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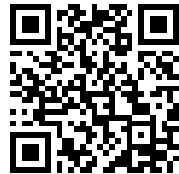
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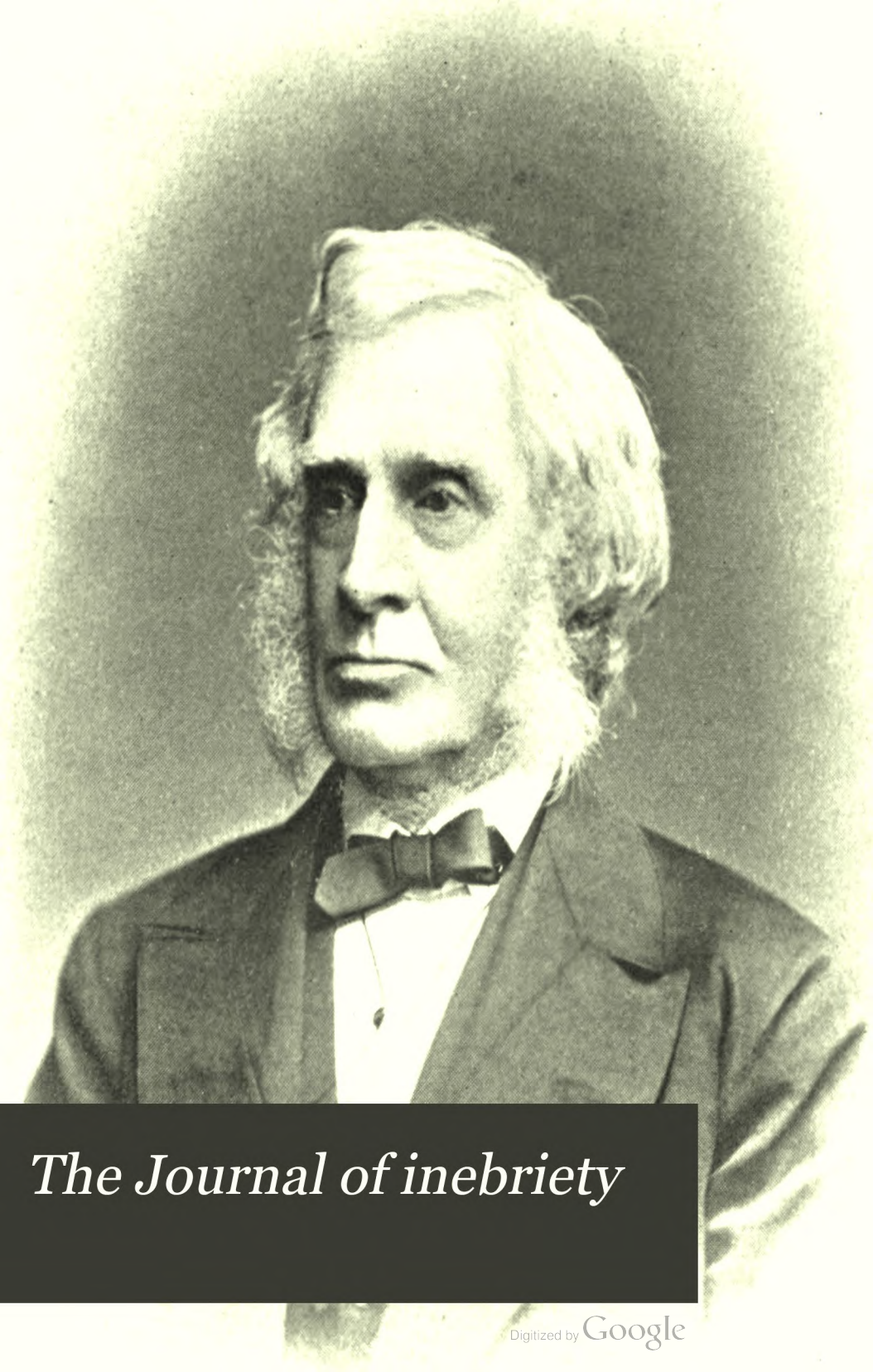
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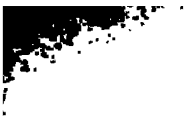
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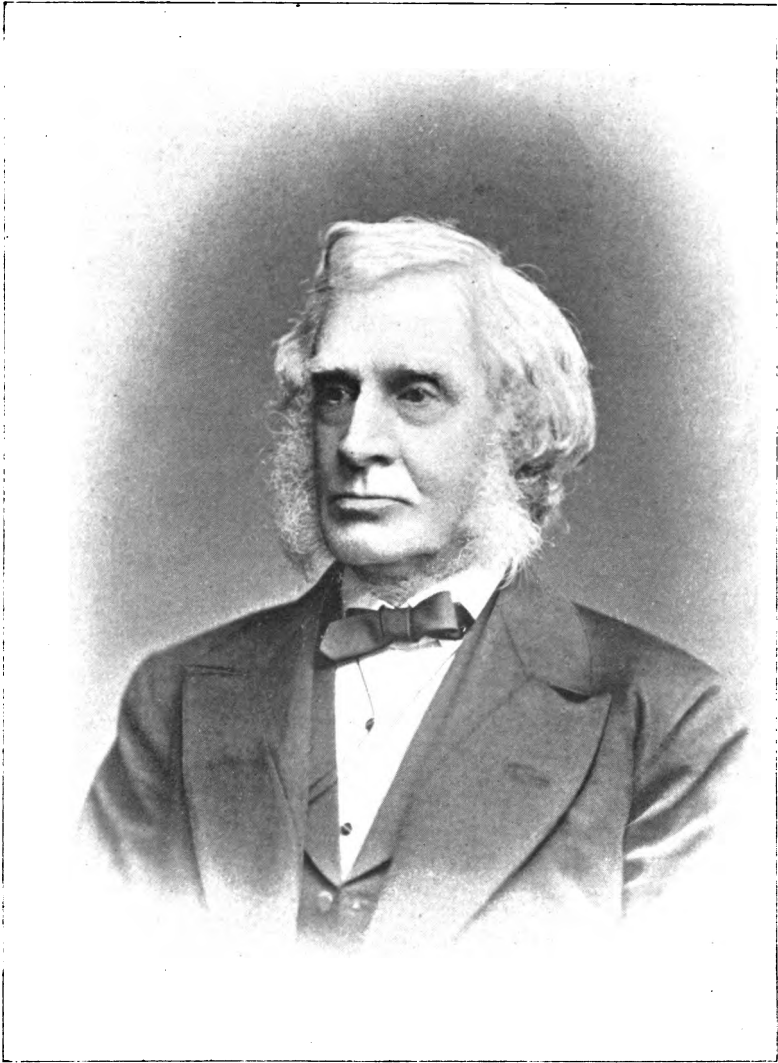
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SOME QUESTIONS CONCERNING THE RESPONSIBILITY OF INEBRIATES.\*

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BY DRs. M. MOTET AND VETAULT OF PARIS, FRANCE.

---

Pathological intoxication is characterized by multiple modifications brought to the habitual symptoms of acute poisoning by a morbid pre-existing state which gives to the intoxication a more serious physiognomy. Here the intoxicating drink is only the blow of the whip which will favor the explosion of the phenomena of delirium of an extreme violence.

It is, as M. Lentz says, "The match which lights the conflagration," and this will vary according to the nature of the materials upon which it shall strike. Some have tried to establish some varieties of pathological intoxication, and, according to the manifestations to which it most often gives place, they speak of maniacal intoxication and of convulsive intoxication.

Without engaging in tedious accounts of a descriptive development, we will only recall that these forms meet most habitually in persons predisposed to mental affections.

---

\* Read before the International Congress of Mental Medicine in Paris.

With them we always find the stigmata of a defective cerebral organization, which has for its first effect to diminish their resistance to the intoxicating action of alcohol, and in the second place to favor the development of an intellectual and moral disturbance more considerable at the first onset.

Apart from the insane, properly so called, imbeciles and epileptics, with whom drunkenness is always particularly dangerous, there exists an entire class of degenerate or hereditarily diseased persons whose grave defects of mental condition manifest themselves less by delirious conceptions than by the strangeness of their acts, the looseness of their existence, and who leave everywhere the impression of their incapacity or of their lack of balance. These are the truly diseased persons who no more resist the desire of drinking than other morbid compulsions. With them all the acts executed under the influence of intoxication have, in some sort, the characteristics of impulse. In these cases the expert physician finds himself in a struggle with medico-legal questions of a rare importance.

When one is in the presence of an ill-balanced individual, attacked with intellectual weakness, or being in a state of evident mental inferiority, the part to assign to his responsibility is unquestioned. Unhappily these cases are not always clear nor accepted, and the physician sometimes finds himself in this grave alternative, either to favor an alcoholized person who can, in an apparently short time, compromise all social security, or of exposing him to too severe a punishment. Let us recall in this relation some *desiderata* well known to all physicians accustomed to medico-legal practice. We all know that most of the time the special alcoholized persons of weak intelligence, whose forfeiture of liberty the physician decides without power of formulating, in regard to them, a decisive conclusion, it is also just as impossible to take severe judicial measures as durable administrative measures in regard to them.

We are astonished that the affirmation of irresponsibility does not have for corollary a prolonged commitment to an

insane asylum, especially when the question is in regard to persons notoriously feeble-minded, whom an excess of drink may conduct to worse acts of violence. The fault does not belong to us but to those who do not understand that to keep an insane person legitimately suspected of relapse, is to accomplish a work of protection and of social defense.

Habitual drinkers are susceptible of presenting in the course of their existence symptoms of acute intoxication of an intensity and gravity much greater than those observed in intoxication. These symptoms, which are designated under the name of acute or sub-acute alcoholic delirium, are characterized by many multiple disturbances by varied conceptions of delirium, disorders of immotivity, and acts of which the degree of acuteness is variable, the duration generally short, renewing themselves more or less often, and necessitating for that reason numerous sequestrations. These morbid phenomena are not always in relation with the degree of the saturation of alcohol. With some the alcoholic delirium will make its appearance consequent on some excesses only. With others, on the contrary, it will show itself much later, after excesses repeated every day, during years often without bringing intoxication. Sometimes the delirium will follow more copious libations; sometimes it will be observed to develop apart from all excesses, either by the fact of abstinence or by the action of external circumstances, the physical traumatism, a moral shock, an illness, etc.

Numerous subjective sensations, and, above all, hallucinations of sight, of a painful and terrifying nature, characterize the acute alcoholic delirium. According to the habitual state of the subject and the intensity of the disturbances of his senses, acute intoxication results in forms of mania, melancholia, or stupor. According to the termination, more or less rapid, of the attack, we can distinguish three categories. In the first, the duration is relatively short, and as M. Magan has stated, the convalescence is benign, rapid, and complete. In the second category, we can class the cases of alcoholic delirium with longer convalescence and rather frequent relapses.

When the delirious ideas, the disturbances of the actions, have lost their acuteness, we observe often vague ideas of persecution, hypochondriacal ideas, an emotional state, which are only slowly effaced. In fine, in the third class, we have to study the manifestations of alcoholic delirium with the predisposed. These persons, who have been so well studied by Morel, Magnan, Laborde, and also others, find their special predisposition either in a cerebral inferiority, which has been transmitted to them by heredity, or in an intoxication more considerable and more prolonged. Among them it is possible to observe not only toxic delirium, but also and co-existing with the latter, another delirium which has its origin in the special, natural dispositions, and for which the duration may belong. In all these cases the toxic agent has modified the intimate constitution of the nervous cell, and has created for it a special susceptibility under the influence of any excitement whatever. This susceptibility reveals itself by pathological reactions involving with them a veritable cerebral raptus, characterized by sudden obscuration, ataxia, the perversion of the intellectual faculties. Some disturbances of the general sensibility, some painful hallucinations of different senses determine for the patient a state of anxiety and terror difficult to describe.

The conscience altered, the reason vanished, are powerless to constrain the alcoholized person who finds himself absolutely incapable of withdrawing himself from the domination of sensorial disturbances which subjugate him. The instincts take the ascendancy, and, favored by the nature of the emotional and hallucinatory disturbances, urge to acts of a formidable violence. In what measure will the offense committed under such conditions render its author responsible? Of all the states due to alcoholic intoxication, it is, perhaps, the acute attack of delirium which furnishes the least to the controversy in a medico-legal point of view. Almost all authors are in accord upon this question and show themselves favorable to the absence of culpability in the agent who commits a reprehensible act in a state of alcoholic madness.

Marc maintains that the acts committed during a paroxysm of delirium tremens ought to be considered as the products of a mental lesion, implying the absence of all moral liberty. Tardien, Fournier, and the author are of the same opinion. The evolution in the attack contemporary with the culpable act is sometimes so rapid that often the physician charged with giving his estimate, finds himself in the presence of a person who has recovered his freedom of mind. The expert is then under the obligation of studying the antecedents, of reconstituting the pre-existing mental state, the circumstances which have presided over the accomplishment of the offense or crime and the special conditions under which the accused is found. The act charged ought to be brought into conjunction with the impulse of delirium which has been the cause and the occasion of it.

A man is, by the fact of his profession, exposed to drinking each day sufficiently considerable quantities of alcohol without ever appearing intoxicated. He is, nevertheless, in a permanent state of alcoholic intoxication. Under the influence of any cause whatever, a paroxysm of delirium breaks out. After some days of uncomfortableness, this man cannot keep quiet. At night he leaves his chamber, urged by the irresistible need of walking and to withdraw himself from the terrors born of his hallucinatory disorder. In the street he joins in a fight, he is struck and himself strikes with an energy of which only the alcoholics are capable who attack or defend themselves, a prey to disturbances which their delirium produces. This man has been only a blind agent. He is not punishable. In general, under the influence of alcoholic madness, the person enters at the first onset into the paroxysm of fury, and one cannot say that he has voluntarily provoked it. He has lost consciousness of the moral value of his acts. He has obeyed a morbid impulse which his will was powerless to repress. He is no longer himself; he no longer directs himself. In this kind one can only recognize the absence of all moral liberty, consequently, of all responsibility. It remains for us to examine

the consequences of an alcoholic delirium which we sometimes observe among habitual drinkers in the absence of more copious libations. It is, in fact, an experience, we might say, daily, that a man yielding habitually to alcoholic excesses, attacked, it may be, by an acute febrile malady, or by a wound, or even by a violent moral or physical disturbance, is, by the simple fact of the accident that has occurred unexpectedly, almost fatally exposed to a paroxysm of consecutive alcoholic delirium. In health, sheltered from all preoccupation, he might have continued to drink, each day, the accustomed quantities of alcohol without disturbances of delirium befalling him; ill, preoccupied he is not slow to present acute or sub-acute phenomena of delirium. If he resists, the pathological evolution is regular; eight or ten days suffice for the elimination of the poison and for the modification of the toxic excitability of the nervous cell. Convalescence accomplished, there remains only a few traces of the symptoms. Little by little they are effaced, and if the life is sober, regular, the disorders cannot return.

A man has betimes taken up the habit of alcoholic drinking. He drinks each day quantities considerable enough, and his robust constitution has not had too much to endure from these repeated excesses. Let this man have a serious fall, receive a violent blow, be attacked by pneumonia or any other acute malady, and suddenly the alcoholic delirium may break out. It is not to be doubted that an offense or a crime committed at this moment cannot be imputed to him.

It is the same when alcoholic habits are roughly interrupted, or likewise under the influence of a purely moral shock. Lively emotions, preoccupations, above all, those of a painful nature, causes eminently depressing which profoundly excite the drinker, can, like traumatism, fever, hemorrhage, diminish the resistance to the slowly prepared action of alcohol, and bring the explosion of delirium with all its train of symptoms.

One of the most interesting of cases often presents itself for observation. The question is in regard to prisoners

who, at the first questions, have seemed sound in mind, and who become insane after two or three days of detention. The author considers at some length the following case :

A man who has been drinking, while in a state of consciousness, has committed an offense, is sent to prison ; depressed by his imprisonment, he has an attack of delirium tremens. The action of the alcohol, which up to the moment of the attack has, in some sort, remained latent, is exhausted little by little. The balance is re-established, the prisoner recovers the integrity of his faculties and returns to his normal state.

In such a case it is important to understand the paroxysms for what they are in reality. They are the acute or sub-acute manifestation of an alcoholic intoxication. Their duration is ephemeral. They are dissipated at the same time that the action of the toxic agent which has provoked them, is exhausted. They are a symptom of the same kind as a paroxysm of fever, and do not authorize in any fashion a doubt in regard to the integrity of the intellectual faculties of those who have been subject to them.

Beside the attacks of acute intoxication, drunkenness, or alcoholic insanity, which are purely accidental, one who is professedly a drinker acquires in time certain modifications of the state of his intellectual and moral faculties which it is interesting to study from a medico-legal point of view. These modifications becoming more accentuated conduct the drinker to chronic alcoholism, the last stage of the complexus ; but before arriving at that point, before being so profoundly injured, he is a drunkard, and will later be a chronic alcoholized person.

