persons. Certainly medical science has given at least tacit approbation to this opinion.

Dr. Hartmann also cites the case of the “wonder girl” at

Radein, who attracted considerable attention some time ago. For seven years, according to the statement of investigators, this girl lived without food or drink, and yet was able to maintain phenomenally good health! According to Dr. Hartmann's theory, she lived upon the vitality of others.

"Instead of taking food," he says, "she withdrew vitality from the children who were brought to her for the purpose of receiving her blessing. Some of these children sickened, some wasted away and died. She did not do this consciously and willingly, for she was a very pious person, and, owing to her long fasting, even considered a saint."

There are historical records of many similar cases, but nearly all of them have been proved to be fraudulent; and at the present day science refuses to accept any of them as authentic.

APPENDIX B

Life and Vitality.

SEVERAL times we have had occasion to refer to the theory of vitality, outlined and defended in *Vitality, Fasting and Nutrition*; and it might be well, in this place, briefly to refer to the argument there set forth. It will only be possible to mention a few of the arguments, and those briefly; but it may suffice, at all events, to give the reader an idea of the theory and render the subsequent argument clearer. In brief, the theory is this:—

The generally accepted view of the causation of vital energy is somewhat as follows:—Food taken into the body is burned up or oxidised in it; and during this process of oxidation energy is liberated and given to the system, in very much the same way as the fuel of the engine supplies it with energy. In fact, the two (the engine and the human body) have been frequently compared by physiologists, and their similarity is apparently true; but I endeavoured to show that the body does not derive its energy from the food eaten at all, but from another source altogether, and that the present system of regarding the vital

energy of the body as due to food combustion (chemical combustion) is totally false. I believe that the present theory is disproved by a number of arguments—chief among them being the phenomena of fasting, which show that patients frequently, if not invariably, get stronger as the fast progresses, whereas they should get weaker. If the daily food supplied the strength of the body and its vital energy, it should weaken when this food is withdrawn, but the facts are that—in all diseased conditions at any rate—this is not the case, and that patients who enter upon a fast so weak and debilitated that they cannot walk down stairs, are strong enough to be walking four and five miles a day, at its conclusion, and after having fasted forty or fifty days! Again, we need only observe the facts of everyday experience. If we derived our energies from the food eaten, it would only be necessary to go first to the dining-room and then to the gymnasium, in order to recuperate our strength and energies. But we all know from actual, practical experience that such is not the case: we must seek sleep and rest at the end of a trying day's work, and nothing will take the place of this rest and sleep, and no amount of food will replace the energy lost. There is therefore *some* source of energy other than the food, distinguishing the body from the engine on that account—whose energies are derived exclusively from the fuel consumed. In the self-recuperative powers of the organism, and in its necessity for sleep, I see distinctions which differentiate it from the engine or any other mechanically operating machine. "The engine does not recuperate and restore itself, during its periods of rest, and the body does; the engine continues to wear out, and can never replace its own parts by new ones, and the body can. . . . The great difference between them is that one is self-recuperative and human and needs sleep in order to effect this; and the other is not self-recuperative, and needs no rest, so long as it works at all; and, in spite of this most obvious and all-important difference (since sleep is the greatest restorer of vital energy, as daily observation shows), and merely to bolster up the absurd attempt to include vital force in the law of conservation; and in spite of the most everyday and obvious proofs to the contrary, the scientific world has continued to ignore this question of sleep altogether, and to treat this matter of the renewal of the vital force by food as a proved fact, instead of a mere theory—open to these very objections, and a monstrous absurdity because of them. In short, the plain differences between the human body and the steam engine have been completely ignored, and treated as if they were non-existent—merely because they were

impossible to dovetail into the present materialistic theory . . ." (pp. 244-5).

I contend, in short, that the life or vital force is wrongly placed in the circle of forces, each of which is convertible into the other—*i.e.*, it is wrongly placed in the law of conservation of energy. I hold that "life is absolutely alone, separate, distinct, *per se*," and that "it is in no wise related to, or derivable from, any of the other forces." I believe that we replenish our energies by rest and sleep alone (this giving us a new theory of sleep)—it being defined as "that physiological condition of the organism in which the nervous system of the individual (in precisely the same manner as the electric storage battery) is being recharged from without, by the external, all-pervading, cosmic energy, in which we are bathed, and in which we live and move and have our being" (p. 309). I conceive the organism as a vehicle for transmitting vital energy, merely—"we have the will to expend, but never to make or 'manufacture' this energy by any means in our power. I contend, further, that the body is not an exact parallel, in its action, to the steam engine . . . but rather resembles the *electric motor* which has the power of recharging itself with life or vital energy, just as the motor of the electrician receives its energy from some external source—the brain or nervous system being that part of us which is thus recharged, and constituting the motor of the human body; that this recharging process takes place during the hours of rest, and particularly of sleep, and at such times only—all activity denoting merely an expenditure or waste of this vital force; that we can thus only *allow* or *permit* vitality to flow into us, as it were, in this recharging process—such coming from the universal, all-pervading, cosmic energy, with which we are surrounded, and which our nervous systems (and bodies) merely transmit or transform into the external work of the world—acting merely as *channels through which* the all-pervading energy may find personal expression; channels through which it may individually manifest" (pp. 249-50). Death was defined by me then as "that condition of the organism which renders no longer possible the transmission or manifestation of vital force through it—which condition is probably a poisoned state of the nervous system—due, in turn, to the whole system becoming poisoned by toxic material absorbed from the blood" (pp. 330-1).

Now, if the vital energies, the life forces, are not dependent upon the daily food, then materialism is threatened—for it is doubtful if life, or the vital forces of the body, can be classed

with the other energies of the universe, they seem rather to occupy a separate place. I pointed this out at the end of my chapter on "Vitality," where I said (pp. 300-3):—

"It is not the province of this book to touch upon the wider problems of world philosophy or metaphysics, but I cannot refrain from adding one or two remarks upon what I conceive to be the logical philosophic import of my theory. For I can see in it far more than a mere scheme of vitality; more than a mere speculation as to its nature and its relation to the human organism and to the intake of food; more than its revolutionary effect upon medical practice—important as these should be. It is more than all these. It is an answer, if not an absolute refutation, of the present, generally accepted materialistic doctrine of the universe, and its influence upon our conceptions of the origin and destiny of the human soul. Without further ado, let me illustrate the great importance of the theory in its application to the phenomena of mind, and the world-old question of the immortality of the soul.

"I have endeavoured to show, in the preceding pages, that the life or vital force is in no way inter-related with, transformable and transmutable into any one or other of the physical forces known to us; that it seems to stand absolutely *per se*, in this respect, and that, in fact, its laws and actions are, apparently, totally different from—if not actually opposed to—the other forces, in their actions and laws; that it is in no way related to them, and that the nervous or life energies are different, *toto caelo*, from all other forces or energies whatsoever. But if this is the case, we must most certainly revise our ideas and beliefs with regard to the supposed impossibility of the soul's immortality; for that problem at once assumes a different and a new meaning in the light of these newer facts.

"Let me better illustrate my meaning by first quoting from Professor Shaler's excellent book, *The Individual* (pp. 301-2), the following paragraph, which tersely states the argument of the materialistic philosopher, and well illustrates the position assumed by the majority of physicians, psychologists, biologists, physicists, and in fact by most scientific men to-day. It is this:—

"... The functions of the body are but modes of expression of the energy which it obtains through the appropriation of food. As regards their origin, these functions may be compared to the force which drives the steam engine, being essentially no more mysterious than other mechanical processes. Now, the mind is but one of the functions of the body, a very specialised work of

the parts known as the nervous system. We can trace the development of this mind in a tolerably continuous series from the lowest stages of the nervous processes, such as we find in the *Monera* or kindred *Protozoa*, to Man. Thus it is argued that, though the mental work of our kind is indefinitely more advanced than that of the primitive animals, there is no good reason to believe that it is other than a function of the body; that it is more than a peculiar manifestation of the same forces which guide digestion, contract muscles, or repair a wound. Furthermore, as is well known, at death all the functions of the organic body fall away together in the same manner and at essentially the same time, so there is in fine no more reason to believe that the functions of the brain persist than that a like persistence occurs in the digestive function or in the blood-impelling power of the heart. All this, and much more, can be said to show that the phenomenon of death appears to possess us altogether when we come to die.¹

“Now this position is, to my mind, perfectly logical. The conclusion arrived at is, indeed, the only one to which we can possibly come—is, in fact, the actual ‘truth’ if the premises are correct. No! Provided that these are true, I can see no possible loophole of escape for the logical mind; the conclusion is inevitable. Professor Shaler’s attempts to abstract himself from the position into which he has been led, and which he so well and plainly states, are to me pathetically futile; it is a hopeless failure; his arguments would, I think, prove quite inconclusive to the critical, scientific thinker; and, in any case, philosophic and metaphysical speculations have no place whatever in a purely scientific argument of this kind—which should deal with facts, and facts only.¹

¹ “Professor John Fiske, indeed, tried to surmount this difficulty—here presented—in his writings, and I select the following passage as illustrative of his argument. He says (*Life Everlasting*, pp. 77-9): ‘. . . If we could trace in detail, the metamorphosis of motions within the body, from the sense organs to the brain, and thence onward to the muscular system, it would be somewhat as follows: the inward motion, carrying the message into the brain, would perish in giving place to the vibration which accompanies the conscious state; and this vibration in turn would perish in giving place to the outward motion, carrying the mandate out to the muscles. If we had the means of measurement we could prove the equivalence from step to step. But where would the conscious state, the thought or feeling, come into this circuit? Why, nowhere. The physical circuit of motions is complete in itself; the state of consciousness is accessible only to its possessor. To him it is the subjective equivalent of the vibration within the brain, whereof it is neither the producer nor the

“No: provided that the premises are correct, the conclusion stated by Professor Shaler is not only legitimate, but absolutely incontrovertible, and the conclusion we are driven to adopt if the premises of the argument are sound.