The physiognomy of the drunkard is too well known to detain us a long time. One drinks every day, at the same hours, the same quantities of alcohol. Another commits excesses at the chance of occasions and of meetings. For the two the result is the same. By the fact of a veritable habit, they are surprised by complete intoxication only when the habitual amount is exceeded. The toxic agent does not

less surely exercise its influence; the intelligence is benumbed. The moral sense is blunted and lost. The will lacks strength. All reach that state of indifference which leaves them without resistance to evil suggestions. They become lazy, passionate, violent; the modifications have an effect above all upon the character, and, in spite of the alterations undergone by the faculties, the drunkard may preserve enough intelligence and moral liberty to direct himself and appreciate the nature and value of his acts. Leuret compares drunkenness to mental alienation.

The prolonged abuse of spirituous drinking creates, in the long run, numerous pathological disorders, of which the ensemble constitutes chronic alcoholism. The nature and expression of the manifestations of this morbid state vary with the different phases of its evolution. It is important to distinguish them. With certain drinkers the progress of intoxication has not completely obscured the intelligence and consciousness. With others, on the contrary, unconsciousness is absolute, and sottishness complete. With others, in fine, who seem to stand midway between the preceding, reason and consciousness, without being absolutely perverted, no longer direct them. Often the physician does not experience very great difficulties when the purpose is to estimate the part of responsibility which belongs to one of the different stages of chronic alcoholism.

In studying the man, in his antecedents, in his habits, in his character, as well as in the accomplishment of the acts which are charged against him, he has the measure of his intellectual and moral worth. But the difficulties begin when it is necessary to admit to the magistrates the mental aberration which is the peculiarity of the patient's and which sometimes seems to contrast singularly with their apparent state.

We would speak of those alcoholized persons whose portraits have been so well traced by our masters. M. Fournier says these men with intelligence depressed without being destroyed, with moral sense obscured without being extin-



guished, persons always giddy through alcohol, even fasting, not knowing very well what they do, often indifferent, and acting like machines, simple, deprived of character and of energy, credulous, easy to subject to the domination of another and to drag upon the declivity of evil, persons always near the state of infancy with the appearances of free will and of reason.

*Racle* recognizes the unhealthy transformation undergone by the chronic drinker, and thinks that he has right to a larger extenuation of culpability.

*M. Fournier*, indeed, admits with the moralists, that the degradation which characterizes the chronic drinker is reprehensible in itself, but he adds, that it none the less creates a particular moral situation, of which the judge ought to take account. This is also the opinion of *M. Tourdes Tardien* in his medico-legal study of madness, after having indicated the pathological characteristics of the mental state of the chronic drinker, and having insisted upon the apathy, upon the peculiar carelessness of which he daily makes proof, and from which it is impossible for him to escape, estimates the importance of all these signs which, says he, without making of every drunkard a madman, make of the drinker a type eminently subject to irresistible impulses, and consequently, in many cases, unconscious and irresponsible.

*M. Lentz* does not recognize a criterion which can serve to determine the exact value of the responsibility of the chronic drinker. For him it is evident, that so long as the moral modifications are but little emphasized, the culpability can be only diminished, while, when the subject has reached degeneracy, stupefaction, torpor, he is a person almost unconscious, who can be exonerated almost completely from all imputability.

It seems to us that too often the mistake is made of comparing the inveterate drunkard with the chronic drinker, properly so called. Without doubt, drunkenness conducts in the long run, and fatally, perhaps, to chronic alcoholism. But there are, even here, two very particular states which it is important to distinguish.

The greater part of the states described by authors, considered by them as belonging to the first phases of chronic alcoholism, and conducting the expert in many cases, which it remains with him to determine to develop motives of extenuation, belong to intoxication already old and not to the alcoholic diathesis itself.

As to confirmed chronic alcoholism, the pathological state which expresses itself by manifestations positive, well-defined, symptomatic of profound permanent and irreparable lesions of the intellectual, moral, and effective faculties, we do not hesitate to affirm that it involves unconsciousness and suppresses all imputability.

#### DIPSOMANIA.

This term, for a long time synonymous with intoxication, has definitely conquered in our medical language its true significance. It is a pathological impulse returning by paroxysm to drink to excess, intoxicating liquors. The paroxysm of dipsomania ranges itself in three periods. Prodromic, that of the state itself and of the decline, during which, we observe different psychical symptoms in regard to which we do not think we ought to insist.

Intoxication, whatever has been said of it, is the almost fatal consequence of considerable drinking of alcoholic liquors. During the paroxysm it shows itself with its habitual symptoms, but its duration can be prolonged during several days. So long as the paroxysm endures, we observe a double spectacle, that of the impulse to drink, which becomes more and more imperious, for the more it is satisfied, the more exacting it is, and that determined by the intoxicating action of liquors. At the beginning there are only phenomena of inebriety which disappear after the crisis without leaving traces; but later, when the paroxysm is renewed a great number of times, when its duration is longer, it is not rare to observe, at first acute then chronic manifestations of the delirium of intoxication.

Lasegue was not of this opinion. Nevertheless, it is

often thus that things take place. M. Magnan has justly remarked, "It is alcoholic delirium which promotes the admission of the patient to the asylum, and sometimes it is only after the disappearance of the acute symptoms, that we find again the elements necessary for the establishment of the diagnosis of the hereditary diathesis, and of the morbid impulse. The paroxysms are separated by intervals of greater or less length, during which the dipsomaniac seems to possess the integrity of his faculties, but often it is only an appearance. It is not rare, in fact, that an examination, more minute, more attentive, reveals the lack of balance, and shows the nature of the natural imperfections of the character and tendencies.

It is important to insist upon the differences which exist between the dipsomaniac and the habitual drinker. The dipsomaniac is a drinker on occasions of a particular sort. Apart from his paroxysms he generally has a deep disgust for alcoholic drinks. "Drunkards," says Trélat, are persons who get intoxicated when they find occasion for it. Dipsomaniacs are diseased persons, who become intoxicated whenever their paroxysm seizes them.

With the dipsomaniac the alcoholic symptoms are only secondary. They are the result of the morbid impulse. The drunkard becomes diseased by the simple fact of his excesses.

"The one is deranged before drinking, the other is deranged only after having drunk" (Magnan).

From the medico-legal point of view, a larger number of questions can be put to the medical expert. They require on his part a study so much the more serious, that the greater part of the time the dipsomaniac is taken for a common drunkard.

The dipsomaniac can make himself guilty of a crime or an offense during one of the three periods of the paroxysm or during the intermissions. In these different cases, the culpability, and, consequently, the responsibility are susceptible of variation.

We can leave aside the study of culpability during the intermission of the paroxysm. It belongs to the medico-legal history of hereditary madness.

We ought to consider here only the intoxication or the alcoholic delirium which are produced during the paroxysm, and are the consequence of it. As to that which relates to alcoholic delirium, what we have said previously applies to the dipsomaniac as well as to ordinary drunkards. It involves irresponsibility for all the acts committed under its influence. As to the intoxication which comes upon the dipsomaniac at the height of his paroxysm, it equally exonerates him from all culpability. With him not only is the intoxication not voluntary, not only was it not in his power to shun it, but, moreover, the abuse of drink which has produced it is the result of the morbid force of an irresistible impulse, with darkening of the mind, inhibition of the will, and absence of consciousness. In these conditions the intoxication of the dipsomaniac fully involves his irresponsibility.

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THE English *Prison* commissions report that fifty-nine per cent. of all prisoners convicted during the year have been convicted before. Some of them have been in prison from eight to two hundred times before, and from this they conclude that the present system of treatment of criminals is a lamentable failure.

Of the persons convicted of murder in Great Britain for a period of ten years, from 1879 to 1888, thirty-two per cent. were found to be insane. Thirty-six per cent. of the remainder had their sentences commuted on the ground of mental weakness, and doubtful mental soundness. At least ten per cent. more were questioned for the same reason, leaving less than one-third who were punished as sound and responsible.

RECENT JUDICIAL EVOLUTION AS TO CRIMINAL RESPONSIBILITY OF INEBRIATES.

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By CLARK BELL, ESQ.,

*President American International Congress of Medical Jurisprudence.*

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By the common law of England it was conceded the words *non compos* meant a total deprivation of reason. Lord Cook divided it into four parts, or, as he called them, "Manners."

*First.* The idiot or fool.

*Second.* He who, of good and sound memory at birth, lost it by visitation of God.

*Third.* Lunatics who have lucid intervals, and sometimes of good sound memory, and sometimes *non compos mentis*.

*Fourth.* By his own act a drunkard.

So that drunkenness at and by Common Law under certain circumstances was a form or species of insanity. By the same common law it was held:

*First.* That the drunkard was responsible for all his acts criminally, even if the state of drunkenness was such as to make him insensible to his surroundings and unconscious of his acts.

*Second.* That drunkenness, instead of being any defense to a charge of crime committed while in a state of intoxication, was not only no defense, but that it aggravated the act.

These doctrines were upheld by the English Courts in Dammaree's case, 15 St. Tr., 592; Frost case, 22 St. Tr., 472; Rex v. Carroll, 7 c. and p., 115; and these doctrines have been held likewise in nearly all the American States.

In Ala., State v. Bullock, 13 Ala., 413; in Cal., People v. King, 27 Cal., 507; in Conn., State v. Johnson, 40 Conn.,

106; in Del., *State v. McGonigal*, 5 Har., 510; in Ga., *State v. Jones*, 20 Ga., 534; and in nearly every American State similar decisions have been made.

The Common Law which would not uphold a deed, will, or contract, made by a drunken man in an unconscious state of intoxication, would hold the same man criminally liable for every act constituting a violation of the criminal law. To-day we are regarding these views as legal curios and relics of the past.

The law should have its museums for the preservation of its antique anomalies. A silent, unconscious change has been wrought in the law, not by legislation, but by the growth of ideas, the diffusion of knowledge.

Insanity is now demonstrated to be a disease of the brain, of which it is itself an outward manifestation. Inebriety is also shown to be a disease of the man, manifesting itself through brain indications, which demonstrate it to be a form of insanity wholly dominating the volition and beyond the power of the victim to control, and is now treated as such.

The essential element of crime, intention, hardly fits into the acts of the unconscious inebriate, who, while blind or dead drunk, kills an innocent victim, and the absence of motive, like the absence of intention, are missing links in that chain which the law exacts in regard to all criminal action. It would be next to impossible now to find a judge willing to charge a jury that a crime committed by a man in a state of intoxication, in which the accused was unconscious of his act, or incapable of either reflection or memory, should be placed on a par with one fully comprehended and understood by the perpetrator.

Buswell says, in speaking of the old doctrine of drunkenness being an aggravation of the offense: "It is apprehended that this is the expression of an ethical rather than a legal truth." (Buswell on Insanity.)

Such considerations compel us to enquire: What is law? There are two schools of thought regarding it.

Webster, the great expounder of the American Constitution, is credited with saying: "Law is any principle successfully maintained in a Court of Justice. This represents one school.

Richard Hooker, in his ecclesiastical polity, represents the other. He says of Law: "There can be no less acknowledged than that her seat is the bosom of God, her voice the harmony of the world; all things in heaven and earth do her homage; the very least as feeling her care, the greatest as not exempted from her power." The gulf intervening between these two extremes is as wide and deep as that which divided Abraham and Lazarus in the parable of our Lord.

The framers of the New York Penal Code, without the courage to hew down the error of the old doctrine, engrafted thereon a provision that enables a jury now, in that State, to pass on the motive and the intention of the unconscious and wholly insensible inebriate, so that by law now in New York, since the Penal Code of that State, a conviction would, in such a case, be well nigh impossible.

How have the English judges met the question? In 1886 Mr. Justice Day, in *Regina v. Baides*, at the Lancaster assizes, charged a Lancaster jury, that if a man was in such a state of intoxication that he did not know the nature of his act, or that it was wrongful, he was insane in the eye of the law; and that it was perfectly immaterial whether the mental derangement resulting from such intoxication was permanent or temporary.

In 1887 Chief Baron Palles held that if a person, from any cause, say long watching, want of sleep, or deprivation of blood, was reduced to such a condition that a smaller quantity of stimulants would make him drunk, and that would produce such a state if he were in health, then neither law nor common sense could hold him responsible for his acts, inasmuch as they were not voluntary, but produced by disease.

As long ago as 1865, in the case of *Watson*, tried at  
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Liverpool for the murder of his wife, before Baron Brammwell, the evidence showed that he was laboring under delirium tremens. After the act, he grew calm and said he knew perfectly well what he had done, and that his wife was in league with men who were hidden in the walls.

Baron Brammwell, who favored hanging insane men who committed homicides, when acting under an insane delusion, if of sufficient intelligence to understand the nature and quality of the act and its consequences, tried the case, and charged the jury that there were two kinds of insanity, by reason of which a prisoner was entitled to be acquitted. Probably the jury would not be of opinion that the prisoner did not know the quality of his act, that it would kill and was wrong, but it was still open to them to acquit him, if they were of opinion that he was suffering from a delusion leading him to suppose that which, if true, would have justified him in the act. One more remark he would make, viz.: That drunkenness was no excuse, and that a prisoner cannot, by drinking, qualify himself for the perpetration of crime; but if, through drink, his mind had become substantially impaired, a ground of acquittal would then fairly arise. The prisoner was acquitted.

Under the English law there is no right of appeal to the convicted homicide, as in the American States, and so it is difficult to find the decision of English higher courts on the questions involved in the discussion.

In the American States no person is executed except on the decision of the highest court of the State, if the accused desires it and appeals. In England the appeal does not lie as a matter of right, and so the opinion and dicta of the English trial judges form the real body of the law of England upon these questions.

Baron Brammwell undoubtedly regarded Watson as entitled to an acquittal, and the case shows a remarkable result in this respect. Had he been insane and committed the homicide under delusions which dominated his will and controlled his action, he would have been convicted if he



had sufficient intelligence to understand the nature and the quality of the act, but the drunkenness which had caused the attack which resulted in delirium tremens, with a diseased condition of the brain, also resulted in a delusion which controlled his mental powers so as to render him irresponsible at law.

In 1888 Baron Pollock held that the law was the same where insane predisposition and not physical weakness was the proximate cause of the intoxication.

The English Home Secretary, Mr. Matthews, is one of the ablest men connected with the English government.

Under the English system he has the power to commute or modify the sentence of the courts in criminal cases, and he exercises it with as much effect, and more in many cases, than would the reversal of the Appellate Court, if the right of appeal existed.

No eye in Great Britain sees more clearly or more intelligently the action of the criminal courts than his. It is his province to correct errors and redress grievances and abuses, if such exist or occur, in the criminal jurisprudence of Great Britain. He has recently named a commission, composed of Mr. J. S. Wharton, chairman; Sir Guy Hunter, M.P.; Mr. E. Leigh Pemberton, Assistant under Secretary of the Home Department; Mr. Daniel Nickolson, Superintendent of the Broad Moor Criminal Lunatic Asylum, and Mr. C. S. Múrdock, head of the Criminal Department, to inquire into the best mode of treatment and punishment for habitual drunkards.

Mr. Matthews says, regarding the appointment of this committee, "Great differences of opinion have arisen as to what kind and degree of punishment for offenses committed by habitual drunkards would be the most effectual, both as a deterrent and with a view to the reformation of such offenders. It appears to me that advantage would result from an inquiry being made into the subject." It may be fairly claimed, so far as the British Islands are concerned, that the old common law rule no longer is enforced there,

and that inebriety, as a disease, is now not only recognized as an existing fact, but that the jurisprudence of that country is receiving such modifications as are necessary to fit it for the advance made by scientific research.

We are doubtless near similar results in the American States.

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M. LANCEREAUX concludes his observations on the effect of alcohol and the progeny of the drunkard, by saying that alcoholic liquors, such as are now consumed, prevent the most important and noble faculties of the man who abuses them, they disturb his nutrition, they make him old before his time; nay, more, they affect his progeny, whom they change and often kill. It is fortunate for mankind, that while the descendants of the good continue to enjoy the advantage derived from their forefathers for centuries, "The sins of the fathers are visited upon the children 'only' to the third or fourth degeneration." The unhappy tendencies of the father are transmitted to the children, but a stop is put to the wide degeneration of the race which might otherwise occur by the fact that alcoholism tends to lessen reproduction as well as to increase mortality. Sterility may affect those who have acquired intemperate habits as well as the descendants of such persons, and the children when born, being very liable to disease, the family is likely to die out.— *Medical Review.*

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THE *chronic inebriate* will be found, as a rule, defective in his entire system, both moral, physical, and intellectual. He is literally switched off on the side track of progressive degeneration. His intellectual capacity is only automatic and a thin varnish of reality. His moral capacity is gone, and he is unable to appreciate between right and wrong. His physical power is rapidly growing weaker, and receding into the most degenerate forms.

THE INFLUENCE OF TOBACCO ON VISION.\*

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By FRANCIS DOWLING, M.D.,

*Member of the American Medical Association, etc.*

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As far back as 1833, a Scotch physician, Dr. McKenzie, of Glasgow, first called attention to the influence which tobacco exerts in the causation of certain forms of blindness, in these words: "I have already had occasion repeatedly to hint my suspicion that one of the narcotic acrids, which custom has foolishly introduced into common use, namely, tobacco, is a frequent cause of amaurosis."

Since that time various writers on this subject have laid greater or less stress on this agent, when used in excess, as a cause of certain troubles of vision, some claiming that it exerts a very injurious influence, while others, on the other hand, state that aside from its association with the use of alcoholic drinks it does very little harm. Dr. Hutchinson, among the English physicians, has written a great deal on this subject in the way of hospital reports, etc., and thinks that the disease is of more frequent occurrence than is supposed. Many of the French writers coincide with Hutchinson, while among the German writers the majority are inclined to the opinion that, as the majority of great smokers are also heavy drinkers, a large share of the visual trouble is due to this latter agent — alcohol.

For some time I have been making a series of investigations in regard to this subject of chronic tobacco poisoning, with a view to getting such statistics and other items of information as were available in regard to this subject. During the year 1884, while in Paris, in the eye clinic of Dr. Galezowski, I collected some information bearing on this

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\* A Paper read before the Mississippi Valley Medical Association, at Cincinnati, October 12 to 14, 1892.

subject, and more recently I have made a series of examinations of the employes of the principal tobacco factories of Cincinnati, with the same object in view. Out of 1,500 male employes in these places, I examined 10 per cent., selecting the men from among those who, by virtue of age and habits, would be most likely to suffer from tobacco poisoning. I here give a synopsis of my findings in 150 of these selected cases :

There were altogether about 3,000 employes in these factories which I visited ; about half of these were females and the other half males. I found that 90 per cent. of all the male employes used tobacco in some form or other. About 20 per cent. chewed tobacco, in addition to smoking liberally of a pipe or cigar. Most of them did their smoking in the morning and evening, before and after working hours.

One woman, aged forty, presented a well-marked case of tobacco amblyopia ; she confounded the red and green colors of the test with the black, and white with dark gray. She also presented a notable diminution of her visual acuteness, and said her eyesight had been failing for the past two years. She had been working in tobacco for five or six years, but has never used the article in any shape. The trouble, I am inclined to think, is hereditary in her case, although her age is beyond that at which the trouble usually makes its appearance through heredity.

Comparatively few of the men examined drank to any great extent, and those who did drank mostly beer. A very large number of the men appeared to have a flabby condition of the muscles, and to suffer more or less from anæmia. This was particularly noticeable among the female employes, who were largely made up of young girls.

The ventilation of the workrooms was, as a general thing, as good as could be expected in establishments of this kind.

The principal colors confounded by those who were examined was red confounded with pink, dark brown or black, the latter usually in the more pronounced cases ; green was

confounded with light blue, yellow, or black ; white was, as a general thing, confounded with gray of different degrees of intensity, according to the degree of tobacco infection. All of these cases were only affected for the central colors of the test ; the colors in the periphery could be distinguished without much difficulty.

The men examined ranged in age from thirty to sixty years, and were among the heaviest consumers of tobacco in the factories ; so that they were among the best subjects that could be had for the object in view, viz., ascertaining the effects of tobacco on the system.

In my first series of examinations some of the females were included in the list, but, with the exception of the case already named, none gave evidence of tobacco poisoning as manifested by troubles of vision.

Out of over 150 men examined, there were forty-five who showed more or less evidence of tobacco amblyopia. The majority of these, however, were of a light degree ; but thirty among the number were pretty well marked cases, as they distinctly mistook the red color of the test for brown or black, and the green color for light blue or orange, and in some instances black. They were also unable to make out the white spot in the center of a black card.

The majority of those who were examined—that is, of the whole 150—showed evidence of a contracted condition of both pupils. This was present in a good many who showed no other evidence of tobacco poisoning, but it was marked and persistent in those who showed other well-marked evidence of tobacco infection. Thirty out of the forty-five complained of a gradual failure of vision.

Three-fourths of all the men examined were over thirty-five years of age, and the oldest man examined was sixty-one years.

Some of the men examined smoked as high as twenty cigars a day. Many of them declared that they were compelled to stop smoking for a month or so at a time on account of unpleasant feelings in the head and a difficulty in reading,

owing to confused vision. Among these latter was a man, aged forty, who was accustomed to smoke fifteen cigars a day, and, in addition to this, to chew a considerable quantity of tobacco; he was compelled to stop chewing and smoking a few months ago, owing to failing eyesight. According to his statement, his eyesight has improved since then. On examination he still confounded white with gray, and the red and green circles in the center of the test-chart are still made out with some difficulty.

In several instances the proprietors of the establishments where the examinations were made pronounced themselves skeptical in regard to tobacco having any deleterious influence on the eyes. They were very much surprised when they found that they confounded the colors on the test-chart, and were finally convinced that tobacco could have a bad influence on the eyesight.

When I commenced my examinations I was under the impression that the constant inhalation of the dust, and the odor of tobacco in the work-shops, would tend in itself to bring about symptoms of tobacco amblyopia. I am inclined to think this hardly takes place, for in my examination I found that those who did not smoke or chew were uniformly free from troubles of vision of a toxic nature, and the females were almost universally free from the trouble—that is, as far as I examined them.

As a result of all my investigations in this department, the following would be a fair résumé of the principal symptoms which characterize chronic tobacco poisoning, affecting both the general system and the organs of vision.

The subjects are light eaters, and the appetite is easily satisfied; a large number have a decided antipathy to meat. Constipation is usual. The sleep is usually disturbed, often by disagreeable dreams. They usually have to go to bed late, as they claim, in order to be able to fall asleep. They often wake up in a few hours, and are again unable to go to sleep for some time. They usually complain of more or less palpitation of the heart, and the pulse generally ranges at

about 90 or over. On taking any great amount of exercise the muscles feel unusually tired, and the hand often has a characteristic tremble on holding a book or pen. A case in which this latter symptom was particularly well marked came under my treatment recently, in a man who was a heavy smoker, and who had pronounced symptoms of tobacco amblyopia in addition.

The subjects who usually suffer with tobacco blindness are almost always males between the age of thirty and sixty years. Exceptions to this occasionally occur, and in my own series of examinations I found one young man, aged nineteen, who presented a well-marked case of this trouble. The young man was a most inveterate chewer and smoker of tobacco. Noyes also states that he treated a boy of fifteen who presented a classical case of this disease. The boy was an inveterate cigarette smoker. In speaking of this subject, Förster, of Breslau, says that he has never seen a case of tobacco amblyopia in a person under the twenty-sixth year but that they are mostly from thirty to sixty-five years of age.

There is almost always a gradual but progressive failure of visual acuteness in both eyes. This was noticed more or less in a large number of all the cases I examined. Luminous objects dazzle the eye-sight, and a bright light is worse for reading by than a subdued one. These patients see better in the evening than in the middle of the day, and in this connection, Förster cites the case of an old smoker who, in playing nine-pins, could not distinguish between the upright pins and those that were down during the bright light of day, but had no difficulty in that direction as evening came on. In addition to this, patients often complain of a glimmering mist which covers all objects, especially in a bright light. These subjects almost always confound colors for central vision. First in the order comes red ; this is generally taken for dark brown, pink, or black. Next in order comes green ; this color is taken for light blue or black. Then in order comes white, which is taken for dark gray or black. Pink to

these subjects often looks like blue. It must be remembered that it is only for the central visual field that these colors are confounded; the periphery is usually seen all right.

*Myosis.*—Persistent contraction of both pupils is generally present, and this was the most frequent of all the symptoms noticed in the cases examined; and we could almost always tell by looking at the pupils in advance of the rest of the examination that the subject would fail to make out the colors of the test. This symptom was present in many cases where the men were heavy chewers of tobacco, and even when there was very little other evidence of infection.

It would be well to mention here that in some cases this contraction is so pronounced that it is impossible to illuminate the eye chamber sufficiently to make an examination at its fundus by means of the ophthalmoscope, and in consequence this condition may be mistaken for other disease. For a case bearing on this point I am indebted to my friend and former teacher, Dr. Galezowski, of Paris. The case was treated by the Doctor in 1889, and he writes me the particulars under date of last August as follows: A man in the Island of Martinique suffered a diminution of vision to such an extent that he was no longer able to go about without assistance. He consulted a doctor on the island, who examined him and said that he had a cataract, and advised an operation. The patient's wife took him to Paris and asked Dr. Galezowski to perform the operation. The Doctor, before operating, made careful examination and was surprised to find no trace of cataract. The patient had instead a marked case of tobacco amblyopia from smoking twenty to thirty cigars a day. He was placed under appropriate treatment. The use of tobacco in any form was strictly forbidden him, as well as alcohol. In about three and a half months the man had entirely recovered the use of his sight, without an operation.

It will be well to mention that all the symptoms mentioned are more marked in the case of chewers of tobacco than in smokers. This we can probably explain by the fact



that in the case of chewing more nicotine is absorbed than in the case of smoking, for in the latter case a great part of this poisonous agent is volatilized by the heat and escapes with the smoke; while in the former most of it is directly absorbed into the circulation through the blood-vessels of the mouth and tongue.

Lastly, the ophthalmoscopic examination of the eyes of those affected with tobacco amblyopia reveals the papilla of the optic nerve to be more than usually red in the early part of the affection. Later it appears anæmic, especially on the temporal half, and finally atrophy of the disc takes place. It is quite probable that these changes in the papilla are caused by direct action of the nicotine, which enters the circulation and causes contraction of the smooth muscular fibres, and then, diminishing the calibre of the minute blood-vessels of the part, the irritation of the nerve tissue of this essentially sensitive body takes place at the same time, by means of this agent, and this explains the congested condition of the part seen in the early history of the disease. The pressure, etc., caused by the congestion finally produces a gradual atrophy of the disk, and eventually more or less of the contiguous retina, according to the duration of the disease and the amount of tobacco infection.

Dr. Swanzig says that tobacco blindness is more common in England and Ireland than in Germany, where light cigars are more in use than the stronger ones of England and Ireland. I think another reason, in addition to the one cited by Swanzig, is that in England and Ireland the stronger alcoholic drinks are used in preference to the comparatively weak malt liquors of Germany. These alcoholic drinks have a greater tendency to lower the tone of the system than those of malt, and thus powerfully aid the action of tobacco in producing its poisonous effects. This is particularly so among the poorer classes.

Dr. Hirschberg, of Germany, says that out of a total of 18,000 eye cases treated from 1871 to 1876 he only diagnosed seven cases of tobacco poisoning, and during the year

1879 he witnessed only nine cases of this trouble. Dr. Galezowski, writing to me under date of August 15, says that out of every thousand cases of amplyopia from various causes from five to fifteen were from tobacco poisoning. Dr. Londolt, of Paris, writes me under date of August 1, and says that during the course of last year out of 2,771 eye diseases treated in his clinic twelve cases were distinctively due to tobacco poisoning. Dr. Sichel thinks that the disease is of frequent occurrence.

The prognosis is good if the patient comes under treatment early. In some cases complete recovery occurs, and very great improvement is a rule. In long standing cases a moderate improvement is all that can be expected. If smoking is persisted in, no improvement takes place under any system of treatment. Under proper care fully 60 per cent. recover.

It is necessary in the first place to absolutely forbid the use of tobacco in any form. Next, the use of alcoholic drinks. The very worst cases to cure are those arising from chewing tobacco. From six to twelve weeks' treatment are usually necessary to effect a cure.

Haughton in his experiments has shown that there is an antagonism between nicotine and strychnia, hence the usefulness of this latter agent in the treatment of this disease. I have been more successful with it in combination with arsenious acid and other tonics than with any other mode of treatment.

I here give the outlines of a few cases which have come under my treatment, and which are selected at random from my note book.

#### CASE I.

Mr. W., a cigarmaker by trade, presented himself with failing vision; both eyes are effected; can see better in the evening than during the day; cannot see the central circle of a figure on a dark dial, but can see those toward the periphery better. Green color appears gray to him, and red color looks blackish. He was accustomed to smoke eight

strong cigars per day ; this quantity was reduced to two per day, and at the end of two months his condition was much improved.

CASE II.

This was an old gentleman of sixty years of age, who lived in the Rue des Ecoles, Paris. He was an inveterate smoker of the pipe. He had been gradually losing his sight for two years, and could not read the ordinary print with any kind of a glass ; the half of each papilla of the nerve of sight was atrophied towards the temporal side. He was color blind for red and green. I induced him to reduce his quantity of tobacco for awhile, but he soon returned to his old habits, and I was unable to get any improvement in his condition.

CASE III.

T. E., a blacksmith, aged forty-five years ; smoked five cigars a day and a couple of pipes of tobacco before going to bed ; had to give up work on account of failing sight. Central vision defective in both eyes ; pupils moderately contracted. Gave up smoking, and at the end of two months was well enough to resume work at his trade.

CASE IV.

This man was a cigar dealer, aged forty years ; was accustomed to smoke continually during the day. During the past year his sight has been gradually failing ; cannot read ordinary print ; has contracted pupils and an anæmic face. Confounds red color with black ; white on a black ground appears gray ; red color appears brown. Was induced to give up smoking, and at the end of three months' treatment he was greatly improved.

CASE V.

This was a colored man who formerly followed the river for a living, and was accustomed to take a drink or two of whisky every day ; chews tobacco almost constantly. Has not been able to distinguish ordinary letters with his

right eye for a couple of years ; for about three months the sight has been failing in his left eye. There is a large central scotoma in the right eye, but nothing perceptible with the ophthalmoscope in the left. The red and green colors are not seen with the right eye, but appear slightly off-shaded with the left one. He was induced to give up tobacco on being told that otherwise he would go blind ; his sight was somewhat improved after two months' treatment.

## CASE VI.

Mr. G., aged thirty-one, brass finisher ; has anæmia of both optic discs ; gradual failure of vision for the last year ; looking at a bright light causes dizziness ; has also an irritable heart and rapid pulse ; no organic disease ; general tremulousness of the muscles. Does not use alcoholic liquors ; smokes six or seven pipes of tobacco during the evening, and finds it difficult to give up the habit. Confounds red and green with black. Still under treatment.

Tobacco was not used in Europe till about the close of the fifteenth century, soon after the return of Columbus from his first discoveries. From that time on its consumption spread from country to country until it is now more or less extensively used throughout the world. Statistics show that the per capita consumption of tobacco in Germany alone every year is three and a half pounds. In France nearly two pounds, and in Austria nearly the same quantity is consumed. Counting the adult males in Germany as one in five of the population, every adult male in that country would use seventeen pounds of tobacco per year.

The deleterious effects of tobacco on the system in general or on the eyes is due as we all know to the presence of a poisonous ingredient called nicotine. This oily, colorless fluid diffuses itself into the blood with as much rapidity as prussic acid, and a poisonous dose has been known to kill an adult in three minutes. Nicotine, when heated to 250 degrees, becomes volatilized and decomposed, but if watery vapor is present, volatilization takes place without

decomposition. When dry tobacco is smoked, the greater part of the nicotine is decomposed by the heat, and passes off with the smoke. The moister the tobacco, and the cheap grades are usually damp, the more is this retarded. The cheaper grades of tobacco contain more nicotine than the dearer ones, and consequently are more injurious to the consumers; and this is probably one reason why tobacco blindness is more common among the poorer classes than among the rich. The tobacco used for chewing purposes is usually very rich in nicotine.

In conclusion, the question might be asked: Can anything be done to check the use of tobacco? The answer would be: Very little. The public could be instructed with respect to the consequences of its abuse by our Health Boards or other authorities. In this connection it will be well to state that very few of the patients who seek advice on account of this disease suspect the cause of their trouble, hence the advisability of a more general information on the subject. The manufacturers could diminish the quantity of nicotine contained in tobacco, especially in the cheaper grades. Manufacturers know of various processes for extracting this poison without at the same time impairing the aroma of the tobacco. This could be carried out particularly well where the government has a monopoly of the manufacture and sale of tobacco, in such countries as Germany, France, and Austria.

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To all inquiries of where to go for *rest* and *recuperation*, and, at the same time, be under the care and advice of a physician, we say, go to the Battle Creek Sanitarium. Without any doubt, this is the most thoroughly organized scientific institution in the country. The regulation of diet, exercise, and all other health conditions are most efficiently carried out by the aid of every means known to science. Health-seeking invalids will find everything that will build up and restore lost energies in this place. Send to Dr. Kellogg, the superintendent, for circulars.

## ALCOHOLIC HYSTERIA.

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By DR. FERDINAND DREYFOUS.

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The term "toxic hysteria" was probably first pronounced by Dr. Debove, in 1886. In terminating an important communication upon hysteric apoplexy he expressed himself in the following language: "In saturnine, alcoholic, and mercurial intoxications we observe, apart from the element of hysteria, a manifestation of hemianesthesia which occurs without organic lesion. I have already called the Society's attention to these affections, and spoken of their curability by esthesiogenous agents. I would not separate these phenomena from hysteria itself, and I would say that the malady in question is a sort of symptomatic hysteria—an *hystérie toxique*. Please observe carefully that when a saturnine patient presents convulsive epiphenomena, the word symptomatic epilepsy does not shock us; neither am I unwilling to say that it is a question of symptomatic hysteria when a saturnine patient manifests hemianesthesia, *a syndrome which, for us, is almost the characteristic sign of hysteria.*" From this time was created the idea of toxic hysterias. Inspired by Dr. Debove, M. Achard, one of his scholars, made in a study of apoplectic hysteria, distinctive citations of saturnine, mercurial, and alcoholic hysteria. But the author did little more than indicate the existence of alcoholic hysteria and gave but two cases. Attention at that time seemed to be concentrated upon saturnine and mercurial hysterias.