“And now we perceive the great significance of my theory in its relation to the problem of immortality, and of its revolutionary effects upon the present-world philosophy. It is not only anti-materialistic or negative, but pro-vital and positive in its attitude. It is not destructive, but constructive; not devolutionary, but evolutionary. For we now perceive that this great argument against immortality crumbles to dust; it is worse than useless. The premises are not correct; for, as we have seen, nervous or vital force is not dependent upon food combustion at any time, nor under any circumstances whatever; and consequently mental energy—one form of nervous energy—is not dependent upon this physiological process either; it is altogether independent of it; mental energies, together with all other bodily activities, are quite separate and distinct from, and independent of, this process; so that, when the process itself ceases, it is no proof whatever—and there is not even a presumption in favour of the argument—that mental life ceases at the death of the physical organism. In fact, the presumption is all the other way. So that this main, oft-quoted, and central argument against survival is no valid objection at all. Provided my theory be true, it proves to have no foundation in fact. The possibility of conscious survival of death is thus left quite an open question—capable of scientific investigation or of philosophic dispute; but the grand, negative physiological

offspring, but simply the concomitant. In other words the natural history of the mass of activities that are perpetually being concentrated within our bodies, to be presently once more disintegrated and diffused, shows us a closed circle, which is entirely physical, and in which one segment belongs to the nervous system. As for our conscious life, that forms no part of the closed circle, but stands entirely outside of it, concentric with the segment which belongs to the nervous system.’ (See also in this connection, *The Parallelism of Mind and Body*, by Arthur K. Rogers, Ph.D., pp. 3-4; Sir Oliver Lodge, *Life and Matter*, p. 116, &c.). This theory is defective, it seems to me, in that it takes no account of abstract thinking, but only of sensations; and we know that a man may sit still at his desk all day and think, and yet be as tired as though he had exercised vigorously, and even more so. Or he may exercise half a day and think half a day, and be as tired as though he had done either one or other the whole day. Obviously, then, thinking *does* use up vital energy; and, inasmuch as this energy is derived from our food—so it is claimed—the mental life must be directly or indirectly dependent upon the food supply and the energy derived from it.”

argument vanishes.¹ And it is because of this fact that I think my theory not only of practical importance to the physician, but of theoretical importance in its bearing upon human thought; upon current scientific and religious opinion; upon the morals and the ethics of the race."

And, as I contended, at the end of the book (p. 580): ". . . The theory has tremendous philosophic, no less than medical importance—enabling us to see that surrounding this universe, and pervading it, is a conscious vital energy which is, in all probability, the energising force of the universe, and which, for want of a better name, we might call God."

APPENDIX C

On the "Creation" of Life.

It may be contended that our theories of life and death are not in accord with the newer teachings of science, in so far as they relate to the recent experiments in the creation of life by artificial means. Professors Loeb, Butler Burke, Bastian, Le Dantec, and others have recently been conducting a series of investigations in which it would seem that life has been created from inorganic substances, and, for that reason, it may be said that it cannot be the character of life postulated in this volume, and, consequently, that our theory of death must also be at fault. If life can be brought into being by means of chemical combinations and compounds, it might logically be urged that it is closely related to the other material energies, and by no means a force or energy *per se*. We

¹ "I would point out in this connection that, if this theory of vitality be true, there can be no valid objection to the actual existence—far less the investigation of—psychic phenomena, because the objections to a future life would thus be cleared away, and the field left open for facts. Such facts psychic phenomena apparently are; and at least there can no longer be any objection to their study. I would also point out that the old materialistic notion, which compared the body to a lamp, vitality and life to the flame, which simply ceased to exist with the extinction of the lamp, is thus shown to be invalid, and based upon an incorrect interpretation of the facts. Life is not the result of any process of combustion or oxidation whatever, but, on the contrary, the guiding, controlling principle—the real entity, for whose manifestation the body was brought into being."

think that this view of the facts is based upon a superficial examination only. In the first place, the experiments themselves are largely open to question. Many biologists have never accepted Dr. Bastian's work, and do not accept it to-day, while Dr. Burke's researches are now all but universally discredited. Dr. Burke experimented upon radium and sterilised bouillon, and created, apparently, minute organisms which he called "radiobes." It was afterwards ascertained, however, that these organisms could be duplicated without either radium or bouillon, and that they further lacked all the essentials of life. Dr. Bastian's experiments are more conclusive. Having placed some cleansed chemicals and distilled water in a sterilised glass flask, he sealed this hermetically while steam was issuing from the neck, and then immersed this flask in a fluid at a temperature of 260° F. for twenty minutes. The flask was then removed and stood in diffused daylight for a few days. At the end of that time its contents was examined, and it was found to contain bacilli which multiplied and showed all the signs of life. There are many imperfections in Dr. Bastian's experiments, and certain biologists have questioned whether the organisms obtained are typical bacilli at all, but for our present purposes we shall grant their existence and assume that the experiments are theoretically perfect—life being present where there was formerly no life.

Now for the interpretations. It would usually be contended under these circumstances that life had actually been created by the chemical substances employed, or through or by means of their combinations and reciprocal influences. But there is another way of viewing the facts which enables us to hold the theory of life herewith advanced, and to perceive that there is no objection to it that can be urged on account of these experiments. Instead of life having been brought into being, let us view the facts from another standpoint.

Let us postulate life as a separate energy or force in the universe. In order to become manifest to us here, it must operate through or by means of a material organism. For it to manifest in this way, the material basis, intermediary for such manifestation, must be perfect, the delicate relations and inter-relations of all the particles of the

material body, as well as its affinities and forces, must be adjusted to one another with the utmost exactitude. If this perfect balance or adjustment is not present, life cannot manifest through that material body. It cannot utilise that particular combination of matter to manifest *through*. On the other hand, if these material conditions are perfect, then life can become manifest to us, because it can utilise the material basis as a medium for its expression or transmission. Life, therefore, might well be a separate force or energy which only becomes manifest to us when such conditions are supplied as render this manifestation possible.

APPENDIX D

Mrs. Piper's Trance State.

A NOTE on Mrs. Piper's trance condition may be of interest in this connection. Mrs. Piper passes into trance somewhat in this fashion: She seats herself upon a chair, remains passive, fixes her eyes upon some point in space or upon the opposite wall, and within five or ten minutes slowly passes into the trance state. Her breathing becomes stertorous, the eyes assume a look of vacancy; gradually the head droops, the body becomes limp, sags forward, and is supported upon the cushions piled upon the table to receive it. The coming-out of the trance condition is most interesting to watch, and no one who has witnessed it can well doubt the genuine nature of the trance state. From fifteen to twenty minutes is frequently required to regain full consciousness and possession of the faculties, and frequently the mind is not clear for an hour or so after apparently normal conditions have been restored. In coming out of the trance the hand first drops the pencil with which the automatic writing has been done, then pushes away the articles ("influences") that have been presented to it. A few moments of passivity then follow. Soon a general writhing movement of the body is noted, accompanied by groans, semi-articulate exclamations, and movements of the hands and arms. The head is then raised and the face

can be seen to be perfectly expressionless. The eyes are generally open and staring into vacancy. In this state words and fragments of sentences are muttered, which can be caught by placing the ear close to the mouth. These fragmentary remarks are frequently of great interest and importance, and supernormal information, such as names, &c., have been obtained at this time, which had been sought in vain during the regular trance state. What apparently happens, and what the controls say *does* happen, is that Mrs. Piper's "soul" is taken out of her body and set to one side, while other entities manipulate her organism, during the trance! That is what the appearances suggest. The trance is certainly genuine. In the early years of the Society's work, Mrs. Piper was carefully tested for anæsthesia and various reactions. It was found that the eyes reacted slightly to light, that her pulse was affected, and that there was, sometimes at least, complete insensibility to pain. In later years, since the control has changed, the trance has become much deeper, and there is now no sensibility such as existed formerly, though no severe pain tests have been tried of late.