While Professors Charcot and Potain demonstrated the relation—now so evident—between hysteria and saturnism, and Professor Potain stated (for the first time) the phenomena of the transference of paralysis of the extensors, M. Letulle gave the first complete description of saturnine hysteria. Besides hemianesthesia and apoplexy he attached

to this variety of symptomatic hysteria certain monoplegias described by authors, but not classed among hysterical manifestations; they comprised circumscribed contractures—of which he cites two examples—and attacks of temporary mutitas. The same author brings together the known facts of mercurial hysteria. There again were cited the hemianesthesias, the apoplectic attacks and the circumscribed contractures, together with posthemiplegic hemichorea. As a final proof of his demonstration, M. Letulle presents the phenomena of transference.

All of this, which has been so well done for mercurial and saturnine intoxications, remained to be done for alcoholic intoxication. Charcot has laid great stress upon alcoholic hemianesthesia: "I believe," says he, "that the cases of alcoholic hemianesthesia are cases of hysteria in alcoholic patients." This opinion sustained by Drs. Debove and Charcot rests to-day upon a respectable number of facts.

I have brought together these cases on account of the simultaneous presence in them of the two symptoms—epileptiform attacks and hemianesthesia. All of the patients are alcoholics.

[Dr. Dreyfous's cases are very fully detailed and occupy many pages; the writer's recapitulation of them, together with his conclusions, fairly present the points.]

**THE FACTS CONSIDERED.** Are the individuals whose history we have recited alcoholic patients or hysterical patients? In reply, we rest upon one negative and two positive proofs. It is impossible to deny the alcoholism. A large proportion of the patients acknowledged the habit of drinking to excess. They had the stringy mucus, the characteristic dreams and the delirium. The presence of hysteria could almost be affirmed simply by the signs of sensitive and sensorial hemianesthesia.

Debove and Achard have dwelt strongly upon the semeiological value of this syndrome which "truly bears the mark of the neurosis." According to them, in fact, "cerebral hemianesthesia, above all other symptoms, should always

cause us to think of hysteria." This is all the more necessary if, as in a few of our cases, hemianesthesia appears after an apoplectic attack. But a point which raises all doubts—unfortunately the experiment was not made in every case—is the disappearance of hemianesthesia under the influence of the electric current. And we may add to this, the moral condition of the patients, who had those whimsical characteristics which accord so well with the same hysteric symptom; and finally and especially the convulsive attacks, which are not the same as those which occur in epilepsy. Those seizures have in fact an abnormal, illogical, and extraordinary semblance and like those of hysteria occur both night and day. (The appearance of attacks in the daytime and their absence at night was regarded by the lamented Lasègue as belonging to true epilepsy.) In some of these cases the descriptions fully recall hysteric attacks with movements of the pelvis, and the clownishness of hysterico-epileptics. In one case chloroform caused a cessation of the convulsive attacks.

These considerations, which to-day appear to have a peremptory power, would have greatly astonished the clinicians of a few years ago, when such cases remained insolvable problems. Now and then late or abnormal epilepsy was admitted, and sometimes credit was given to a cerebral tumor. But these diagnoses did not completely satisfy the mind. They were, however, the only possible views to accept. Now that the analogous facts have been well studied and classified, we may well ask how, *outside of hysteria*, it would be possible to interpret these facts, formerly so obscure, but now so simple. This proteiform neurosis—*hysteria*—alone permits us to reconcile the apparent contradictions of such cases.

**SYMPTOMS.** The hysteric symptoms cited in the cases may be summed up as follows: Hemianesthesia in 15 cases; apoplexy, 2; vertigoes, 5; hysterico-epileptic attacks, 10; circumscribed contractures, 2; hemi-chorea, or unilateral choreiform agitation, 4; mutitas (which accompanied right hemiplegia only), 3. In brief, alcoholic hysteria presented



the same symptomatology as the mercurial and saturnine toxic hysterias.

**PATHOGENESIS.** Is the pathogenesis absolutely identical? Charcot regards alcoholism in such cases as the occasional cause, not the efficient cause. According to him alcoholism does not create hysteria; it only aids in producing it in a patient having the predisposition. This is also the opinion of Achard. "In the matter of alcoholism," he says, "we have held a position of great reserve; and in the development of hysterical manifestations we have accepted only the adjuvant part played by intoxication as being sufficiently well established for acceptance." This part played by alcohol would be somewhat like that which M. Potain attributes to syphilis. "The subject is hysterical of himself, as his infancy has shown. He is hysterical from heredity, or rather, through his family. Venereal disease has given an impetus to the nervous troubles."

We naturally find a certain amount of complexity in the pathogenesis of alcoholic hysteria. Heredity is observed in the first rank; we find it in 7 out of 15 cases. Is it surprising? Has not Dr. Féré shown that alcoholism is most frequently seen in subjects having the tendency [*chez les alcoolisables*]? Heredity prepares the soil for alcoholism; and this creates conditions favorable to the development of hysteria. Has traumatism a part in it also? Burns are cited in one of our cases, and fractures in three others. Syphilis occurs twice. Scrofulous and tuberculous antecedents also, are not rare.

The necessary conclusion is that alcoholic hysteria is not suddenly created by alcoholism; it is the culmination of multiple defects, and of a variety of depressing and debilitating defects, hereditary or acquired. From a pathogenetic point of view, therefore, alcohol hysteria appears less simple, less pure than the mercurial or saturnine hysterias. Does this mean that alcoholic hysteria never arises spontaneously in a subject free from defects and from hereditary predisposition? I would not dare to say this; it certainly is not the case in absinthisme.

We know of Dr. Magnan's remarkable experiments with absinthine epilepsy. According to this learned physician absinthism in man produces a variety of symptomatic epilepsy. With the new idea of the toxic hysterics would there not be good reason for revising these facts, which might quite possibly be classified as hysteria? It seems quite possible that if alcoholism appears rather to give rise to hysteria where there is predisposition, absinthe might of itself—like lead or mercury—create a variety of hysteria. As stated by Magnan and Laborde, "M. Lancereaux reported 4 cases in which absinthe drinkers presented hysteriform rather than epileptiform epiphenomena."

CONCLUSIONS. The idea of the toxic hysterias, of which the credit is wholly due to Dr. Debove, already permits us to group and to make clear, facts which were formerly obscure. The saturnine, mercurial, and alcoholic hysterias are now established upon a sufficient number of irrefragible facts and proofs. It is also permissible to ask if the hysteriform phenomena observed in certain auto-intoxications, such as uræmic paralysis, should not come under the same category. Facts also which I observed in the services of Drs. Gingeot and Robin lead me to believe that senile hysteria is not a very rare malady. Our object has been to state simply what we have to expect from this new idea of the toxic hysterias to whose recently written history a new chapter seems almost daily to be added.—*L'Union Médicale.*

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*Alcoholics* should be excluded from the diet of those who have fatty heart. They make tissue change slow by lessening the oxygen-carrying power of the blood. They lessen the vigor of nutritive changes partly in the same way, and by expanding the peripheral vessels and slowing the peripheral current. If the heart is exhausted, it can be spurred only temporarily, and, in spite of drugs the pulse will grow smaller and quicker.—*Diseases of Lungs, Heart, and Kidneys.*—DR. DAVIS."

THE EQUITABLE RESPONSIBILITY OF  
INEBRIETY.

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By T. L. WRIGHT, M.D.,

*Bellefontaine, Ohio.*

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The word responsibility, from *respondeo*, signifies the state of being able to answer, or make good. It carries with it the idea of ability, character—as distinguished from the word *respondo*, which simply means to reply or answer, without the presumption of character or stamina.

I will not consider responsibility as it goes with human nature in all the several planes of that nature—moral, legal, and religious, but will mainly employ the term as it may be associated with the popular significance of justice and fair play.

I say *inebriate* responsibility, because there is no settled responsibility for the acts of mere drunkenness alone. Drunkenness is a form of insanity, and is practically so recognized by the law; and “in insanity there can be no crime,” says Judge Noah Davis. There is no definition of insanity, nor can there be. The *sane* cannot conceive the *insane*; and hence it cannot define the insane. It can only describe phenomena; but it is unable to point out the logical connection between the phenomena of insanity and their moving cause. Insanity is not subject to law. When, therefore, a crime is committed by reason of drunkenness, it is not strictly that identical crime that is the subject of inquiry and punishment, but it is the anterior and original act of getting drunk that is esteemed to be the actual crime. If a man gets drunk and commits no offense other than that, he is not usually punished. But if he does commit some other offense, then he is held responsible, and punishable for putting himself in a drunken state. The rule of responsi-

bility for inebriates differs in civil from that in criminal cases. Our business is with the responsibility of inebriates for criminal acts.

“The law assumes that he who, while insane, puts himself voluntarily into a condition in which he knows he cannot control his actions, must take the consequences of his acts, and his intentions may be inferred.”

The inquirer, upon reading this plausible and rather fair rule of law, is hardly prepared for the very next thing that he will hear (or see), namely: “therefore, drunkenness is no defense for crime.” This is a *non sequitur*. Yet it is heard from the bar, the bench, and the pulpit, and it rings and reverberates throughout the civilized world, as though it contained all the wisdom applicable to inebriate crime, and settled once and forever the whole subject.

What class of inebriates is it that most frequently violates the laws of the land—and particularly those laws that relate to crimes of violence? Clearly that class that drinks the most immoderately, the most irrationally, the dipsomaniacal class.

Dipsomania is a mental disease. The convulsive or spasmodic drinking of the dipsomaniac is only one of the *traits* of the malady—showing that the insanity, no longer latent, has become active and raging. Magnan says: “The alcoholic excitement with which an attack of dipsomania terminates, should not be confounded with dipsomania itself, as it is a complication, not a symptom of it.” Trelat also says: “Dipsomaniacs are patients who become intoxicated whenever their attacks come on.” Other writers of note adopt these propositions as substantially correct. But who is the dipsomaniac? Always he is of the neurotic constitution. He is in a state of hypnotic automatism much of the time, not only when intoxicated; but the strong presumption is, that he labors under the same disability, very often indeed, at the very moment when he begins to consume alcohol in order to become drunken. This is inconsistent with the idea of free will or rational volition.

Drunkenness is not-always, if it is ever, a factor or a part of dipsomania, but may be a consequence of it. The dipsomaniac cannot be assumed to be "sane"; and in drinking he does not "voluntarily" put himself in a condition in which he "knows" he cannot control himself. On the contrary, the dipsomaniac, being insane, cannot control himself when—and before—he *begins* his ungovernable movements of intoxication. His drinking is one of a series of causes tending toward crime—the first one of which was formed in an insane mind; and for the existence of which the inebriate mind is totally irresponsible.

In the neurotic constitution, the condition called *trance* is not uncommon—and this is especially true in dipsomania. The hypnotic state is not recognized by its subject. He moves by *suggestion*, coming not only from the outside world, but also from memory and inward impulsion. He may suspect that he has suffered, by afterward seeing the effects of his unnatural state—as, strange localities, writings, and the like. But if there are no perceptible effects, neither himself nor his friends may suspect that he has been under hypnotic influence.

It is impossible for the inebriate to foresee this peculiar effect of alcohol, even should he be perfectly sane; and it does not seem fair that he should be held accountable for acts done by him when in the trance condition.

It is true that the uncertainties, imperfections, and necessities of human nature make it incumbent on society to hold, within certain limits, even the insane responsible for criminal acts. Sometimes the presumed knowledge of right and wrong, abstractly, is made the test; or, whether the insane criminal knew that a particular act "was wrong," may be chosen to determine the measure of his responsibility. Nevertheless the assigned limits of insane responsibility are narrow, and often difficult to establish. It is probable that true dipsomania may sometimes be of such moderate intensity that it should not be excused from accountability for

criminal deeds.\* Again, the mental disease may be more severe; and grave *doubts* may arise as to the rightfulness of holding it responsible for inebriate misconduct. But there are instances wherein the violence of dipsomaniacal insanity is superlative; and there can be no question as to the injustice of exacting responsibility for its conduct. And now the scene of strife is reached. To distinguish accurately the truly responsible, the doubtful, and the wholly irresponsible among dipsomaniacs themselves, is the work in hand. In view of the facts of dipsomania, it seems unjust and untrue to declare that *drunkenness is no defense for crime*. In strict accordance with the legal maxim already cited, dipsomania does, in all cases, present a good *prima facie* defense for criminality. The reasonable mind, the sober mind of the dipsomaniac, has nothing to do in deciding upon the probabilities of intoxication; for the intoxication of dipsomania is only one of a series of more or less insane movements, begun and carried on under the forceful suggestions of mental disease. As long as the insanity is latent there is no drunkenness.

The subject under discussion may be viewed in other lights. For example: In order to excuse responsibility for inebriate crime, there must be a morbid incentive, a judgment incompetent to pass upon conduct intelligently, and a defective will. The crave for drink is, in the dipsomaniac, the outcome of disease, and of unmanageable nervous distress. The powers of mind are overcome and dominated by a peculiar form of insanity; and the will, in all such contingencies is latent, or powerless. It must be borne in mind that the question here is not of the actual commission of crime, but it relates to the voluntary establishment of the criminal propensity through the act of drinking.

Similar considerations apply to the character of criminal responsibility in the *habitual* drunkard. In him, incurable

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\* The facility with which the moral nature may "fall in" with the improper representations and motives exhibited in dreams, will serve as an illustration of the character of both mind and morals, sometimes seen in the mental wreck of insanity.

physical degenerations have impaired the integrity of important organs. Structural degradations of the gravest import affect perhaps, the liver, or kidneys, or brain. These may serve as centers of irritation to the entire nervous organism; and to allay this, a crave for the lethal effects of alcohol may become overmastering. Here is the incentive to drink till the full alcoholic influence is established.

Degenerations within the brain materially interfere with sound judgment and rational discrimination. Here is incapacity to reason on the wisdom and the moral nature of conduct. Will, too, is inefficient and helpless, because the diseased appetites and impulses of the animal being are stronger than the determinations of rational choice—and they rule the life while reason slumbers.

The rigid responsibility demanded for so-called alcoholic crime should be somewhat mitigated in view of the fact that alcohol, *alone*, is rather infrequently the exciting cause of criminality. Recent intoxication is generally agreeable. The mind is elated and happy. It is mainly after prolonged inebriation that the surly and truculent disposition, often attributed to simple drunkenness, appears. Then it is that strange poisons other than alcohol have become present in the circulation. It is then that carbonic acid, urea, and other poisons not alcoholic oppress the brain, and force the mind into vicious thoughts and incentives. Under circumstances of this kind, alcohol should not be charged with the sole agency in the formation of the criminal nature; it is only one of many.

I might add, as an excuse for the establishment of the criminal mind through the alcoholic influence, this fact: In all enlightened countries whoever is licensed by the law to deal in alcoholic beverages is forbidden, in the permissive contract, to furnish liquor to insane persons and to habitual drunkards. Therefore, when these agents of the public do sell to dipsomaniacs, to persons intoxicated, and to those in the habit of getting drunk, the public should rightfully share in the accountability for the crimes of such drunkards. So-

ciety should enforce its own law, and compel the fulfillment of contracts made under it. By the very terms of the law affecting the liquor traffic, the State implies its complete knowledge of the incapacity of the dipsomaniac and of the habitual drunkard to control their own actions when intoxicated. Should not the State — that is, society at large — be responsible for the legitimate consequences of its own neglect? And in case of crime, should not the “intent” [of the State] to commit the crime “be inferred?”

In selling alcoholic liquors by law there is no escaping the fact that the State is the *principal*, and the seller is the *agent*. The principal is responsible for the acts of his agent. It is said to be a poor rule which will not work both ways. Whenever a dipsomaniac becomes inebriated, or a habitual drunkard is seen staggering under the influence of alcoholic liquor, it is manifest that the public has been violating its own laws. When the State will actively interfere to protect its own insane and sick *from themselves*, it will be time to discuss the interests and rights of society — as they may be jeopardized by the freaks of insanity and disease.

It will be remembered that the legal *dictum*, assumed to include all the contingencies of certain phases of inebriate responsibility for crime, presupposes:

(a) That the criminal was *sane* when he partook of liquor.

(b) That the act of drinking was *voluntary*, and

(c) That he *knew* he would, through that act, become unable to control his conduct.

Nothing, on a superficial view, could seem to be a more reasonable test of alcoholic responsibility. Yet it appears to be composed of plausible assumptions that are not fairly applicable to the facts of practical life. It contains a summary of essential prerequisites that cannot be made to operate in unison; for it is impossible to accurately measure the acts of inebriate life by the rule of law as it has been formulated. But before entering more specifically upon the nature of inebriate responsibility certain facts of general application may properly be offered for consideration.



When the material instruments of the mental and moral powers are, for a protracted reason, inhibited in function by the anæsthetic property of alcohol, great disturbances must ensue in the manifestations of mind and morals. Anæsthesia withdraws the nervous centers from spontaneous activity and compels the mind to assume that inferior plane of exhibition, which is merely imitative, habitual, automatic. It is impossible for a mind in which the sense of personality is wavering or destroyed to so establish its own relations with morality as to be capable of distinguishing accurately between right and wrong. To perceive what is right requires alertness and the intellectual power of clear discrimination. To recognize wrong requires the same mental properties, and also a sensitive condition of the moral faculties—which is quite inconsistent with the torpor imposed by alcoholic anæsthesia.

The questions often propounded in courts of law respecting the moral capacity of criminals are in substance these: “Could the man distinguish between right and wrong? Did he know when he committed the act that he was doing wrong?” These questions embody what the courts in England and America insist shall be a real test of legal responsibility for crime. But the power of discriminating between the fine shades of the moral qualities must be weakened when consciousness is defective; and it must be defective in some degree in every grade of anæsthesia. There is a distinction to be made between the purely rational process of discriminating as to the nature of moral qualities and the living and appreciative feeling of the same qualities. The knowledge of right, abstractly, and through reason only, and the knowledge of wrong, abstractly, may be present and yet the power of discriminating between the two, in a comparison or an analysis of the elements of right as relates to the elements of wrong, may be wholly absent.

Relevant to this subject are the words of Seppilli: “We must remember that cerebral activity is manifested under

two different aspects — that of the conscient and of the inconscient. The conscient activity, or consciousness, is constituted of knowledge by the *ego* of its own acts. On the contrary, in the inconscient activity of the brain (called also automatism) all those actions enter, in which the *ego* takes no part, or is aware of any; but these latter are combined and directed so as to resemble those which the *ego* perceives, wills, and directs.”

Here is explained the difference between responsible life and automatic life. In the former, the mind under consciousness directs, perceives, wills; while in the latter, conduct is matter of habit, imitation, custom; in brief, automatism. Conduct directed by consciousness is amenable to the requirements of right and wrong; but it is not responsible when it is founded upon automatism. Yet the apparent features of these two phases, or lines, of mental existence resemble each other; or rather, the automatic life imitates and resembles the purely rational life.

The conclusion is that it is difficult, very frequently, to determine whether a criminal can discriminate between right and wrong. The semblances of automatism are so like those of conscious rationality that they disguise the actual incompetency of the moral powers. Habit and automatism are not under the supervision of judgment or will, and consequently they have little or, perhaps, no place in the formation of intelligent comparison or in the determinations of choice. They cannot act as arbiters in questions wherein the qualities of right and wrong are involved.

The “test” of a sensitive knowledge of right and wrong is, therefore, fraught with difficulties; and it may be liable to such interpretations as will confound the judgment respecting the motives and incentives which lead to criminality.

There is, then, a difference of opinion respecting the criminal responsibility that should commonly be exacted from drunkenness. The law, however, is pretty well established in its doctrines and decisions on the subject. J. R.

McIlraith (Barrister at Law, London) says: "Hallucinations and illusions, which are common effects of drunkenness, do not seem to constitute insanity when so induced." Apparently different is a charge of Justice Stephens, namely: "If you think there was a distinct disease caused by drunkenness, but differing from it, and that hence he did not know the act was wrong, you will find a verdict of not guilty, on the ground of insanity."

Brierre de Boismont declares that: "The man who is convinced that he is surrounded by enemies whom he perceives before him and hears threatening him (through hallucination) will endeavor to injure them, to strike them, to kill them; and should he, through illusion, convert the persons of attendants into those of imagined enemies, the most disastrous results might ensue from this error. We are beginning to be aware that there are certain extravagant actions hitherto inscribed among the annals of crime which might be referred to insanity, and especially to hallucinations."

The law recognizes the fact that the man drunk is insane. There is actually, and founded upon the incontrolability of the mind in drunkenness, a remarkable legal inference (already referred to), to the effect that *drunkenness is no defense for crime*. True, this has the appearance of a strange inconsistency; for the law also declares that "where there is insanity, there can be no crime." The legal conclusion respecting responsibility for inebriate crime involves an assumption that may be disputed. "The law has settled that a drunken intent is just as guilty as a sober one." This may be settled as law, but it is not settled as fact. There is no pretence that the law has proven the equality, or even the similarity, of a drunken and a sober intent.

But the law claims that the drunken man is a "voluntary" madman; and this voluntary element is the core of the assumption as to responsibility. There seems to be in this assertion a contradiction in terms. A madman is supposed to be bereft of reason, not only as being mad, but

as becoming mad. There is something beyond the bounds of rational conception in the idea of voluntary insanity; that is, insanity brought on by express purpose; as though, *being in a sound condition*, a mind would use its volition to destroy its volition. Such a use of will would be the act of a mind already insane. The assumption is a very questionable one, that a mind, being sound, ever voluntarily places itself in a situation in which it knows it will be unable to control itself.

The perfect mind cannot conceive of itself as being insane. The drunkard does not believe that he cannot control his actions when drunk—although he cannot. He knows nothing of hypnotism, nor of invading poisons, unexpected and unknown. The sober *ego* is wholly different from the drunken *ego*. The body is the same, but the minds are two. A sane mind may speak for another mind also sane; their faculties are on the same plane of consciousness, both by reason of possessing similar powers and by reason of a similar presentation of surroundings. But a sober mind cannot speak for itself as though drunken. The different states of the mind cause it to act as two; and they can no more explain the motives and interpret the movements of each other, than a sound mind in one person can interpret the impulses of an unsound mind in some other person.

The following remark is made by a distinguished lawyer, the Hon. Clark Bell: "The medical view that irresponsibility should follow where insanity exists, has nowhere been conceded by the law."

Another legal writer declares: "A voluntary demon who has produced a condition in himself by his own act, which is not the disease known as insanity, is not excused."

There is objection to the formidable epithet, *voluntary demon*. There are no demons, voluntary or otherwise, wandering about—although there is no lack of bad men. The term was employed by Lord Coke in an age when evil-inclined persons were presumed to come, through choice, under

the guidance of certain vagabond devils. These individuals were supposed to be incapable of self-control, but responsible for their acts by reason of their chosen associations—in contradistinction to *lunatics* who, while incapable of self-control, were not responsible for their acts. *Voluntarius dæmon* simply signifies “a man who is drunk.”

Lord Coke says: “As for a drunkard who is *voluntarius dæmon*, he hath no privilege thereby, but what hurt or ill soever he doeth, his drunkenness doth aggravate it.” That drunkenness can aggravate the guilt of homicide, for instance, is a strange conceit. The man who deliberates and executes murder for purposes of robbery, is surely more guilty than the man who commits homicide in the haste and madness of a drunken frenzy, and without premeditation or criminal motive.

A case in Vermont is cited, wherein it is said: “Voluntary drunkenness will not protect a person from liability for torts or for crimes committed while in that situation.” The reason given for this decision is to the effect that, as some one might pretend to be drunk and commit crime, in order to render such an excuse of no avail, punishment should be imposed on another who really does get drunk and commits crime. The language employed is: “In respect to torts, sound policy forbids that intoxication should be an excuse for crime; for if it were, under actual or feigned intoxication, the most atrocious crimes might be committed with impunity.” Why may not this doctrine be applied to insanity as well as drunkenness? By inflicting the death penalty upon insane homicides, an effectual stop would be put to the proceedings of those who feign insanity in order to commit murder.

Judge Hale says: “By the law of England such a person shall have no privilege by this voluntary contracted madness, but shall have the same judgment as if he were in his right senses.” “If, indeed,” says Holroyd, J., “the infuriated state at which he arrives should continue and become a lasting malady, then he is not amenable.” It would be worth

while to state at what period of time the temporary madness merges into the permanent madness ; and, also, what is the abstract difference between their capacity of responsibility.

Remarkable nervous conditions sometimes become epidemic. They are largely confined to persons of uncultivated and superstitious minds. They may evolve delusive beliefs, leading to the most serious consequences ; or they may, through illusion and hallucination, so impose upon the senses and imagination as to supplant rational perception and right judgment.

The following incident is abridged from Brierre de Boismont. "In Germany certain superstitious people believe that ghosts of slain troopers were seen from time to time in the night. They were said to appear in uniform and on horseback, and caused great consternation among the peasantry. Two laboring men, fatigued with work, were seated and partook of some wine they had with them. They became much intoxicated and excited by drink, and imagined they were surrounded by Swedish cavaliers. They carried sticks with them, as was their custom, and thinking they were battling with the Swedish horsemen, they began to strike and knock each other, until one of them disappeared. The other, taking up his friend's hat and thinking it was a helmet of the enemy, carried it in triumph to the home of his companion, who, he thought had gone before him. As he approached the house, he cried out : 'The devils wanted to take me away, but I gave one of them such a dressing with my stick that they will not come again.' He had in reality killed his companion by a blow on the back of his head, fracturing his skull.

"The next day, filled with grief, all he could say was, that having continued to drink with his friend, it seemed to them that they were surrounded by spectres on horseback, in their blue and red uniforms ; and being convinced that evil was about to happen to them, they resolved to defend themselves with their sticks ; that they both attacked the spectres, having heard that when fearlessly confronted they would be-

take themselves to flight. In the midst of the struggle he missed his companion, and the spectres seemed to have disappeared."

This case was referred to the legal faculty at Helmstadt. The decision was that—"If any one becomes voluntarily intoxicated, and in this state commits a crime, he must be responsible for it, for the loss of reason was due to his own act."

The criticism of Boismont on this legal decision is: "If at the time and in the country where this event took place, the doctrine of hallucinations and illusions had been better understood, and the power of those which accompany drunkenness more fully appreciated, the punishment would have been less severe." The accused was sentenced to ten years hard labor.

Respecting the criminal responsibility of the man who drinks from mere idleness and without any driving neurotic stress, and who is free from congenital and from constitutional defects—the latter arising from disease or injury—and who is free from the physical degenerations of habitual drunkenness, no doubt the rules of accountability should be strict. But even in such instance, principles of responsibility should not be "lumped," or generalized. The effect of alcohol is so modified by special nervous sensibilities and peculiarities, that it is the right of every individual guilty of inebriate crime to have his trial made a *special* one. He is entitled to a full inquiry respecting the facts that pertain to himself alone.

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THE *British Women's Temperance Association* has founded a home for Female Inebriates, whose successful operation has attracted unusual attention. Women who are indigent and diseased have the protection of a hospital and an opportunity to earn a living in the best conditions for permanent recovery. This is more practical than engaging in political efforts to incorporate a theory that is not established by facts.

## DRUNKENNESS AS A DEFENSE.

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BY CLARK BELL, ESQ.

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The law as now settled in England and the American States may be stated as follows :

While drunkenness is not *per se* a defense upon a charge of crime, yet mental unsoundness, superinduced by excessive intoxication and continuing after it has subsided, may excuse ; or where the mind is destroyed by a long-continued habit of drunkenness ; or where the long-continued drunkenness has caused an habitual madness, which existed when the offense was committed, the victim would not be responsible. For if the reason be perverted or destroyed by a fixed disease, although brought on by his own vices, the law holds him not accountable.

*Rex vs. Meakin*, 7 Car. & P., 297 ; *Reume's Case*, 1 Lewin, 76 ; *Reniger vs. Fogassa*, Plow., 1 ; 1 Russ. on Crimes (9th ed.), 12 ; 1 Bishop Cr. L. (6th ed.), 406 ; 1 Wharton Cr. L. (8th ed.), sec. 48 ; *McDonald C. L. of Scot.*, 16 ; 1 Hale, 4 ; *Black. Com.*, 26 ; *Beasley vs. State*, 50 Ala., 149 ; *Peo. vs. Odill*, 1 Dak. Ter., 197 ; *Estes vs. State*, 55 Ga., 30 ; *Baily vs. State*, 26 Ind., 422 ; *Roberts vs. People*, 10 Mich., 401 ; s. c. 19 Metc., 402 ; *State vs. Hundley*, 46 Mo., 414 ; *State vs. Thompson*, 12 Nev., 140 ; *Lanergan vs. People*, 50 Barb. (N. Y.), 266 ; *Maconnehey vs. State*, 5 Ohio, 77 ; *Com. vs. Green*, 1 Ashm. (Pa.), 289 ; *U. S. vs. Forbes, Crabbe* (D. C.), 558 ; *Stuart vs. State*, 57 Tenn., 178 ; *Carter vs. State*, 12 Texas, 500 ; *Bell's Med. Jurisp. of Inebriety*, p. 10, and cases there cited.

The rule of law is well settled that evidence of intoxication is always admissible to explain the conduct and intent of the accused in cases of homicide, although the rule does not apply in lesser crimes, where the intent is not a necessary element to constitute a degree or phase of the crime :

*Bell's Med. Jur. of Inebriety*, p. 10, and cases there cited.

In cases where the law recognizes different degrees of a given crime, and provides that willful and deliberate inten-



tion, malice, and premeditation must be actually proved to convict in the first degree, it is a proper subject of inquiry whether the accused was in a condition of mind to be capable of premeditation :

Gray, J., in *Hopt vs. People*, 104 U. S., 631; *Buswell on Insanity*, § 450; *Penn vs. McFall*, Addison, 255; *Keenan vs. Commonwealth*, 44 Pa. St., 55; *Jones vs. Com.*, 75 Pa. St., 403; *State vs. Johnson*, 40 Conn., 36; *Pirtle vs. The State*, 9 Humph., 663; *Haile vs. State*, 11 Humphrey, 154; *Smith vs. Duval (Ky.)*, 224; *Boswell vs. Com.*, 20 Gratt., 860; *Willis vs. Com.*, 32 Gratt., 929; *People vs. Belencia*, 21 Cal., 544; *People vs. King*, 27 Cal., 507; *People vs. Lewis*, 36 Cal., 531; *People vs. Williams*, 43 Cal., 344; *Farrell vs. State*, 43 Texas, 508; *Colbath vs. State*, 2 Tex. App., 391; *State vs. White*, 14 Kan., 538; *Schlacken vs. State*, 9 Neb., 241; 104 U. S.

The reason of this rule of law rests upon the fact that intoxication is a circumstance to be weighed in connection with the other circumstances surrounding the commission of the act in determining whether it was inspired by deliberate and malicious intent, and whether immediately before and at the time of his act the intoxication of the accused was so great as to render him incapable of forming a design or intent, which the jury must find from the facts in the case, without regard to opinions of others :

*Buswell on Insanity*, § 452; *Marshall's Case*, 1 Lew. Cr. Cas., 76; *Thacher, J.*, in *Kelly vs. State*, 3 S. & M., 518; *Armor vs. State*, 63 Ala., 173; *People vs. Belencia*, 21 Cal., 544.

And because, since he who voluntarily becomes intoxicated is subject to the same rules of law as the sober man, it follows: that where a provocation has been received which, if acted upon instantly, would mitigate the offense if committed by a sober man, the question in the case of a drunken man sometime is, whether such provocation was in fact acted upon, and evidence of intoxication may be considered in deciding that question :

*Buswell on Insanity*, § 423; *State vs. McCants*, 1 Speer, 384.

The New York Penal Code defines precisely this question of responsibility in that State in such cases as follows: " § 22. Intoxicated persons.— No act committed by a person while

in a state of intoxication shall be deemed less criminal by reason of his having been in such condition. But whenever the actual existence of any particular purpose, motive, or intent, is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time, in determining the purpose, motive, or intent, with which he committed the act."

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Rev. Dr. Hale of Boston remarked, "Take away the saloons and bars for the sale of spirits from Boston, and my church will take care of all the poverty and distress of the city without any strain."

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ALCOHOLISM AND DEGENERATION.— In the Commune of Fauborn, near Limbourg-sur-Lahn, in the Grand Duchy of Hesse-Nassau, there are several distilleries, and the population appears to be composed of cretins and examples of degeneration of all descriptions. The contrast is the more striking as in the neighboring villages which contain no distilleries the population is healthy.— *Le Progrès Médicale*.

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THE *Brewers' Journal*, with exultation, calls attention to the fact that it appears, from the annual report of the Commissioner of Internal Revenue, that there was an increase in the output of malt liquors during the fiscal year ending June 30, 1892, of 1,339,641 barrels as compared with the preceding year, the totals for the two years being respectively 30,478,192 and 31,817,836 barrels. There was also an increase in the production of distilled spirits for the same period, of 5,830,723 gallons. These figures have an ominous significance for the friends of temperance, and suggest the urgent need of a greatly increased total abstinence propagandism.

## DELIRIUM TREMENS AND THE LAW.

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BY CLARK BELL, ESQ.