APPENDIX E

Superstitions, Sayings, &c., concerning Death.

"SUPERSTITIONS, Sayings, &c., concerning Death," by C. W. J., in *Chambers' Book of Days*, vol. ii., pp. 52-53:—

"If a grave is open on Sunday, there will be another dug in a week.

"This I believe to be a very narrowly limited superstition, as Sunday is generally a favourite day of funerals among the poor.

"If a corpse does not stiffen after death, or if the *rigor mortis* disappears before burial, it is a sign that there will be a death in the family before the end of the year.

"In the case of a child of my own, every joint of the corpse was as flexible as in life. I was perplexed at this, thinking that perhaps the little fellow might, after all, be in a trance. While

I was considering the matter, I perceived a bystander looking very grave and evidently having something on her mind. On asking her what she wished to say, I received for an answer that, though she did not put any faith in it herself, yet people did say that such a thing was a sign of another death in the family within the twelvemonth.

“If every remnant of Christmas decoration is not cleared out of church before Candlemas Day (February 2), there will be a death that year in the family occupying the pew where a leaf or berry is left.

“An old lady (now dead) whom I knew was so persuaded of the truth of this superstition that she would not be content to leave the clearing of her pew to the constituted authorities, but used to send her own servant on Candlemas Eve to see that her own seat, at any rate, was thoroughly freed from danger.

“Fires and candles also afford presages of death—coffins flying out of the former, and winding-sheets guttering down from the latter. A winding-sheet is produced from a candle; if, after it has guttered, the strip which has run down, instead of being absorbed into the general tallow, remains unmelted; if, under these circumstances, it curls over away from the flame, it is a presage of death to the person in whose direction it points.

“Coffins out of the fire are hollow, oblong cinders, spirited from it, and are a sign of coming death in the family. I have seen cinders which have flown out of the fire picked up and examined to see what they presaged; for coffins are not the only things that are thus produced. If the cinder, instead of being oblong, is oval, it is a cradle, and predicts the advent of a baby; while, if it is round, it is a purse, and means prosperity.

“The howling of a dog at night under the window of a sick-room is looked upon as a warning of death being near.

“Perhaps there may be some truth in this notion. Everybody knows the peculiar odour which frequently precedes death, and it is possible that the acute nose of the dog may perceive this, and that it may render him uneasy; but the same can hardly be alleged in favour of the notion that the screech of an owl flying past signifies the same, for if the owl did scent death and was in hopes of prey, it is not likely that it would screech and so give notice of its presence.”

APPENDIX F

The Death of Cells.

FROM *Age, Growth, and Death*, by C. S. Minot, pp. 75-76 :—

I. DEATH OF CELLS.

1. *Causes of Death.*

A. External to the organism :—

1. Physical (mechanical, chemical, thermal, &c.).
2. Parasites.

B. Changes in intercellular substances (probably primarily due to cells) :—

1. Hypertrophy.
2. Induration.
3. Calcification.
4. Amyloid degeneration (infiltration).

C. Changes inherent in cells.

2. *Morphological Changes of Dying Cells.*

A. Direct death of cells :—

1. Atrophy.
2. Disintegration and reabsorption.

B. Indirect death of cells :—

1. Necrobiosis (structural change precedes final death).
2. Hypertrophic degeneration (growth and structural change often with nuclear proliferation precede final death).

3. *Removal of Cells.*

A. By mechanical means (sloughing or shedding).

B. By chemical means (solution).

C. By phagocytes.

II. INDIRECT DEATH OF CELLS.

A. Necrobiosis :—

1. Cytoplasmic changes—

- (a) Granulation.
- (b) Hyaline transformation.
- (c) Imbibition.
- (d) Desiccation.
- (e) Clasmatosis.

2. Nuclear changes—

- (a) Karyorhexis.
- (b) Karyolysis.

B. Hypertrophic degeneration :—

1. Cytoplasmic—

- (a) Granular.
- (b) Cornifying.
- (c) Hyaline.

2. Paraplasmic—

- (a) Fatty.
- (b) Pigmentary.
- (c) Mucoïd.
- (d) Colloid, &c.

3. Nuclear (increase of chromatin).

APPENDIX G

Eusapia Palladino's Phenomena and Fraud.

IT may be thought that we have, in our discussion of the evidence in this case, ignored the fraud that was brought to light during the American investigation, and which, in the estimation of a large proportion of the American public at least, deprives the case of evidential value. We wish to state most emphatically, however, that such is not the case, and that we have given due weight to this negative evidence in summing up the results. In spite of the fraud which has been discovered, we do not feel in the least inclined to alter our former opinion, and for the following reasons :—For more than twenty years, it has been known that Eusapia Palladino resorts to trickery whenever possible ; all her European investigators knew this, and have caught her repeatedly. We ourselves detected fraud, or attempts at fraud, on several occasions. In spite of this, however, no one who has studied her case for any length of time has failed to be convinced that genuine supernormal manifestations are witnessed in her presence ; and the longer they study her, the more certain are they that fraud cannot account for many of the observed facts. Under certain conditions, Eusapia can produce phenomena which are unquestionably genuine ; but

if those conditions are lacking, and the medium, for any reason, cannot succeed, she invariably resorts to trickery, rather than admit that she is unable to produce them. Particularly has this been the case of late years, as her powers have gradually waned, and increasing difficulty has been experienced by the medium in obtaining any phenomena at all; or phenomena of so feeble a character that no man of common sense could expect to be convinced by them. But the genuine phenomena are undoubted. No one who has attended a really *good* séance can doubt this. And the fraudulent phenomena are a very weak imitation of the genuine manifestations, which frequently take place in light sufficiently good to enable the sitters to *see* clearly that the medium is not producing the phenomena herself. While, therefore, we acknowledge that Eusapia practised fraud, and probably a good deal of fraud, during her later American séances, we still deny that this in any way proves that her earlier phenomena were also fraudulent. We admit her trickery; but then, everybody who had studied the case already knew that she tricked, and no *new* form of trickery was disclosed by the American series. We feel, therefore, and feel strongly, that, in spite of the fraud disclosed, the case as a whole remains *in statu quo*; and that the evidence has not been materially shaken. Indeed, a great mass of material evidencing the supernormal has been presented at these séances, for the details of which we refer the reader to the *Annals of Psychical Science*, 1910-11.

APPENDIX H

Dr. Tanner's "Studies in Spiritism," and Survival.

WHILE our book was passing through the press, Dr. Amy E. Tanner's important work, *Studies in Spiritism*, was issued. It gives an account of a short series of sittings, by herself and Dr. Stanley Hall, with Mrs. Piper, and incidentally discusses the evidence for survival, and for supernormally-acquired information, not only in the Piper case, but by means of telepathy, clairvoyance, &c. The book attempts to show that the whole of the evidence for survival is groundless, and that telepathy, clairvoyance, and spirit-communication are believed in only because of inexact analysis of the evidence. The case is most forcibly presented in her book, and it is certainly an epoch-

making work in the history of psychical research. Dr. Tanner attempts to show that experimental thought-transference can be explained by a combination of hyperæsthesia, chance-coincidence, and by that parallelism or similarity of thought which is so common to all individuals living in the same community, and in much the same environment. Apparitions at the moment of death are examined, and deemed to be due to chance-coincidence and other normal causes. The entire evidence for the supernormal is considered and dealt with in a similar way.

It would be impossible, in the limited time and space at our disposal, adequately to consider or discuss this book, and its attempted reduction of psychical research to "rationalism." The attack on the Piper case most intimately concerns us; and it may be said at once that we consider much of this destructive evidence—particularly of the cross-correspondences—wholesome and sound. Her facts and arguments are, indeed, in many cases convincing. Thus, it is evident that when a fictitious personality is suggested to the "controls," and when this personality—which never had any existence, except in the minds of the experimenters—turns up and "communicates," giving lengthy descriptions of his own life, and recalling many incidents which never in reality took place at all, it is evident that no such personality really existed; but that it was probably a portion of Mrs. Piper's subliminal consciousness, acting out the part it is supposed to play. This does not mean that Mrs. Piper is consciously fraudulent; and both Dr. Tanner and Dr. Hall state their complete faith in the medium's honesty. But it *does* seem to imply that portions of the medium's mind may assume the guise of "spirits," and pass themselves off as "spirits," whereas, as a matter of fact, they are not spirits at all, but, as before said, mere portions of the medium's own mind. Good evidence is advanced, also, in proof of the contention that Hodgson is not Hodgson—at least the Hodgson whom we once knew—but is some masquerading intelligence, again a mere fragment of the medium's subconsciousness, or some external and mischievously-inclined intelligence, palming itself off as Dr. Hodgson, and wilfully pretending to be he. [This is, we may say, the belief of *some* psychical researchers, who admit the mere facts.] But the general conclusion seems fair, that the *soi-disant* "spirits" were not, in these sittings, what they purported to be, and, that being so, it is possible, even probable, some may think, that they were not "spirits" in other cases either.