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The rule of law is well established both in England and the United States, that insanity produced by delirium tremens is a good defense to a criminal charge. Even if induced by intoxication, the victim is no more punishable for his acts than if the delirium had resulted from causes not under his control :

*Regina vs. Davis*, 14 Cox C. C., 563 ; Bell on Med. Juris. of Inebriety, 9, and cases there cited ; J. Crisp Poole, Med. Leg. Jour., vol. 8, p. 44 ; U. S. *vs. McGlue*, 1 Curt., 1 ; Wharton's Crim. Law (8th ed.), sec. 48 ; *People vs. Williams*, 43 Cal., 344 ; U. S. *vs. Clarke*, 2 Cr. C. C., 758 ; *Lanergan vs. People*, 50 Barb. (N. Y.), 266 ; s. c. 6 Parker, Cr. R. (N. Y.), 209 ; *O'Brien vs. People*, 48 Barb., 274 ; *State vs. Dillahunt*, 3 Harr. (Del.), 551 ; *State vs. McGonigal*, 5 Harr. (Del.), 510 ; *Cluck vs. State*, 40 Ind., 563 ; *Bradley vs. State*, 26 Ind., 423 ; *O'Herrin vs. State*, 14 Ind., 420 ; *Dawson vs. State*, 16 Ind., 428 ; *Fisher vs. State*, 64 Ind., 435 ; *Smith vs. Com.*, 1 Duy. (Ky.), 224 ; *Roberts vs. People*, 10 Mich., 401 ; *State vs. Hundley*, 46 Mo., 414 ; *State vs. Sewell*, 3 Jones (N. C.) L., 245 ; *Cornwell vs. State*, Mart & Y. (Tenn.), 147 ; *Carter vs. State*, 12 Tex., 500 ; *Boswell vs. Com.*, 30 Gratt. (Va.), 860 ; U. S. *vs. Drew*, 5 Mason C. C., 283.

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Mr. Thomas Burt, an English cabinet minister, declares, " If we had no intoxicating drink, all the poverty and pauperism of England could be relieved and cared for by the present philanthropic and charitable agencies.

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THERE is one saloon to every eighty-seven inhabitants in France, and twenty-seven thousand in Paris alone. The whole number of saloons decreased from 1869 to 1875, since that time they have slowly increased. From 1886 to 1891 this increase amounted to 12,000 saloons.

## Abstracts and Reviews.

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### MARRIAGE AND INEBRIETY.

In Dr. Strahan's work on *Marriage and Disease*, noticed in last number, occurs the following in the chapter with the above heading :

It is not necessary to say in the way of proof of the transmissibility of the "drink crave." It speaks for itself from every grade of society in the land, and its voice gives forth no uncertain sound. With instances of the hereditary transmission of this curse, everyone is only too familiar. All anyone has to do, is to look around among his friends and acquaintances to see how this sin in parents is visited upon the children. The hereditary character of the abnormal condition, of which habitual drunkenness is the outward sign, although firmly established and universally admitted, is not understood as it should be. It is too often looked upon as a vice acquired by the individual, the outcome of voluntary wickedness. In the vast majority of cases, inquiry into the family history will reveal the presence of an inherited taint, such families generally showing the neurotic or insane diathesis more or less distinctly marked.

No grade in the social or intellectual world is, or ever has been, free from this disease, and if we study the family histories of the great ones of the earth who have fallen victims to it, we shall find that there the cause is the same as among the obscure, viz., that they have inherited a degenerate nerve condition which renders them, above others, susceptible to this and allied neuroses, such as epilepsy, idiocy, madness, suicide, and the like. In fact, the dipsomaniac and habitual drunkard are as much sinned against as sinning, inasmuch as they have inherited an unstable nervous system which renders them liable at any time to fall victims to this

vice under provocation, which, upon a stable nervous organization, would be powerless for evil.

Evidence of the hereditary character of this and other transmitted pathological conditions, is seen in the tenacity with which they stick to their victims despite all treatment. An acquired disease often gives way before persistent judicious treatment, but the innate evil is only to be eradicated by treatment carried on through several generations. Nevertheless, the physician's duty is to make the attempt in every case. In some few, his efforts will be rewarded with more or less success, but, unhappily, in the vast majority, they must end in utter failure, for the simple reason that he has been called in too late. As Dr. Holmes has said, "the doctor should have been called in a hundred years earlier."

By reference to Dr. Stewart's table, it will be seen that he fixes the proportion of cases of dipsomania, in which he found hereditary taint, at so high a figure as 63.4 per cent., which is above that of any other form of mental disease given. Of late years, the legislature has been induced to recognize habitual drunkenness as a diseased condition, and has made certain laws for the temporary confinement, care, and treatment of those so afflicted, if they themselves sanction it. This is only a first step in the right direction, but the path is entered upon and we may hope before long to be able to detain, as we now can a raving maniac, those unfortunate, semi-responsible creatures who at present outrage society by indulging their degraded appetites, and are free to propagate their innate degeneracy. And, when that day arrives, we shall enter upon an era in which it will be possible to lessen, in some part, not only habitual drunkenness, but all the diseases, mental and bodily, which arise from the use of alcohol.

It is a curse upon the community, for it is the starting point of insanities, epilepsies, crime, and endless disease in posterity, while as to the individual, there is no other diseased condition known, which so utterly and rapidly destroys all moral sense, unless it be epilepsy, to which it is nearly

allied. The victims of this horrible and irresistible craving, may, at first, honestly express shame and regret for their weakness, and for the disgrace which they bring upon those who should be dearest to them. But this spirit is only too short-lived; soon the moral nature, never strong in such persons, becomes undermined, and we find the man or woman who, but a short time before, would have scorned dissimulation or untruth, transformed by his vice to a cunning, scheming liar, without the remotest sense of truth or honor and ready to do absolutely anything to gain the wherewithal with which to feed his thirst.

Once on the down grade, a man soon reaches a level where honor, truth, and even common honesty, are unknown, but in woman the descent is even more rapid and terrible. Once launched upon the downward journey, her course is not to be stayed. To every deep, she finds a lower depth; her home, her husband, her family, her very honor, are, in turn, given a sacrifice to the demon who is not to be appeased. Yet, after all that has been said and written on this subject, these unfortunate creatures are still misunderstood, and when their inborn vice leads them beyond the lines laid down for the guidance of the mass, they are haled before a court of justice and punished like the thief or other law-breakers. As might be anticipated, this seldom, if ever, does any good, and if proof of this were wanted, it would be found in the regularity with which they return, time after time, to their place before the judgment-seat. Who has not come across such passages in the reports of the proceedings at our police courts, as these?

“A shoe rivetter made his fiftieth appearance at the police court this morning, when he was charged with being drunk and disorderly; and having, thanks to the holiday time, no money to pay for his ‘jubilee,’ was sentenced to seven days.”

“Margaret West, who was said to have been before a magistrate upwards of fifty times, was charged with being drunk and disorderly, was fined forty shillings, or in default,

twenty-one days' imprisonment." Such persons as are here referred to, are not responsible agents, and the State should recognize that fact and act accordingly. These creatures are as helpless to fight against the desire for drink as is the hereditary suicide to fight against the fate which impels him to destruction, and their punishment is neither more just nor more beneficial than would be that of the epileptic for creating an obstruction by falling down upon the pavement. Justice will not be done until these "weak ones," instead of being packed off again and again to prison, and being permitted to propagate their kind in the intervals, are sent to some kind of industrial home or penitentiary, where they will be guarded against temptation, where they may spend the full value of their labors in any comforts they please, except only intoxicants, and where the sexes shall be kept apart.

The fact that this drink crave is handed down through generations in most instances, can in no way justify any man or woman, however clean their family bill of health may be, in thinking that their indulgence in this vice will be harmless to their offspring. It must be remembered that acquired characters tend to be transmitted, and that the most vicious hereditary predisposition existent, had a beginning in a healthy individual. Therefore, those who wish to live in posterity and see their children free from the mark of the beast, endowed with all the heaven-born attributes which raise man to his high position above all other creatures, must never degrade their nature.

True, one indulgence may not leave an impress sufficient to appreciably affect the children. But that way danger lies. An act once done, whether good or evil, is easier to repeat for having been done before.

The appetite for alcohol is only too easily cultivated, and the man or woman, who, through weakness or thoughtlessness, saturates his brain with it frequently, must not be surprised if his sin be visited upon his children as idiocy, epilepsy, or other grave nervous or physical deformity.

From the earliest times, it has been known that drunken-  
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ness is one of the most fruitful sources of idiocy and also of physical deformity and crime in the children. It will be remembered that it was the drunkenness of Jupiter when Vulcan was conceived, to which was attributed the deformity of that god.

Dr. Beach sets down drunkenness, either alone or associated with some other obliquity of nature, as the cause of 25 per cent. of all the idiocy received into the Darent Asylum, and with this estimate almost every other observer agrees. When spoken of in this connection, it is generally chronic drunkenness that is meant, and certainly, a large part of the evil caused by the abuse of alcohol arises from chronic or continued dissipation; nevertheless, it must be clearly understood, that a single debauch may result in the idiocy or deformity of the child then conceived. Cases are quite common where a temporarily drunken person has begotten an idiot child. As Dr. Maudsley says, "Here, as elsewhere in nature, like produces like, and the parent who makes himself a temporary lunatic or idiot by his degrading vice, propagates his kind in procreation, and entails on his children the curse of a most hopeless fate."

A striking illustration of the part played by drunkenness in the production of idiocy, is to be found in Norway. In that country, in 1825, the spirit duty was removed, and, consequently, intemperance at once began to increase alarmingly among the people. The result, or rather one of the results of this was, that during the first ten years following this regrettable event, insanity increased among the Norwegians by 50 per cent. This was, perhaps, to be expected under the circumstances, but no one anticipated that the increase of congenital idiocy among the children born during the same decennial period would amount, as it did, to 150 per cent. Drunkenness is one of the greatest — perhaps the greatest — agent of degeneration at work among the human race, and to it must be attributed much of the disease, crime, moral obliquity and general degeneracy, physical, mental, and moral, which we find so common among the poorer classes in all large centers of civilization.



The dire effects of this agent of degeneration are to be found among almost every people upon the face of the earth, and in some countries they are simply appalling. In Sweden, for instance, which is one of the most drunken countries in the world, the people are deteriorating in a manner positively alarming.

Some years ago, Dr. Magnus Huss wrote of the Swedes : "The whole people are degenerating ; insanity, suicide, and crime are frightfully on the increase ; new and aggravated diseases have invaded all classes of society ; sterility and premature death of children are much more common ; and congenital imbecility and idiocy are in fearful proportion to the numbers born."

Here is a history of a family which well shows the degenerating effect of drunkenness upon the stock :

*First generation.* Father a drunkard.

*Second generation.* Son, a drunkard. Was disgustingly drunk on his marriage day.

*Third generation.* Seven grandchildren. First died of convulsions. Second died of convulsions. Third was an idiot at twenty-two years of age. Fourth, melancholic with suicidal tendency, became demented. Fifth, peculiar and irritable. Sixth, has become insane repeatedly. Seventh, nervous and depressed, and indulges in most despairing anticipations as to his life and reason.

This drink crave takes one of two forms, either habitual drunkenness as seen in the toper, who is at all times, when he can procure the drink, more or less intoxicated ; or dipsomania, in which the disease takes on a periodic character, breaking out at intervals of one to six or nine months, and rendering the individual wholly irresponsible while the paroxysm lasts. These two forms of the disease are totally distinct, the paroxysmal seldom running into the habitual, or the reverse. Indeed, they seem to attack persons of altogether different temperaments, the toper being in most instances a slow, obtuse, lethargic person, both in mind and body, with but little power of will, while the true dipso-

maniac is generally of quick, excitable nature, active and impulsive, and not infrequently, before his disease has gone too far, of superior intellectual ability. In both cases, if life be prolonged, the end is the same; for while the dipsomaniac is specially liable to sudden death from violence, suicide, delirium tremens, etc., and the toper to disease of such organs as the kidney, heart, liver, and brain, yet, if they be not so cut off, each will arrive at the same terminus, viz., gradual weakening of the mental faculties terminating in complete dementia. In some cases epilepsy, or some form of delusional insanity with attacks of maniacal excitement, may precede the final dementia, but dementia is the end.

The distinction between these two forms of the disease is also marked in the progeny. The offspring of the habitual drunkard generally inherits such degenerative conditions as idiocy, scrofula, deaf-mutism, the tendency to phthisis and sometimes epilepsy, while that of the dipsomaniac is liable to the more active or spasmodic forms of nervous disease, as suicide, acute mania, epilepsy, and crime. The children of both are peculiarly liable to convulsions, and death at an early age from this cause is a frequent occurrence in such families.

This diseased condition, like any other hereditary predisposition, may remain latent for a generation and reappear unexpectedly in the next, but it is seldom that it does not show in some member of the family, more especially in those children which were begotten after the disease had been active in the parent; for, as in other hereditary diseases, those children, begotten after the disease has declared itself by an acute attack in the parent, are much more liable to inherit the predisposition than those born before such outbreak, these latter appearing at times to escape the blight altogether.

It is, perhaps, unnecessary to say, that in this disease, as in the other neuroses, it is highly improper that those in whom it is well marked should become parents. They are

unfitted by their inherited infirmity to undertake the duties and responsibilities of married life; as husbands or wives, and as parents, they are equally sad failures. They are always improvident, and their early death often saddles the community with the care of a helpless family, while of the children it may be said, that there is not sufficient chance of their being useful to themselves or to the commonwealth to justify their being brought into existence. Above all, there should be no intermarriage among persons inheriting this disposition. If there be any person whose partner should be without taint, it is assuredly him that carries within him the germ of such an insidious and degrading disease as this drink crave. In this, as in the other insanities, the disease is much more dangerous in the mother than in the father, which is a sound reason why the daughters of drunken parents, often fascinating by their flighty, excitable, vivacious, neurotic manner, should be carefully avoided by men in search of mothers for their children. The man who marries the daughter of a drunkard, not only endangers his own self-respect and happiness, but entails to his children a wretched inheritance of degradation and suffering. On the other hand, no woman should be induced to marry a confirmed drunkard, and the disposition and character of the sons of such should be most carefully inquired into before any engagement is entered upon. This is one of the few instances in which a long engagement is not to be condemned, for frequently the engaged man loses that desire to appear well in the eyes of all women, which actuates most single men, and displays much of his real character.

Not a few of the best of our women throw themselves away and ruin their whole lives, by marrying confirmed rakes and drunkards, in the hope of saving them from the fate to which they have been foreordained by a bad inheritance.

The spirit which prompts to such devotion and self-sacrifice is not to be treated lightly. An attribute so Christ-like is not to be rudely pushed aside by cold, calculating reason without a word of sympathy. In some few cases, doubt-

less, men have been snatched as brands from the burning by noble women, who have risked all in the hazard, and such wife-heroes should stand in the forefront of the ranks of nature's nobility. Yet, I would point out, that the attempt so rarely ends in salvation, and so frequently in complete failure and despair, that such an experiment can, in no case, be advised; and further, that while one might not feel justified in interfering with attempts at the reclamation of the erring, if only the fate of the volunteer were at stake, he feels it his duty to speak when he remembers the children whose fate is also staked upon the hazard.

It may be argued that a person has a right to risk happiness, even life itself in the hope that some other may be benefited, but it cannot be said that a person should have legal or moral right to jeopardize the future of a whole family, to satisfy any instinct, however noble.

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#### SOME CONSIDERATIONS OF INEBRIETY.

When a man is intoxicated the symptoms are generally sufficiently pronounced for a diagnosis to be made. However, there are cases that we occasionally see when it is a difficult point to decide as to whether the person is "dead drunk" or is suffering from some form of brain trouble. Physicians are aware that chloride of ammonium is a remedy that will "sober up" an individual who is intoxicated in a comparatively short space of time.

Quite frequently, after a person has indulged in the use of alcoholic drinks for a long time, there is such a change produced in the nervous system that the desire for the stimulant is stronger than the will. The person then becomes a slave to this morbid appetite, and, at the same time that he may express a desire and even make an effort to quit, yet the change in the nervous system is so great that the "good intentions" have no control over the morbid craving for alcohol.

Some men, when they find that the habit is growing on them, make an effort to quit, and are very much surprised to find that they are in the grasp of the monster and he will not relax his grip at their bidding. Through social intercourse and business pursuits, persons have had the habit develop so gradually and insidiously that they did not know that they were victims until they made an effort to stop. Then, to their surprise, they find that the craving for drink was uncontrollable by any will power that they could command.

If a man honestly and earnestly desires to quit drinking and cannot of his own volition do so, he would probably call on his physician and ask him for assistance. The question then arises with the physician, What shall I give this man? How shall I treat him? With the consent and desire of the victim to be cured, there are three courses that may be pursued. The first is, medicine to be taken into the system through the stomach; second, by hypodermic medication; and third, by a combination of the two.

A simple yet efficient prescription for allaying the craving for drink in dipsomaniacs is as follows:

R	Tr. capsici,	.	.	.	.	.	.	℞	x.
	Tr. nucis vom.,	.	.	.	.	.	.	℞	x.
	Ac. nitric dil.,	.	.	.	.	.	.	℞	xx.
	Aquæ,	.	.	.	.	.	.	℥	ii.