Theoretically, the argument is perfect, and it would take much space to show why it is not so actually. As briefly as possible, however, we believe that the case is not closed—the whole of the evidence is not shown to be due to normal causes, for the following reasons:—

1. Adequate allowance is not made for the supernormal knowledge shown. Assuming, for the sake of argument, that the personalities in the Piper case are not “spirits,” in the sense that they are usually thought to be, that does not prove that no supernormal knowledge is displayed; or even that Spiritism may not ultimately be true. Professor James always took the stand that Rector, Imperator, &c., were mere “personifications” by Mrs. Piper, and that R. H. was not really present every time the hand wrote, “Here I am, R. H.—How are you?” &c. He always assumed that this was subconscious acting on the part of Mrs. Piper; yet, in spite of this, he believed that “dips down” from a spiritual world frequently occurred, and that the actual germ of knowledge displayed emanated from the intelligence it claimed to issue from. It was merely symbolised and dramatised and elaborated by the medium’s subliminal, just as dreams are elaborated and extended from actual, external stimuli. In both cases, the stimuli actually exist; but they are not recognised in the mass of symbolism and elaborate detail with which they were clothed before they emerged into consciousness. Thus, a spiritual world might well exist, and information be imparted therefrom, but it would have to come through the medium’s mind and organism, and be enacted and personified by it. But the destruction of the “psychological burning-glass” would not annihilate the sun; the vehicle might be destroyed, but the reality remain behind, unmanifest.

2. The method adopted in the book of disposing of the supernormal evidence in the Piper case is by no means conclusive to us. It is impossible to reduce to figures psychological facts of this character; and Dr. Tanner should know that. Due allowance is not made for the “personal factor”; much of the best evidence for survival is of so private a nature that it has not been and never can be published; and Dr. Tanner begins by ruling this all out as non-evidential, because not printed! This is hardly fair treatment of the evidence, and this method of disposing of valuable material in too offhand a manner appears to us to have been applied too freely in the work under review. We expect to see this portion of her book disproved and shown to be unjustifiable, by later researches. Certainly there are,

in our estimation, many hundreds of incidents in the Piper and other similar cases, which have not been adequately accounted for in the book under review.

3. The attempts to show that "Dr. Hodgson" and Mrs. Piper are possessed of a common memory and common emotional background are, to us, quite inconclusive, and display as great a "selective capacity" in the mind of the writer, forcing her to pick out only those facts which it wanted to see hidden in the material, as Mr. Piddington's mind could be accused of displaying, in his selection of the cross-correspondence tests! Dr. Tanner asserts that "a memory common to the two personalities" is proved by these observations (p. 22). Four incidents are quoted in support of this view:—

(1) The "control" asked for more air, as the room was "stuffy"; and this was taken to indicate that Mrs. Piper's subconscious mind requested it, as she is known to be very sensitive to closeness, &c. Yet Dr. Hodgson, when alive, knew the value of fresh air during the sittings, and always insisted upon it; hence, if he reacted to the bodily condition of the medium at all, *he* might have requested this.

(2) Dr. Tanner pretended that gas was leaking in the hall; and the hand at once wrote that "anything wrong was to be attended to at once." From this fact Dr. Tanner draws the conclusion that Mrs. Piper, and not the control, did the writing. *Why*, it is hard to see, inasmuch as the "controls" have always been solicitous regarding her health and comfort during the trance state. We fail to see in this the slightest evidence that Mrs. Piper herself was doing the thinking or writing.

(3) The "control" was asked if some "pain-tests" might be tried; and the control stated that she (the medium) would not feel the pain, but that "they had better not try them," as "the machine might suffer after the sitting had ended." Again, Dr. Tanner draws the conclusion that "a memory common to the two personalities" is proved by this fact. We fail to see the slightest reason for thinking so.

(4) The strongest evidence for this "common memory," in Dr. Tanner's estimation, is furnished by the following incident: "Dr. Hall, before the trance, quoted the phrase, 'a white blackbird,' to Mrs. Piper, and in the trance Hodgson used the phrase, 'Catch me, and you catch a white crow.'"

From this fact Dr. Tanner concludes that there is a "common memory" in the two cases, because a remark uttered in Mrs. Piper's presence comes out in the trance, as if from Dr. Hodgson. But it is dangerous for a critic, however acute he

(or she) may be, to draw large conclusions from scarce data; and this is well shown in the present instance. For, in this case, there is no evidence that the remark was "carried over," into the trance; on the other hand, there is good reason to believe that it originated in Dr. Hodgson. And for the following reason:—

In a sitting which one of us had with Mrs. Piper in January 1908, the following conversation occurred:—

(You won't forget that message you promised to give me through another light, will you?)

Not much. Catch me to forget, and you'll catch a white blackbird.

(White blackbird? Do you remember Professor James's joke about that?)

Of course I do; you mean *crow*.

(Yes.)

Do you mean as applied to this? [the medium].

(Yes.)

Oh yes, blackbird I said just for fun. Well, Carrington, old chap, I'm glad to know you . . . &c.

It will be seen that Dr. Hodgson and the sitter had discussed this "white crow" incident in a sitting which has never been published, but which took place January 13, 1908. Dr. Tanner did not have her sittings until more than a year later. It is very evident, therefore, that the "white blackbird" incident, which is supposed to indicate more strongly than any other the bond of connection between Dr. Hodgson's memory and that of Mrs. Piper, is evidentially worthless, and open to quite another interpretation.

We have said enough, at all events, to show the reader that the book here under review, while possessing many fine qualities, yet fails to explain or take into account many factors, and unduly slights much supernormal information which has been given from time to time in the past, through Mrs. Piper. For this reason we believe that the book, despite its excellence, will not have the effect which the authors doubtless believe it should have—viz., of arresting, to a great extent, the growth of spiritualism; inasmuch as they fail to explain much of the strongest evidence in favour of the survival or persistence of human consciousness after death. (For a detailed reply to Dr. Tanner's book, see *Journal of the American S.P.R.*, Jan., 1911, pp. 1-98.)

BIBLIOGRAPHY

- Alden, Henry M. *A Study of Death*. New York, 1895.
- Allen, F. D. *Remarks on the Dangers and Duties of Sepulture; or, Security for the Living, &c.* Boston, U.S.A., 1873.
- Anon. *An Essay on Vital Suspension: being an attempt to investigate and ascertain those diseases in which the principles of life are apparently extinguished*. London, 1791.
- *An Unrealised Duty*. London, 1905.
- *Burials Amendment Act*. London. N.D.
- *Circular of the London Association for the Prevention of Premature Burial*. London. N.D.
- *Directions for Recovering Persons Apparently Dead from Drowning, and from Disorders occasioned by Cold Liquors*. Philadelphia. N.D.
- *Dying Pillows of Infidels and Christians*. London, 1889.
- *Earth-to-Earth Burial, and Cremation by Fire*. London, 1890.
- *How Burying Alive may be Prevented*. London. N.D.
- *In Dread of Premature Burial*. London. N.D.
- *Prayers for the Dead*. By an Anglican Priest. London, 1885.
- *Premature Burial and its Prevention*. London. N.D.
- *Premature Burial; with Sir B. W. Richardson's Signs and Proofs of Death*. London, 1908.
- *Premature Death*. New York, 1878.
- *The Cause of Death from Old Age now Revealed to Man*. London, 1883.
- *The Uncertainty of the Signs of Death*. Dublin, 1748.
- Arnold, Sir Edwin. *Death—and Afterwards*. New York, 1897.
- Besant, Annie. *Death and After?* New York, 1906.
- Bichat. *Recherches physiologiques sur la Vie et la Mort*. Paris, 1880.
- Björklund, Gustav. *Death and Resurrection, from the Point of View of the Cell Theory*. Chicago, 1910.

¹ The Bibliography refers almost exclusively to the physiological side of the question, as treated in Part I. Books on psychical research, or general works on science, are not given, as being too general for a work of this character.

- Bostwick, Homer, M.D. *An Inquiry into the Cause of Natural Death ; or, Death from Old Age.* New York, 1851.
- Bouchut, E. *Traité des Signes de la Mort et des Moyens de ne pas être Enterré Vivant.* Paris, 1849.
- *Mémoire sur plusieurs nouveaux Signes de la Mort, &c.* Paris, 1867.
- Bourdeau, L. *Le Problème de la Mort.* Paris, 1900.
- Braid, James. *Observations on Trance ; or, Human Hibernation.* 1850.
- Brouardel, P. *Death and Sudden Death.* New York, 1896.
- Browne, O. *On the Care of the Dying.* London, 1894.
- Bruhier, d'A. *The Uncertainty of the Signs of Death, &c.* 1751.
- Burdett, H. C. *The Necessity and Importance of Mortuaries for Towns and Villages, with Suggestions for their Establishment.* London, 1880.
- Burke, William. *On Suspended Animation, &c.* London, 1805.
- Calhoun, T. *An Essay on Suspended Animation.* Philadelphia, 1823.
- Carrington, Hereward. *Vitality, Fasting and Nutrition.* New York, 1908.
- Chantourelle. *Paper at the Royal Academy of Medicine of Paris, on the Danger of Premature Burial, &c.* 1827.
- Cobb, Augustus G. *Earth-Burial and Cremation.* New York, 1892.
- Coleman, Edward. *Dissertation on Suspended and Natural Respiration.* London, 1802.
- Cooper, M. *Uncertainty of the Signs of Death, precipitate interment and dissection, and funeral solemnities.* London, 1746.
- Curry, James. *Popular Observations on Apparent Death from Drowning, Suffocation, &c.* London, 1793.
- Davis, A. J. *Death and After Life.* Boston, 1865.
- Davis, Mary F. *Death in the Light of the Harmonial Philosophy.* Boston, 1876.
- Dastre, A. *La Vie et la Mort.* Paris, 1903.
- De Laurence, Dr. L. W. *The Book of Death and Hindoo Spiritism.* Chicago, 1908.
- Deschamps, M. H. *Précis de la Mort apparente.* Paris, 1841.
- Desmaire, Paul. *Les Morts Vivants.* Paris, 1862.
- Duffield. *The Burial of the Dead.* New York, 1887.
- Evans, De Lacy. *How to Prolong Life ; an Inquiry into the Cause of Old Age and Natural Death.* London, 1880.
- Eaves, A. *The Mastery of Death.* London, 1904.
- Figuier, Louis. *The To-morrow of Death.* Boston, 1873.
- Finot, Jean. *Philosophy of Long Life.* New York, 1910.
- Fletcher, M. R. *One Thousand Buried Alive by their Best Friends.* Boston, 1890.
- Foot, G. W. *Infidel Death Beds.* London, 1886.

- Fothergill, Anthony. *Inquiry into the Suspension of Vital Action in Drowning and Suffocation*. Bath, 1794.
- Francis, J. R. *Encyclopædia of Death*, 3 vols. Chicago, 1894.
- Franks, John. *Observations on Animal Life and Apparent Death*. London, 1790.
- Fuller, John, M.D. *Some Hints relative to the Recovery of Persons Drowned and apparently Dead*. London, 1784.
- Gardner, John, M.D. *Longevity*. Boston, 1875.
- Gaze, Harry. *How to Live Forever*. Chicago, 1904.
- Gerhard, Calvin S. *Death and the Resurrection: an Inquiry into their true nature*. Philadelphia, 1895.
- Giles, Alfred E. *Funerals, Suspended Animation, Premature Burials*. Boston, 1895.
- Greene, C. *Death and Sleep: their Analogy, &c.* London, 1904.
- Hadwen, Dr. Walter B. *The Need of Legislation concerning Burial Reform*. London. N.D.
- Haeckel, Ernst. *The Wonders of Life*. New York, 1905.
- Hamilton, Robert. *Rules for Recovering Persons Apparently Drowned*. London, 1785.
- Harrison, J. B. *The Medical Aspects of Death*. London, 1852.
- Hartmann, Franz. *Buried Alive*. Boston, 1895.
- Hawes, Dr. *On the Duty of the Relations of those who are in Dangerous Illness, and the Hazard of Hasty Interment*. 1703.
- Hicks, A. B. *Hints to Medical Practitioners concerning granting Certificates of Death*. London, 1895.
- Hooker, J. Stenson, M.D. *Premature Burial and its Prevention*. London. N.D.
- Hufeland, C. W. *Ueber die Ungewissheit des Todes, &c.* 1791.
- leard, S. *La Mort réelle et la Mort apparente*. Paris, 1897.
- Jacobs, Joseph. *The Dying of Death*. New York. N.D.
- James, J. Brindley, M.R.C.S. *Trance: its Various Aspects and Possible Results*. London. N.D.
- *Death and its Verification*. London, 1908.
- Johnson, Alexander. *A Collection of Cases Proving the Practicability of Reviving Persons Visibly Dead, &c.* London, 1773.
- *Relief from Accidental Death; or, Summary Instructions for the General Institution proposed in 1773*. London, 1785.
- Kay, J. P. *The Physiology, Pathology and Treatment of Asphyxia, including suspended animation in new-born children, and from hanging, drowning, wounds in the chest, mechanical obstruction of the air passages, respiration of gases, deaths from cold, &c.* London, 1834.

- Laborde, J. V. *Le Traitement physiologique de la Mort*. Paris, 1894.
- L. E. A. *Sunset Glories: Quotations from Dying Words*. London, 1886.
- Le Bon, G. *Recherches expérimentales sur les Signes diagnostiques de la Mort et sur les Moyens de Prévenir les Inhumations Précipitées*. Paris. N.D.
- Lenormand, L. *Des Inhumations Précipitées*. Macon, 1843.
- Lorand, Arnold. *Old Age Deferred*. Philadelphia, 1910.
- Malcolm, John D. *The Physiology of Death from Traumatic Fever*. London, 1893
- Marvin, F. R. *The Last Words of Distinguished Men and Women*. Troy, U.S.A., 1800.
- Maze. *Signes de la Mort*. Paris, 1892.
- Metchnikoff, Elie. *Old Age (Smithsonian Reports)*.
 — *The New Hygiene*. Chicago, 1907.
 — *The Nature of Man*. New York, 1905.
 — *The Prolongation of Life*. New York, 1908.
- Minot, Chas. S. *Age, Growth, and Death*. New York, 1908.
- Mitchell, C. P. *Dissolution, Evolution, and Medicine*. London, 1888.
- Munk, W. *Euthanasia: Medical Treatment in aid of Easy Death*. London, 1887.
- Orfila, F. *Directions for the Treatment of Persons who have taken Poison, and those in a State of Apparent Death*. London, 1818.
- Paris, Thomas, M.D. *The Post-mortem Handbook*. New York, 1887.
- Peebles, Dr. J. M. *Death Defeated, &c.* Battle Creek, Mich., 1908.
- Philip, A. P. W. *An Inquiry into the Nature of Sleep and Death*. London, 1834.
- Ransome, A. *On the Distribution of Death and Disease*. London, 1884.
- Reid, J. *The Philosophy of Death*. London, 1841.
- Sabatier, A. *Essai sur la Vie et la Mort*. Paris, 1892.
- Savory, Wm. S. *On Life and Death*. London, 1863.
- Schopenhauer, A. *Ueber den Tod, &c.* Leipzig, 1886.
- Shaler, N. S. *The Individual: a Study of Life and Death*. New York, 1902.
- Smyth, N. *The Place of Death in Evolution*. London, 1897.
- Snart, John. *An Historical Inquiry Concerning Apparent Death and Premature Interment*. London, 1824.
 — *Thesaurus of Horror; or, the Charnel House Explored*. London, 1817.
- Stephens, Dr. C. A. *Natural Salvation*. Privately printed, 1907.
- Tebb and Vollum. *Premature Burial*. London, 1896.

- Tebb, Wm. *Premature Burial: a Reply to Dr. David Walsh.* London. N.D.
- Teichmann, Dr. E. *Life and Death.* Chicago, 1906.
- Thoms, William J. *Human Longevity: its Facts and Fictions.* London, 1873.
- Thwing, E. P. *Euthanasia in articulo mortis.* New York, 1888.
- T. M. E. *Final Triumph: Dying Sayings.* London, 1893.
- Tozer, Basil. *Premature Burial and the only True Signs of Death* London. N.D.
- Walker, G. A. *Gatherings from Graveyards, &c.* London, 1830.
- Walsh, David. *Premature Burial.* New York, 1898.
- Weismann, A. *Ueber Leben und Tod.* Jena, 1884.
- Welby, Horace. *Mysteries of Life, Death, and Futurity.* 1861.
- Welchman, E. *Observations on Apparent Death from Suffocation or Drowning, Choke-damp, Stroke of Lightning, &c.* New York, 1842.
- Whiter, W. *A Dissertation on the Disorder called Suspended Animation.* Norwich, 1819.
- Wilder, Alex., M.D. *Burying Alive a Frequent Peril.* London. N.D.
— *The Perils of Premature Burial.* London, 1895.
- Wilkinson, J. J. G. *Greater Origins and Issues of Life and Death.* London, 1885.
- Williamson, James R. *How the State can Prevent Premature Burial.* London. N.D.
- Wilson, John K. *Death, its Meaning and Results.* 1900.
- Zschokke. *Meditations on Death and Eternity.* Boston, 1864.