M. Sig. This quantity to be taken three times a day.

Dr. McKinley treated dipsomania in something like the following manner: He generally gave the man a pint of good whisky and let him help himself to as much as he wanted of it. If there was a sluggish action of the liver or a disposition to dropsy, he gave him a large dose of hydrargyrum protochloride dry on the tongue, to be washed down with whisky. Then the treatment consisted of a few large doses of ipecac dropped dry on the tongue and washed down with whisky. Generally two large doses of pulverized ipecac were given and afterward smaller doses. The diet to be light and whisky to be allowed as long as he wanted it, and

in some cases to be given even after it had become nauseous to take.

The doctor's conclusions are as follows :

“First, that medicine offers the confirmed inebriate relief from the trammels of appetite, with as much certainty as relief from any other pathological condition.

“Second, that what is done by specialists in the treatment of chronic drunkenness can and should be done equally well by the profession at large.

“Third, that reformation by the aid of medicine has a solid and real foundation in changes of structure on which appetite depends ; which purely moral reformations lack, and are, therefore, less permanent.”

Some men are dipsomaniacs because they cannot help it, at least there is no effort put forth to be otherwise. Their relations and friends would like to have the habit broken up, and they consult the physician to know if they can procure something that can be administered secretly. For this purpose sometimes the following is used :

R	Powdered capsicum, . . . . .	1 part.
	Powdered ginger, . . . . .	8 parts.
	Powdered bayberry root bark, . . . . .	16 parts.
M.	Sig. A small quantity to be placed in a cup of coffee.	

On account of the color of the coffee it would not be seen, and a few dregs at the bottom of the cup would not be suspected as anything except coffee grounds. There are other medicinal agents, some of which can be put directly in the whisky itself, and the person drinking the whisky would not know it.

We will now speak of the method of treating inebriates by hypodermic medication. There is this difference between medicine given by the mouth and hypodermically: The former can be prescribed and the patient given the necessary instructions as to how it should be taken; the latter must always be administered by the physician himself.

Nitrate of strychnia has long been known as an agent that has a powerful influence in controlling the desire and

craving for alcohol when given hypodermically. It not only allays the craving for drink, but it has a direct effect upon the brain and nervous system.

Alcohol at first stimulates and causes a fullness of the vessels that may amount to a congestion. If this condition is continued long enough the effects will be the same as an engorgement and dilatation from any other source. The secondary effects are just the opposite of the first, and we have the engorgement giving way to contraction, showing that a vaso-motor disturbance has been produced by the unnatural and long-continued congestion.

The effect of alcohol upon the nervous system may be seen and demonstrated by its effect upon the optic nerves. The pathological effect is atrophy following inflammation of the axial fibres of the nerve. Here, in the second pair of cerebral nerves we have an actual demonstration of the structural change produced in the nerve and its effect upon vision.

If alcohol can so change the organic structures of the optic nerves as to partially or completely destroy vision, why may it not act on the cerebral centers in such a manner that a morbid or depraved appetite may be produced ?

The reflex function of the brain and spinal cord are changed by keeping the system saturated with alcohol in such a manner that frequently the power of the will is completely subservient to the dominating influence of desire.

— *Cincinnati Lancet.*

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## THE TOXINE ALCOHOL.

Dr. Broadbent's introductory address at the opening of the session at Owen's College, Manchester, deserves more attention than most of these formal deliveries. He dwelt on the intellectual interest which attaches to the study of medical science, and illustrated it, among other ways, by the interest excited by recent observations on the action of bacilli and the combat which goes on between

these invading hosts and the guardian cells or leucocytes of the living body. Inflammation surrounding a wound is regarded and caused by the influx and multiplication of leucocytes to engulf and destroy septic bacilli which have gained entrance from the air, a "local war" of defense. The issue of this pitched battle will depend upon the relative number and activity of the respective hosts. Inflammation round a poisoned wound is an evidence of vital power and a means of protecting the system at large from invasion and devastation. If this first line of defense is broken through the bacilli pass through the lymphatic spaces and ducts to the glands, and another battle ensues which produces glandular swelling and inflammation and, possibly, abscess. This second line of defense may be insufficient, and then we get general septicæmia. It is now well proven that the injury is done, not by the bacilli themselves but by the toxins which they secrete or excrete. Dr. Broadbent very properly points out that the action of the bacilla of fever in the body is strictly comparable to the action of yeast in a fermentable liquid. The yeast cells grow and multiply at the expense of the sugar, in destroying which they produce alcohol, carbonic dioxide, and other substances. When the alcohol amounts to some 17 per cent. of the liquid the process is stopped by the poisonous action of the alcohol on the yeast cells. In just the same way the toxins produced by the bacilli at length stop their further multiplication and put an end to the disease. Alcohol is, in fact, the toxin produced by yeast, and, like many other toxins, it is not only poisonous to the cells which produce it, but to any animal into whose veins it may happen to get.

There can be little doubt that the state of immunity which one attack of certain fevers confers against future attacks depends partly upon what is called the phagocytic action of leucocytes. These have been actually observed to draw into their interior and destroy bacilli which would otherwise have multiplied and produced their special effects. There can be little doubt, either, that we are continually



taking into our systems bacilli of all sorts, and that, again and again, disease is averted by the activity of the germ-devouring leucocytes. Dr. Broadbent describes an experiment which proves that power of resisting disease is largely dependent on the activity of these cells. A rabbit, having had a certain quantity of bacilli injected under its skin, suffers from inflammation at the spot, and perhaps abscess, but recovers. At the same time, another rabbit is treated in precisely the same way, but, simultaneously, a dose of choral is injected into another part of the body. The choral, circulating in the blood, is known to paralyze leucocytes, and, as a result of this, they do not collect and wage war on the bacilli injected under the skin; there is very little local reaction, the bacilli get free course into the lymph and blood, and the animal dies. But, in the words of Dr. Broadbent, "alcohol in excess has a similar action on the leucocytes, and this, as well as the deteriorating influence of chronic alcoholism on the tissues, predisposes to septic infection. A single debauch, therefore, may open the door to fever or erysipelas." A similar experiment of Doyen confirms this. He found that guinea pigs can be killed by the cholera microbe, when introduced by the mouth, if a dose of alcohol has been previously administered. It has been the general testimony of observers in cholera epidemics that those addicted to much alcohol are far more liable to fatal attacks. But while large doses of alcohol are, of course, more obviously injurious, it would be absurd to imagine that lesser quantities are entirely without influence in the same direction. It has, indeed, been shown by Dr. Ridge that even infinitesimal quantities of alcohol, such as one part in 5,000, cause a more rapid multiplication of the *bacillus subtilis* and other bacilli of decomposition, while, by the same quantities, the growth of both animal and vegetable protoplasm is retarded. Hence, there can be no longer any question that alcohol renders the body more liable to conquest by invading microbes, less able to resist and destroy them. Alcohol, a toxine injurious to living

cells, is destroyed or removed from the body as fast as nature can affect it, but while it remains, and while able to affect the cells at all, its action is detrimental to healthy growth and healthy life, and the less we take of such an agent, the better for us. This is a dictum which it becomes the profession to enunciate far and wide. "The less, the better" is a watchword which all may use, and the wise will interpret in a way which will infallibly preserve them altogether from all possible danger from such a source.—*The Medical Pioneer.*

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### TOXIC INSANITIES.

Dr. Edwards, the medical superintendent of the Michigan Asylum for the Insane for 1891 and 1892, makes the following reference to such cases:

Classed under the head of toxic-insanities is a certain form of psychoneurosis manifesting itself as a result of prolonged opium eating in a person with a hereditary history of either alcoholic or opium dissipation.

The opium habitué with an opium-taking ancestry displays a singular tolerance for the drug. This fact may explain, perhaps, the less injurious effects of the practice in India and China, where, for hundreds of years, generation after generation have been accustomed to the use of this narcotic. Those thus prepared, as it were, for the drug can withstand its action a much longer time than the novices at the dissipation. In the hereditary class from ten to fifteen years were required in the cases recently observed to produce a mental aberration sufficient to warrant commitment to the asylum, while in the non-hereditary class the time varied from one to four years. All of the cases under observation required a period of probation in the use of alcoholics in order to pave the way for the more deadly indulgence. Thus the loss of moral sense and responsibility which to a greater or less extent is found in those addicted to alcohol,

both in the hereditary and non-hereditary cases, is only too easily nourished and cultivated by the substitution of opium for that stimulant. The hereditary cases present the most striking examples of moral perversion.

Case I. An irregular practitioner of medicine, "self-educated," possessing a smattering of medical education. Mother and maternal grandmother were opium habitués. Resembles his mother mentally. Twenty-five years ago he began the use of alcohol and continued its use excessively until fourteen years ago, when he substituted opium. He married and raised a family of bright, intelligent children. The alcoholic habit did not materially affect his intellect except to cause him to desert his calling, which was that of a carpenter, and to begin his "self-education" as a physician. The limited knowledge he acquired in this direction proved dangerous, for he learned of the fascinations of the drug that was to be his ruin. For thirteen years he worshiped his idol moderately, and at no time did he exhibit any signs of active mental confusion. He became, however, exceedingly irritable, and later careless of dress and deportment. An attack of la grippe during the winter of 1889 was sufficient to destroy further resistance, and a decided alteration of mental action now appeared. The ordinary doses of morphine appeared to have but little effect in satisfying his appetite and he became suspicious of his friends. He was at first suicidal, restless, hysterical, and then exceedingly irritable. Sexual delusions made their appearance, the most fixed being that his wife and son were criminally intimate. After the development of this idea he made life miserable for his wife by reason of his attempts to prove the truthfulness of it. He talked about the alleged crimes of his family to his neighbors, to strangers, to all who would give an ear, until his family in despair sent him to the asylum. By the acuteness of his persecution, the plausibility of his theories, and the sauvity of his arguments, he had ruined the character of his family. After his escape from the asylum, which he effected by the assistance of an attendant whom

he had converted to the idea that he was not insane, he succeeded in having his guardian discharged, and having the courts set aside the verdict of insanity. He continues the persecution of his family and the indulgence of his dissipation.

Case II. A physician, well educated, and with fair prospects upon leaving college. He at once began the use of morphine, having used alcohol before for some years, and continued it uninterruptedly for fifteen years. In the history, as given by his wife, there is mentioned one convulsion occurring eight years before he was adjudged insane, and at different times slight attacks of excitement. One year prior to admission he added cocaine to the morphine, giving as an excuse that by this means he could check the habit. He was then using daily sixty grains of morphine and added ten grains of cocaine. Shortly afterwards delusions began to be manifest; he was irritable, suspicious, very vulgar, and rough in language. He finally became restless and mildly maniacal, and was committed to the asylum. He passed through the usual train of symptoms with the addition of most exaggerated sexual delusions and hallucinations. He was at first vulgar and obscene in language, and accused the attendants and other patients of talking of him in an offensive manner. Being misled by his hallucinations, he made several violent assaults upon both attendants and patients. He insisted that his food was contaminated with venereal pus and his hallucinations of sight relating to sexual matters, especially at night, were vivid in the extreme. He was yet hallucinated when removed by friends two months after admission.

Case III. A druggist, married, resembles father mentally and physically; father and uncle were morphine eaters. As a druggist he received a good salary, but spent a large portion of it earlier in alcoholic and other dissipations. Ten years before he came to the asylum he began the use of morphine and has continued it to the present time. He gradually became irritable and quarrelsome, and six years

later he received a blow on the head which left him unconscious for three hours. Thereafter he was more demented, easily excited, and given to exhibitions of violence. These attacks occurred at intervals of a few months and lasted from three days to three weeks. He became very suspicious of his wife and five months ago left her. Ten days before admission he had a severe convulsion and was much confused and threatened suicide. He was exceedingly vulgar and obscene, careless of dress, and finally deported himself in such a manner that it became necessary to remove him to the asylum.

He proved to be one of the most irritable, quarrelsome, vulgar, and repulsive patients about the institution. He bent all his energies to stirring up dissension, quarreling with his companions, and threatening all sorts of desperation. After two weeks of turmoil, he succeeded in making his escape and was not returned to the asylum.

Case IV. A merchant, successful in business, father, paternal grandfather, and several uncles were alcoholics. He began the use of alcohol twenty-three years ago and of late years has used large quantities, from two to four quarts of whisky a day. About two years before coming to the asylum, under the guise of attempting to reform, he began the use of opiates. He soon carried this dissipation to excess, using about one drachm of morphine a day. Three months prior to admission he probably began to comprehend that his indulgence was harming him, and attempted to reform. He at once became confused, delusive, and destructive. As soon as possible he was sent to an inebriates' home, but soon became so violent that the officers declined to retain him. While returning to his home in Michigan, he talked almost continuously of the depravity of his wife, her use of obscene language, and, after his arrival home, accused other females of the family of vulgarity and obscenity. He drove them from the house and because of his violence was sent at once to the asylum. For a short time the activity of his hallucinations regarding his

wife was very evident, but as he improved and became quiet he was more politic in conversation and, although his manner towards his wife was indicative of suspicion, he would not commit himself to further denounce her. He was later allowed the liberty of the grounds, but was soon reported to have taken, with a female whom he met on the grounds, liberties unbecoming one of his age and civil condition. Four months after admission he was removed by his wife. Shortly after his return home he deserted his family, and for many months was not heard of.

The peculiarities most characteristic of the hereditary cases as differing from the non-hereditary are the sexual delusions and hallucinations. In each case the wife is accused of infidelity or gross immorality. Hallucinations pertaining to the sexual economy were present in each case, and in all the cases under observation were sexual perversities noticed. Knowing the depressing influence that opium taken habitually has on the sexual functions, would it not be probable that the possible sexual center situated in the base of the brain participated in the well-known depressing action of the drug upon these organic centers, and that the action is thus a purely psychic one, and that by the disturbance of this cerebral sexual center are produced pure hallucinations of a like nature? The relation of the facts is at any rate quite noticeable.

The medico-legal aspect of these chronic cases should require a passing glance. It is quite impossible to keep them in confinement for a prolonged period. After ceasing the use of the drug there is no return of the moral nature. Deceitfulness, cruelty, want of gratitude and responsibility have become a part of the man's character, and it is impossible for him to be other than criminal in his tendencies. In the asylum he contaminates his fellow patients with his vicious ideas and by his adroitness and plausible theories, augments delusions in the more susceptible. By strenuous efforts he effects his release and pursues the vagaries of his delusions without mercy. As has been seen, the wife

or some female member of the family is the chosen victim, and the result is usually disastrous to their reputation. The law does not hold an opium-eater, unless maniacal, irresponsible, and his friends cannot conscientiously proceed against him for alleged criminality. Hence there is no check upon his persecutions, nor relief to his family.

### STRYCHNIA IN INEBRIETY AND DELIRIUM TREMENS.

Hahn (*Der ärztliche Praktiker*, September 1, 1892) questions whether the cases of chronic alcoholism, cured by strychnia or other drugs, were not in a degree influenced by hypnotic suggestion. He cites Biswanger's assertion that the main task of temperance societies is to "suggest" aversion to alcohol.

He distinguishes between kinds of action of strychnia in alcoholism :

1. The curative action, which many authors suppose strychnia exerts, and
2. The effects of strychnia upon the results of chronic abuse of alcohol.

While the former is debatable, Hahn says that since about four years he has treated a large number of cases which undeniably prove the effect of strychnia upon the chronic vaso-motor, nervous and nutritive disturbances produced by alcohol.

Hahn employs strychnia in the manners mentioned below:

℞ Strychnin. nitric. . . . .	0.05 vel 0.1 vel 0.2 ( $\frac{1}{2}$ or $1\frac{1}{4}$ or 3 gr.)
Acid. phosphoric. . . . .	15.0 (f 3 IV)
M. d. s. Ten drops, 3 times a day.	
℞ Extr. nuc. vom. . . . .	0.5 (gr. VIIss)
Spts. vin. ad. sol. . . . .	5.0 (℥ LXXV)
Acid. phosphoric. . . . .	15.0 (f 3 IV)
M. d. s. Ten to fifteen drops, 3 times a day.	

The author orders albuminous food, avoidance of strong spices, and temperance. Sometimes he uses milk diet.

In all his cases matutinal vomiting subsided, regular passages and appetite set in, sleep improved, the general appearance grew better, headaches disappeared, the patients regained control of their extremities, tremor and paræsthesiæ ceased, and psychical disturbances were arrested.

Hahn (in *Delirium Tremens*) reports a vigorous patient with delirium tremens who had been given 4 to 6 grammes (3I to 3Iss) chloral hydrate within 2 hours, without any benefit whatever. The excitement increased, delirium grew strong, the pulse rose from 90 to 140.

The author then gave strychn. nitric. 0.001 (gr.  $\frac{1}{80}$ ) four times at intervals of 3 to 4 hours, and when the pulse fell to 110 in the evening, the patient dropped to sleep, from which he awoke entirely well.

In another case, delirium tremens complicated severe empyema and purulent pericarditis. While death was not averted, the nervous manifestations, muttering delirium, excitement and cardiac debility ceased promptly after several doses of strychnia.

Hahn agrees with Strümpell that strychnia should be given at once in asthenic delirium tremens.