PERIODICALS

The Burial Reformer. (Devoted to the prevention of premature burial.)

MAGAZINE ARTICLES OF IMPORTANCE

- Aldis, C. J. B. On the Danger of Tying up the Lower Jaw Immediately after Death. *Lancet*, 1850, ii. 601.
- Askew, F. D. Death. *Ks. City Med. Index*, 1896, xvii. 154-58.
- Barker, F. C. On Real and Apparent Death. *Clin. Chic. M.*, 1897, xviii. 232-38.
- Beaumont, J. W. Natural Death and Natural Sleep. *Med. Clin.*, London, 1862, xxi. 328.

- Bourke, M. W. Resuscitation of a Child after Ten Minutes' Total Submersion in Water, &c. 1859, xliii. 103.
- Bradnack, F. Death, Its Signs, &c. *Buffalo M. & S. Jour.*, 1889-90, xxix. 667, 718.
- Brandon, R. Construction of Houses for the Reception of the Dead, &c. 1847, xvi. 574.
- Burns, J. F. The Hour at which Death most usually Occurs. *N. Y. Med. Jour.*, 1890, li. 17.
- Clark, T. E. Buried Alive. *Quar. Jour. Psych. Med.*, 1871, v. 87-93.
- Coldstream, John. A Case of Catalepsy. *Edin. Med. and Surg. Jour.*, lxxxi. 477.
- Connell, J. B. Causes and Modes of Death. *Ks. Med. Jour.*, 1895, vii. 59-64.
- Coskery, O. J. Remarks on 288 Deaths, &c. *N. Y. Med. Jour.*, 1884, xi. 395-400.
- Dana, C. L. The Physiology of the Phenomena of Trance. *Med. Rec.*, 1881, xx. 85-89.
- Davis, M. Hasty Burials. *Sanit. Rec.*, 1876, iv. 261.
- Denman, J. Resuscitation after Two Hours' Apparent Death. *Med. Press and Cir.*, 1867, iii. 95.
- Douglas, H. G. Recovery after Fourteen Minutes' Submersion. *Med. Gaz.*, 1842, i. 448.
- Ducachet, H. W. On the Signs of Death, and the Manner for Distinguishing Real from Apparent Death. *Am. Med. Rec.*, 1822, v. 39-53.
- Duckworth, Sir D. On the Cessation of Respiration before Circulation. *Edin. Med. Jour.*, 1898, iii. 145-52.
- Dunglison, R. Lecture on Death. *Coll. Clin. Rec.* Philadelphia, 1880, i. 28.
- Evans, T. R. Signs of Impending Death. *Tr. M. Soc. Va.* Wheeling, U.S.A., 1885, cviii. 218-22.
- Fraser, W. Distinctions between Real and Apparent Death. *Pop. Sci. Monthly*, 1880-81, xviii. 401-8.
- Gairdner, W. T. Case of Lethargic Stupor or Trance, extending continuously over more than Twenty-three Weeks, &c. *Lancet*, 1883, ii. 1078 ; and 1884, v. 56.
- Goadby. Death Trance. *Med. Ind.*, 1856, i. 90-99.
- Godfrey, E. L. B. Report on the Resuscitation of a Young Girl Apparently Dead from Drowning. *Phil. Med. Times*, 1879, ix. 375.
- Huffy, T. S. Two Cases of Apparent Death. *Tr. Med. Soc. N. Car.*, 1874, xxi. 126-31.

- Jamieson, W. A. On a Case of Trance. *Edin. Med. Jour.*, 1871-72, xvii. 29-31.
- Jenks, W. G. Causes of Sudden Death. *Mass. Med. Jour.*, 1898, xviii. 10-15.
- Knapp, B. C. Sudden Death from Affections of the Nervous System. *Tr. Mass. Med. Leg. Soc.*, 1888, ii. 118-22.
- Lange, J. C. Modes of Dying. *Pitts. Med. Rev.*, 1889, iii. 27-34.
- Lee, W. The Extreme Rarity of Premature Burial. *Pop. Sci. Month.*, xvii. 526.
- Mackenzie, S. C. Phenomena Occurring after Death. In *Med. Leg. Exp. in Calcutta*. Edinburgh, 1891.
- Mackey, G. E. Premature Burials. *Pop. Sci. Month.*, xvi. 389.
- Madden, T. M. On Lethargy or Trance. *Dub. Jour. Med. Sci.*, 1881, lxxi. 297.
- On Morbid Somnolence and Death Trance. *Med. Mag.* London, 1897, vi. 857-922.
- Mann, T. D. On Sudden Death from Natural Causes. *Lancet*, 1897, i. 1730-33.
- Miller, T. C. The State of the Eyelids after Death—Open or Shut? *Med. Rec.*, 1877, xii. 4.
- Minot, C. S. Death and Individuality. *Science*, 1884, iv. 398-400.
- Myers, F. W. H. How we Feel When we Die. *Jour. Amer. Med. Assoc.* Chicago, 1897, xxix. 275.
- Osborne, W. G. Impositions of an Indian Fakeer, who professed to be Buried Alive, &c. *Lancet*, 1839, i. 885.
- Philip, A. P. W. On the Nature of Death. *Phil. Tr.*, 1834, cxxiv. 167-98.
- Povall, R. An Account of a Successful Resuscitation of three Persons from Suspended Animation by Submersion for 25 minutes. *West. Med. and Phys. Jour.*, 1828, ii. 499-503.
- Reid, T. J. A Case of Suspended Animation. *St. Louis Clin. Rec.*, 1879, vi. 261-63.
- Report of Committee on Suspended Animation. *Proc. Roy. Med. and Chir. Soc.*, 1862, iv. 142-47; vi. 299, &c.
- Richardson, B. W. Researches on Treatment of Suspended Animation. *Brit. and For. Chir. Rev.*, 1863, xxxi. 478-505.
- The Absolute Signs and Proofs of Death. *Brit. Med. Jour.* London, 1888, ii. 1338.
- Richardson, F. T. Observations upon a Particular Point in the Physiology of Death. *Month. Jour. Med. Soc.* London, 1842, ii. 260-64.
- Richardson, J. The Death Odour. *Peoria Mag.*, 1884, v. 300.

- Romero, Fr. Infallible Sign of Extinction of Vitality in Sudden Death. *Med. Tr. Roy. Coll. Phys.*, 1815, v. 478-85. (Latin.)
- Sawhill, W. F. Sudden Deaths. *Ks. Med. Jour.*, 1897, ix. 505-10.
- Shrock, N. M. On the Signs that Distinguish Real from Apparent Death. *Transylv. Jour. Med.*, 1835, xiii. 210-20.
- Silvester, H. R. A New Method of Resuscitating Still-Born Children, and of Restoring Persons Apparently Drowned and Dead. *Brit. Med. Jour.*, 1858, 576-79.
- Taylor, J. Case of Recovery from Hanging. *Glas. Med. Jour.*, 1886, xiv. 387.
- Twedell, H. M. Account of a Man submitted to be Buried Alive for a Month at Jaisulmer. *India Med. Jour.*, 1836, i. 389-91.
- Van Giesen, R. E. Sudden Death without Assignable Cause. *Bull. N. Y. Path. Soc.*, 1881, 2 series, i. 279-85.
- White, W. A. H. A Case of Trance. *Brit. Med. Jour.*, 1884, ii. 52.
- Anon. Causes of Apparent Death. *Cal. Med. Jour.*, 1869, ii. 380-87.
- Death and Work. *Harper's Weekly*, Sept. 26, 1908.
- Death by Lightning. *Sci. Amer. Suppt.*, Sept. 10, 1910.
- Fear of Death. *Current Lit.*, Sept., 1909.
- Instinct of Feigning Death. *Sci. Amer. Suppt.*, June 6, 1908.
- Is Death Universal? *Jour. Sc.* London, 1885, vii. 68-72.
- Medical Conceptions of Death. *Current Lit.*, Oct. 20, 1909.
- Old Age and Death. *Sci. Amer. Suppt.*, Feb. 20, 1909.
- Sensations during Anæsthesia and Death. *Current Lit.*, Nov., 1908.
- Signs of Death. *Lond. Med. Rec.*, 1874, ii. 205, 221.
- Sting of Death, The. *The Living Age*, July 2, 1910.

INDEX

- ABBOTT, David P., 396, 397-400
Accordion test, 410-11
Adare, Lord, 409
Addison, 275
Aggazzotti, Dr. A., 417-19
Air, capacity of lungs for, 378-79
Alden, H. M., 263
Alger, 262, 281-82, 289-90
Allen, Dr. Thomas T., 214
American séances of Eusapia Palladino, 430-36, 534-35
Anæsthesia and death, similarities of, 310-13
Ancestor worship, 238-40
Angell, George T., 67
Apparitions, coincidental, 382-84
— experimental, 335-43
Arullani, Dr., 418-19
Asphyxia, death by, 119-20
Audouard, M., 89
Aura, after death, 27-28
Automatic writing, during death, 307
- BACON, Lord, 262
Baggally, W. W., 421, 424-30
Baraduc, Dr. H., 174, 356, 358, 359, 367-71, 372
Barucha, Edward, 243-44
Bastian, Dr. H. Charlton, 217-18, 528-29
Bates, Miss Katherine, 182-84
Beaumont, Dr., 103
Beecher, Henry Ward, 300
Bennett, Edward T., 360
Besant, Mrs. Annie, 85
Bibliography, 540
Bichat, 100, 135
Bishop, Washington Irving, 61
Black light, 371
Blake, Mrs., 397-400
Book of Judgment, 317
Bordas, M., 36
Bostwick, Dr. Homer, 15, 136, 157
Bouchut, Dr., 63-64
Bozzano, Dr. Ernesto, 178-79, 327
Braid, Dr. James, 44, 46
Brittain, Emma Hardinge, 250
Brouardel, Dr., 18, 19, 21, 22, 24, 33, 38, 39, 40, 41-42, 92, 93, 96, 187-88
Broussais, Dr., 103, 106
Brown-Séguard, Dr., 34, 35
Bühler, Dr., 134
Burial customs, 77-82
Burke, Dr. John Butler, 170-72, 528-29
Burns and scalds, death from, 96
Bute, Marquis of, 445
Butler, Bishop, 282-83, 286, 287, 290
- CALKINS, G. N., 10
Calmet, Augustine, 520-22
Cannibalism, origin of, 239
Cardiac massage, 122
Carus, Dr. Paul, 175-77
Catalepsy, defined, 45, 51-52
Cazanvieilh, 138
Cells, cause of death of, 533-34
Chaldeans, beliefs of, 243
Chase, Prof., 261, 286
Chenoworth, Mrs., 499
Christ, raising from the dead, 288-89
Christians. early beliefs of, 248
Cicero, 247, 263
Clairvoyance, 439-42
Clark, Dr. Ed. H., 300, 318-19
Claughton, Mrs., 445-48
Cobb, Augustus G., 83, 85
Communications, confusion in, 508-516
Conclusions, 517-18
Conditional immortality, 260
Confucius, 239-40
Confusion in communications, 508-516

- Conn, H. W., 233
 Consciousness, its relation to organism, 312-13, 313-14
 Consciousness, as a function of the organism, 457-58
 Cremation, 82-85
 Crookes, Sir William, 409, 410-11
 Curry, Dr. James, 53
 Cutter, James E., 123
 Cuvier, 4

 D'ALBE, Fournier, 231
 Dana, Dr. C. L., 46-47
 Darwin, Charles, 55-56, 442, 454
 Davis, Andrew Jackson, 205, 328-334, 348
 Davis, Dr. N. E., 118
 Davis, Mary F., 332
 Davis, W. S., 431
 Death, various kinds of, 11-13, 215-17
 — conscious, 12
 — somatic, 12
 Delirium, statements made during, 514
 Dematerialisation of matter, 358-59
 De Morgan, Prof., 439-41
 De Quincey, 316-17
 Desmond, Countess of, 14
 Dessoir, Prof. Max, 167-68
 Diamond, Captain, case of, 16
 Difficulties in communication, 508-516
 Dixwell, Dr. John, 69
 Donnet, Archbishop, 62-63
 Draper, Henry, 287
 Dreams, nature of, 50
 Driscoll, Dr. James F., 168-69
 Drowning, death by, 119-20
 Druids, beliefs of, 245
 Drummond, Prof. Henry, 260
 Dubois, Prof. Paul, 211, 218, 221-22
 Ductless glands, degeneration of, as a cause of old age, 153-54

 ECSTASY, defined, 45
 Edmunds, Judge, 352
 Egyptians, beliefs of, 240
 Elbé, L., 242, 244, 247, 279-81
 Electricity, death by, 122-25
 Embalming, process of, 85-88
 Emerson, R. W., 259
 Energy and matter, 358-59
 Erskine, Ebenezer, 61, 62

 Esdaile, Dr., 48, 49
 Evans, Dr. De Lacy, 15, 136, 157
 Evidence of survival, 535-39
 Experimental apparitions, 335-43
 Eye, pictures in, after death, 20

 FAKIRS of India, 52
 Falling, sensations while, 315-16
 Fancher, Molly, 204
 Faunce, Pres., 207-8
 Feigning death, 55-56
 Feilding, Hon. Everard, 421, 424-430, 435
 Ferrier, Dr., 445, 447
 Ferri, Mrs. Laura I., 180-82
 Finot, Jean, 16, 84-85, 224-25, 301
 Fiske, John, 527
 Flammarion, Camille, 384, 385, 387
 Fletcher, Dr. Moore R., 71
 Fletcher, Horace, 163
 Foà, Dr. Charles, 417-19
 —, Prof. P., 417-19
 Freezing, death by, 115-17
 French, Mrs. Emily S., case of, 401
 Fruitarianism, 156-57
 Funk, Dr. Isaac K., 341, 343, 401

 GARLAND, Hamlin, 401-6
 Garrigues, Dr. Henry, 67-69
 Gates, Dr. Elmer, 26-27
 Gauls, beliefs of, 244-45
 Gaze, Henry, 130, 214-15, 221
 Gardon, Auguste, 388
 God, conception of, 528
 Goethe, 339
 Good, Dr., 101
 Gowers, Dr. W. R., 53
 Graham, Dr. Sylvester, 220
 Greeks, beliefs of, 245-47
 Gregory, Dr., 130, 220
 Griffiths, Dr., 110, 111
 Guen, M. le, 71
 Gurney, Edmund, 336, 338, 339, 390

 HAECKEL, Ernst, 9, 10, 172-74, 209
 Hæmorrhage, death by, 96-98
 Hair, blanching of, 141
 Hall, Dr. G. Stanley, 535
 Haller, 101
 Hallucination theory of physical phenomena, 412
 Hallucinations, census of, 383
 Hamilton, Gail, 306
 Hamilton, Sir William, 438

- Hammond, Dr William A., 47, 130,
214, 256, 261, 276
Hands, materialised. 411
Hannah Wild, letter, 472-75
Harrison, Dr., 97
Hartmann, Dr. Franz, 20, 24, 52,
58, 64, 66, 67, 72, 521-22
Hartmann, M., 11
Harvey, 34
Haunted Houses, 448-54
Haunting, theories of, 452-54
Hegel, 260
Heim, Dr., 315
Heredity, 219
Herlitzka, Dr. A., 417-19
Hesiod, 246
Hindus, beliefs of, 242-43
Hodgson, Dr. Richard, 323-26, 346,
353, 470-72, 475-80, 510
Holland, Mrs., 493
Holmes, Prof. S. J., 55-56
Home, D. D., case of, 408-12
Hudson, T. J., 52, 271-72, 276, 277,
340, 341
Hunter, John, 102
Huxley, Thomas, 4
Hyslop, James H., 161, 304-5, 319-
326, 341, 342, 343, 353, 472-75,
481-91, 499-500, 510-15
- INSANITY, theory of, 205-6
Isham, Dr. A. B., 28, 29, 30, 31
- JACOBS, Joseph, 160
Jaffa, Prof., 156
James, Dr. J. Brindley, 47, 48
James, Prof. William, 45, 210, 278,
469-70, 497, 498
Jastrow, Prof. Joseph, 437
Jelliffe, Dr. Smith Ely, 112
Jencken, H. D., 411
Jenkins, Henry, case of, 14
Jews, beliefs of, 240-42
Johnson, Alice, 385-86, 412
- KANT, 261
Keeler, Mrs., 499
Kellogg, Dr. J. H., 188
Knott, Dr John, 125
Krafft-Ebing, Dr., 212
Kühne, Dr., 20, 34
- LANG, Andrew, 337, 414, 445, 499-
500
- Langley, Prof. S. P., 284-85
Last words of distinguished men,
308-9
Lateau, Louise, case of, 213
Laws of nature, 284-85
Leaf, Dr. Walter, 184-86, 459,
467-70
Le Bon, Dr. Gustave, 208, 350, 359,
371
Le Conte, Prof. Joseph, 158-59
Le Dantec, Prof., 528
Lee, General, case of, 61
Lenormand, Dr. L., 71
Lewes, G. H., 130
Life, definition of, 3, 4, 5, 6, 194,
524-25, 527-28
— creation of, 528-30
Lightning, death by, 122-25
Livingstone, Dr. David, 301-2
Locke, 261
Lodge, Sir Oliver, 357, 459, 460-
461, 461-67, 498-99
Loeb, Prof. Jacques, 233, 528
Lombroso, Prof., 435
Londe, Charles, 53
Longevity, human, 13-16
Lorand, Dr. Arnold, 152-54
Lotze, 260
- M'CLINTOCK, 265-66
M'Connell, 260
M'Dougall, Dr. Duncan, 372-78,
379, 380
M'Lagan, Sir Douglas, 94
Malcolm, Dr. John D., 96, 135
Mapes, Prof., 411
Marsh, H. P. 297-98
Marvin, Dr., 47
Materialism, theory of, 457-58
Materialisation, 358-59
Matter and energy, 358, 359
Maupas, E., 10
Maxwell, Dr. J., 407-8
Mégnin, M., 90
Melville, Rear-Admiral George N.,
380
Mental causes of death, 98-109
Mental life and bodily energy, 524-
528
Mental phenomena, 437
Metchnikoff, Elie, 16, 129, 131, 132,
133-34, 141, 144, 154, 155, 157,
160
Mills, Dr. Charles E., 45

- Mills, Prof. Wesley, 233
 Minot, Prof. Charles S., 144-45,
 155, 165-67, 199, 533-34
 Moll, Dr. Albert, 213
 Moment of death, memory at, 316-
 317
 Moore, Dr. George, 44
 Morgan, Prof. C. Lloyd, 215
 Morselli, Prof. Henry, 420
 Morton, Miss, 449-50
 Moses, William Stainton, 335, 392,
 412-14
 Müller, Max, 237
 Mummification, 89-91
 Munro, Dr., 130
 Münsterberg, Hugo, 437
 Music, value of, in insane cases,
 206
 Myers, F. W. H., 50, 232, 346, 349,
 391, 437, 438-39, 443, 445, 459-
 460, 468, 469
 Myths as to the origin of death,
 253-55
- NEWNHAM, Rev. P. H., 349-50
 Niederhorn, Dr., 33
- ODOR Mortis, 28-32
 Old age, causes of, 129-57
 Olfactory phenomena, 390-93
 Osler, Dr. William, 300-1
 Ourches, Marquis d', 18
 Ovid, 247
- PAGET, Sir James, 311
 Pain, causes of, 301
 Palladino, Eusapia, 414-36, 534-35
 Parr, Thomas, case of, 14
 Parsees, beliefs of, 243-44
 Pausanias, 243
 Peebles, Dr. James M., 300
 Perspiration, composition of, 392-93
 Photography of the invisible, 356-
 358
 Piddington, J. G., 491-97
 Piper, Mrs. L. E., 49, 323-25, 457-
 500, 510-15, 532-33, 535-39
 Planchette writing, 454-57
 Plato, 246 47, 257 59
 Platonic argument for immortality,
 258 59
 Playfair, Sir Lyon, 83-84
 Podmore, Frank, 384, 388, 409, 412
 Poe, Edgar Allan, 122
- Porro, Prof., 415-16
 Post, Charles J., 91
 Presumption *versus* proof of future
 life, 291
 Protozoa, life of, 7-11
 Purinton, E. E., 169-70
 Putnam, Dr. James J., 161
 Putrefaction, 35-40
 Pythagoras, 246
- QUESTIONNAIRE on death, 159
- RABAGLIATI, Dr. A., 186-87, 198,
 209-10
 Radiobes, 529
 Raising the dead, 54, 199-200
 Ramsay, Sir William, 392-93
 Raps, coincidental, 385
 — indicating intelligence, 406-8
 Raupert, J. Godfrey, 363-67
 Re-animation, 53-54
 Regnault, Dr. Felix, 150-52
 Reid, Dr. H. A., 359
 Resuscitation, 201
 Ribot, Prof., 219
 Richardson, Sir B. W., 42, 43, 53,
 54, 188, 199-200
 Rigor mortis, 32-35
 Roehrig, Prof. R. L. O., 59-60
 Romans, beliefs of, 247
 Rosenbach, Dr., 188
- SAPONIFICATION, 40-42
 Savage, Rev. M. J., 322-23
 Scent, at séances, 392-93
 — of animals, 392-93
 Schiller, Prof. F. C. S., 159-60, 162,
 195, 231-32
 Schofield, Dr. A. T., 212
 Schopenhauer, 259-60, 290-91
 Schultz, 233
 Scott, Sir Walter, 98
 Shaler, Prof. N. S., 526-27
 Shelley, 339
 Shew, Dr. Joel, 126-27
 Shock, death from, 121-22
 Sidgwick, Prof. Henry, 459
 Simpson, Dr. F. T., 435
 Sextus, Carl, 71
 Sleep and death, 51-57, 305-6
 Sleep, theory of, 204-5, 524-25
 Smead, Mrs., case of, 500-1
 Smiley, Mrs., case of, 401-6
 Soldi, M., 238

- Solovovo, Count, 169, 412, 431
 Somnolence, morbid, 46-47
 Soul, weighing, 372-78
 Space, question of, 382
 Spencer, Dr. Thomas D., 299-300
 — Herbert, 3, 6, 263
 Spinoza, 232, 259
 Spirit photography, 359-67
 Spiritistic doctrine of immortality,
 248-50
 Spiritual body, 371-72
 Spontaneous combustion, 126-28
 Stahelin, Dr., 241, 256-57
 Starvation, death by, 117-18
 Stephens, Dr. C. A., 145, 146-47,
 313
 Stevenson, R. L., 233-34
 Stewart, Prof. Balfour, 158, 279
 Stigmata, 212-13
 Strangulation, death by, 120
 Struve, Dr., 53
 Subliminal consciousness, 437-39
 Sudden death, causes of, 93, 94-96,
 203
 Superstitions, &c., concerning
 death, 534-35
 Sweetser, Dr. William, 99, 101, 103,
 108, 222-23

 TANNER, Dr. Amy E., 535-39
 Tappan, Cora L. V., 352
 Taylor, J. Traill, 360-63
 Tebb (and Vollum), 54, 58, 65, 72
 Teichmann, Dr. E., 133
 Tertullian, 263
 Tesla, Nikola, 162
 Tests of death, 19-24, 42-43
 Theosophy, doctrine of immorta-
 lity, 251-53
 Thompson, Mrs., 502-4
 — Sir Henry, 463
 Thoms, William J., 13, 14, 15, 16
 Tissues, rate of death of, 13
 Tourtelle, Dr., 103
 Tozer, Basil, 66-67

 Trall, Dr. R. T., 126, 188
 Trance, 44, 50, 51, 52
 — Mrs. Piper's, 530-31
 Transmission of life, theory of, 149,
 524-25, 528
 Triviality, question of, 506-8
 Tuke, Dr. Hack, 213
 Tyndall, Prof., 300

 ULTRA-VIOLET light, 371
 Uncooked foods, 156-57

 VAMPIRES, 38, 519-21
 Van Eeden, Dr. F., 163-65, 502-4
 Venzano, Dr. Joseph, 180, 420-21
 Verrall, Mrs., 493, 494, 495 *et seq.*
 Vibration theory of life, 194-206
 Virchow, 213, 233
 Vital exhaustion, theory of, 134-35
 Vitality, theory of, 522-28
 Voices, independent, 396-406
 Vollum, Dr., 70-71, 73. *See* Tebb
 Voltage, to produce death, 123-24

 WAGNER, Rudolph, 378
 Wallace, Prof. A. R., 249
 Walsh, Dr. David, 58-59
 Warburton, Bishop, 241
 Watson, Prof., 257
 Wedgwood, Hensleigh, 442, 454
 — Mrs. Alfred, 441-42
 Weight, remarkable losses of, 379-
 381
 Weismann, Prof., 7, 11
 White, Dr. Edward, 260
 White crow incident, 538-39
 Welby, Horace, 304
 Wilder, Alexander, 52, 69
 Williamson, James R., 48
 Wilson, Dr. A. D., 411
 Wilson, Prof. E. B., 187, 199
 Wilson, John K., 350

 X., Miss, 450-52
 X-rays, 371

--- 1122

RETURN TO →

CIRCULATION DEPARTMENT

202 Main Library

| | | |
|-----------------|---|---|
| LOAN PERIOD 1 | 2 | 3 |
| HOME USE | | |
| 4 | 5 | 6 |

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS
 1-month loans may be renewed by calling 642-2500
 1-year loans may be recharged by bringing the books to the Circulation Desk
 Renewals and recharges may be made 4 days prior to due date

DUE AS STAMPED BELOW

JUN 24 1984

REC. CIR. AUG 2 '84

NOV 7 1984 16

REC CIR FEB 25 1985

U. C. BERKELEY LIBRARIES



C046749337

THE UNIVERSITY OF CALIFORNIA LIBRARY