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## THE REFORM OF HABITUAL DRUNKARDS.

As an illustration of the attention which this subject is attracting throughout the more intelligent classes of the civilized world, and the form which this inquiry is taking, we note that Lord Herschell, of the British Government, has had the matter under consideration, and has asked the advice and assistance of some of the most eminent medical men of Great Britain. The press of the English medical world is abounding in leading articles on the subject of the physical and mental state of the inebriate, and the proper disposition of those who are shown to have deficient self-control.

All of this indicates a rapid progress in the right direction. The *Medical Press* remarks that "the returns show that



imprisonment, as a punishment for drunkenness, whether regarded as a deterrent or as a preventive, is a disastrous failure." Mere legislation, it claims, is utterly inefficient, and it maintains that this indicates that it has been on wrong lines entirely. It believes that at present a better apprehension of the nature of the disorder is obtaining, and that public opinion is gradually being brought to view the inebriate as less of a criminal and more of a victim of disease partly inherited and partly acquired. The remedy which it points out is "to provide, that after a certain number of convictions for inebriety within a given period of time, the accused be dealt with as suffering from a malady calling for special and appropriate treatment." In other words, that an order for sequestration follow, say the third conviction within six months. The patient would then be relegated to a special house of detention or confined in wards set apart for the purpose.

The *British Medical Journal* speaks of the "inutility of the present penal procedure," mentions the interest of the Home Secretary in the proper legislation for the habitual drunkard, and commends the inquiry of Lord Herschell in the House of Lords to ascertain "whether some better means of dealing with such cases cannot be adopted." Lord Herschell also stated that while one-seventh of the males convicted of habitual drunkenness had been imprisoned ten times or upwards, the proportion of females had been one-third, and that 80 to 85 per cent of the female commitments had been for drunkenness or allied offenses. It claims that the present judicial system is only "a training school for inebriety." It expresses the hope that the objections to the compulsory detention of habitual drunkards, which have hitherto, in both Houses of Parliament, proved insurmountable, may be removed.

These are favorable signs, and serve to indicate that the day is not far distant when our whole treatment of the inebriate will be readjusted along more scientific and more humane lines. We must recognize the full force of inherit-

ance and of structural peculiarities before we can attain to any efficient eradication of the disease.

The kernel of the nut is in the indeterminate compulsory confinement of the inebriate, under proper regulations and restrictions, in an institution organized for the specific purpose of the rational treatment of the disease of inebriety, in the charge of trained and scientific experts, and with all the advantages which the present status of medical science affords for the control and eradication of the disease.

— *The Cincinnati Lancet-Clinic.*

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#### DRAFT REPORT OF INEBRIATES LEGISLATION COMMITTEE.

Your committee is happily in a position to report the continued diminution in the use of ether as a means of intoxication, consequent on the judicious step taken by the authorities in scheduling this drug as a "poison," which can be sold only by chemists and druggists under the provisions of the Pharmacy Act. The making of methylated spirit more nauseous has also tended to arrest the spread of another mode of intoxication.

A departmental committee has been appointed, pursuant to Lord Herschell's motion in the House of Lords, to inquire into the best method of dealing with habitual drunkards, especially such as are at present repeatedly dealt with at the police-court. The evidence of London and provincial police magistrates, followed by the encouraging results obtained by the Dalrymple Home and other similar institutions for the treatment of inebriates, and the opinion of members of the profession who have had experience in this class of cases, with the testimony of authorized representatives of British colonies and other countries, cannot fail to have due effect in improved legislation.

Your committee has for several years strongly urged the pressing need for decided and thorough-going measures for

the compulsory reception and detention (for purposes of cure) of such inebriates as have become so powerless of will that they have not resolution left to apply for admission to a home of their own accord. This, in your committee's belief, is the most important and urgent want, and should apply to all classes, due provision being made for the poor at the public charge.

The amendment next in importance would be the discontinuance of the existing barriers to the reception of inebriates applying voluntarily for admission. In the case of ladies especially, there is great difficulty in persuading them to surrender their liberty, by the forbidding process of an appearance and declaration before two justices. It would also be a decided gain to include, under the provisions of an amended Act, forms of intoxication other than the alcoholic form. Chloral, opium, and other varieties of habitual drunkenness, in the opinion of the committee, require to be similarly dealt with.

Your committee would hail with pleasure the passage through the legislature of a measure for Scotland on the lines of the Restorative Homes Bill drawn by Mr. Morton, W. S., late Crown Agent, and trusts that his proposals will be duly considered in Parliament. The main provisions which your committee supports are (1) compulsory reception and detention, (2) reception and detention on the voluntary application of the patient, without an appearance before magistrates; and (3) contributions from the public funds.

In Germany, the United States of America, and other countries, agitation for compulsion is increasing, and some of our colonies already possess this desirable power.

Your committee specially desires to note the remarkable response to its invitation to petition Parliament by so many branches, by the Royal Colleges of Edinburgh and Dublin, and by a large number of temperance societies, philanthropic associations, and religious bodies.

The committee recommends its re-election as follows : the President and President-elect *ex officio* ; Dr. Withers Moore,

President of Council ; Mr. D. B. Balding, J.P.; Dr. T. Bridgewater, J.P.; Dr. C. Cameron, M.P.; Dr. G. B. Clark, M.P.; Dr. C. R. Drysdale ; Mr. Geo. Eastes ; Dr. J. W. Eastwood, J.P.; Dr. R. Farquharson, M.P.; Sir Walter Foster, M.P.; Dr. W. T. Gairdner ; Mr. W. C. Garman ; Dr. J. Hill Gibson; Dr. A. Grant ; Mr. F. J. Gray ; Dr. C. J. Hare ; Dr. Norman Kerr ; Mr. H. R. Ker ; Mr. R. N. B. Nicholson ; Surgeon-Major G. K. Poole, M.D.; Mr. J. Prankerd ; Surgeon-Major R. Pringle, M.D.; Fleet-Surgeon Geo. Robertson, M.D.; Dr. G. Danford Thomas, Coroner ; Dr. H. W. Williams ; Dr. Wynn Westcott, Deputy Coroner ; and Dr. E. Hart Vinen. Your committee desires to point to Victoria as in possession of legislation which would be invaluable in Britain. In that colony a county court judge, on the application of any relative or friend, and a statutory declaration by two medical men, can send an inebriate to a retreat for any period not exceeding twelve months.

NORMAN KERR, M.D., *Chairman.*

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#### NEURITIS FROM ALCOHOL.

Dr. Drysdale of London in a recent discussion remarked as follows :

“The statement that alcoholic neuritis is more common with women than men, is not sustained by my experience. The changes which take place in these neurites are either interstitial or parenchymatous ; the latter is the more common. The spinal cord is usually unaffected, but the muscles of the limbs are atrophied. The patient first complains of tingling of the extremities or numbness, at first in the hands and feet, then extending to the legs ; which gradually lose their power. The patient is usually apyretic, going about his usual occupations for a time, until, at last, he takes to his bed. The extensors first show a decided weakening of both the upper and lower extremity, the patient lying in bed with the toes pointed or exhibiting foot drop. The weakened muscles

gradually atrophied, especially the anterior tibial, and interossei of the hand. These muscles do not react to interrupted current, and are variously affected by the continuous current. Anæsthesia is marked in many cases, but occasionally the reverse is present. The muscles are tender to pressure for a long time, especially over the calf. The reflexes are absent, and the legs eventually become contracted and adhesions form round the joint. The patients are, as a rule, apathetic and without appreciation of their condition. Often this disease simulates locomotor ataxy when it effects the lower extremities specifically. It is distinguished from ataxy by tenderness of the muscles and dropping of the foot. In syphilis there is great tenderness of other parts of the body, especially as seen in female patients. The main point of treatment is cutting off the alcohol at once. Where rheumatism complicates the case, salicylate of sodium is of value. The continuous current is valuable in wasted muscles, and in cases much reduced a water bed is essential to prevent bed sores. The treatment is essentially a tonic and building up one.

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#### OPIUM STATISTICS.

For eight years over sixty thousand pounds of opium have annually passed through the custom house at San Francisco. In 1888 the amount reached one hundred thousand pounds. From Jan. to June, 1891, forty-nine thousand eight hundred and fifty-six pounds of prepared opium passed the custom house. It is estimated that fully one hundred and twenty thousand pounds of opium are consumed on the Pacific coast by Chinese and other habitués annually.

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#### SOME CRIMINAL STATISTICS.

The judicial statistics for England and Wales for 1891, have been recently published, and are very suggestive. Of over seven hundred thousand commitments, two hundred

and sixty-five thousand were for drunkenness and its associated crimes. A table of the number of persons arrested for the past twenty-five years and the percentages of the whole number are given as follows :

1867,	-	-	21 per cent.	1879,	-	-	28 per cent.
1868,	-	-	23 "	1880,	-	-	26 "
1869,	-	-	24 "	1881,	-	-	26 "
1870,	-	-	23 "	1882,	-	-	26 "
1871,	-	-	26 "	1883,	-	-	25 "
1872,	-	-	27 "	1884,	-	-	27½ "
1873,	-	-	51 "	1885,	-	-	27 "
1874,	-	-	30 "	1886,	-	-	26 "
1875,	-	-	31 "	1887,	-	-	24½ "
1876,	-	-	31½ "	1888,	-	-	25 "
1877,	-	-	30 "	1889,	-	-	25 "
1878,	-	-	29 "	1890,	-	-	25 "
				1891,	-	-	25½ "

These figures bring strong confirmation of the unknown tide-like movement of inebriety ; rising slowly from a certain low level to a high point, then receding. They are only fragmentary hints because they are confined to persons who come under legal recognition, and indicate a small part of the army of inebriates.

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TWELVE LECTURES ON THE STRUCTURE OF THE CENTRAL NERVOUS SYSTEM, for physicians and surgeons. By DR. LUDWIG EDINGER of Frankfurt-on-the-Main. Translated by Dr. Vittum of St. Paul, Minn. F. A. DAVIS, Publisher, Philadelphia, Pa., 1891.

This volume comprises a series of lectures delivered before active practicing physicians, with the purpose of showing some of the more recent discoveries in the anatomy of the central nervous system. It is profusely illustrated, and is clear and explicit in the descriptions of the structures of the brain. The reader is pleased with the author's candor and frankness of statement, and finds in the methods a thorough teacher's spirit, presenting the thought in the clearest

way. To the hard-working physician this work will be an excursion into a new realm of wonder-land of most intense interest. The work is among the most practical, useful, and valuable additions that can be placed in any medical library. To the student of inebriety it will be invaluable as showing many of the locations where the lesions of alcohol appear. Send to the publisher. Price \$1.75.

**ALCOHOLISM AND ITS TREATMENT.** By J. E. USHER, M.D., Surgeon and formerly Superintendent and Medical Officer of Health to the Queensland Government, etc., etc. BAILLIERE, TINDALL & COX, London, G. P. PUTNAM SONS, New York city, Publishers. 1892.

This little work is the result of a recent study of the subject by a clever English doctor, who personally visited all the asylums, and conversed with the leading specialists in this country and Europe, thus getting all his facts from original sources. The author has given an excellent summary of the leading facts concerning inebriety, even to the specifics so lately vaunted as cures. The chapter on inherited, acquired, and infantile forms of inebriety are the most suggestive. The treatment is also valuable as giving the practice and opinions of many persons of large experience. This is literally one of the best contributions to this subject published during the year, and will be of great service to all readers who wish to have the most authoritative facts in a condensed form.

**DISEASES OF THE LUNGS, HEART, AND KIDNEYS.** By N. S. DAVIS, JR., M.D., Professor of Principles and Practice of Medicine in Chicago Medical College, etc., etc. F. A. DAVIS Co., 1231 Filbert Street, Philadelphia, Pa., Publisher.

This volume of three hundred and fifty pages is a very pleasant grouping of the leading practical facts of a course of lectures which the author has delivered. It has the rather rare merit of conciseness, and yet containing full descriptions of the facts most essential for the practice of medicine.

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The author is an able teacher and evidently could produce a much more thorough work. While this book belongs to the students' series, it can be read with profit by the older students who have been in active work for years. We have elsewhere quoted some very sensible advice which the author gives concerning alcohol in medicine.

The *National Temperance Almanac* for 1893, contains a valuable grouping of statistics and other facts well worth preserving. Published by the National Temperance Society of Reed Street, New York city.

*The Homiletic Review* always brings a charming table of contents for scholars and thoughtful readers. The publishers, Funk & Wagnals of New York city, have made this one of the best magazines of the country.

*The Popular Science Monthly* is a library in itself for every reader who wishes to keep abreast of all general topics of science. Medical science is discussed in its higher aspects, and many very important papers are presented here not seen elsewhere.

The Physicians' Visiting List, P. Blakiston, Sons & Co., is so widely known as not to require any special notice. Its simplicity and conciseness are unequalled, and where it is used once it is seldom given up. This year's edition has many improvements, and should be in the hands of every medical man. Send to publishers at Philadelphia, Pa., and get a copy.

*Childhood* is the name of a monthly magazine that is devoted to the care and culture of children. It is edited by Dr. Winterburn and published by A. L. Chatterton & Co., 78 Maiden Lane, New York city. The price is only one dollar a year. The numbers already published are very attractive and both instructive and suggestive, and it gives promise of being the most popular magazine of the day, in all families where there are children. Send ten cents to publisher and receive a sample copy.



*The Hospital Bulletin*, published by the Minnesota Hospital for the Insane, under the special care of Dr. Phelps, the first assistant physician, is a very attractive quarterly, devoted to all matters pertaining to the care and treatment of the insane in asylums. It is under the care and patronage of the entire staff, and promises to be a great power in the literature of mental disease.

E. B. Treat of N. Y. city, will issue early in February, for the Association for the Study and Cure of Inebriety, a volume "*On the Disease of Inebriety*" and its Treatment, composed of the most authoritative studies which have appeared in the journal for the past fourteen years. This volume will enable the reader to study in a condensed form the best papers which have been published on this topic.

The *Weekly Review*, published at No. 5 Somerset Street, Boston, Mass., by J. M. Fuller, gives a running comment on all the leading articles which have appeared during the week. Also the titles of all prominent papers covering the entire range of literature, art, and science are given. Copies of any of these articles can be had from the same firm. This is the most practical of all journals for the physician, who can see at a glance the contents of all the leading medical journals of the country.

E. B. Treat of 5 Cooper Union, New York, has just published a new work (price, \$2.75) on *Mental Diseases*, including their classification, synonyms, and symptoms, their etiology, diagnosis, and treatment, with the present methods of certification of the insane, by James Shaw, M.D., formerly medical superintendent, Haydock Lodge Asylum, London. Its semi-dictionary form of compilation makes its ready reference exceedingly convenient for practitioners and students, and for us a valuable introduction to the more comprehensive treatises and exhaustive monographs. The work is largely a compilation from the bibliography of the subject, yet the author has stamped his own individuality as a specialist upon the book by observations and experience, both in

asylum and private practice. Its several chapters are devoted to: (1) Definitions of insanity and classification of mental diseases. (2) Index of symptoms somatic, physiological and psychical, with the mental diseases in which they occur. (3) Index of mental diseases, with their synonyms and symptoms. (4) Etiology. (5) Diagnosis. (6) Prognosis. (7) Pathological anatomy, pathology, and pathogenesis. (8) Therapeutics and hygiene. (9) Legal regulations and forensic psychiatry. . . .

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### WORRY, DRINK, AND LUNACY.

(From the *Lancet*.)

It is no new thing to hear of the close connection between indulgence in alcohol and the development of insanity. Accordingly, we feel no surprise at a statement by Dr. Augustine Planus, that a large proportion of the cases of lunacy registered in Paris of late years, are attributable to this form of excess. Far more significant is his observation that drunkenness has increased very markedly in the French capital. This effect is, of course, due to a variety of causes. Among these one is of particular interest, from its bearing upon the neurotic aspect of the alcoholic dyscrasia. It is the pressure and worry of overwork, probably combined as usual, in the like circumstances, with irregular feeding and want of sleep. Though felt by all classes of workers, an important characteristic of its action as a cause of alcoholism is its increasing influence among those who labor with their brains. Artists, authors, and especially journalists — a group of persons by no means usually given to excess — are enumerated as having succumbed to the subtle poison; and this result has, doubtless with truth, been attributed to the craving depression of mental fatigue. It is not difficult, indeed, to trace a connection here, and we may accept it as a warning that forced labor is ever prone to become the natural parent of other and worse excesses. The best work, however hard, is always methodical enough to permit of timely rest and of regular nutrition, and the full recognition of this fact is a mere question of public utility which we hope to see more and more widely admitted in practice.

— *Temperance Record.*

## Editorial.

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### MEMORY IN INEBRIETY.

The aberrations and decadence of memory is one of the most common symptoms of inebriety. In some cases this is along regular gradations from the complex to the simple, according to Dr. Jackson, from that which has been least thoroughly organized into the brain, to that which has been most so. Hence recent events are first lost, then intellectual acquirements, then the impressions which belong to the domain of the feelings, and finally how to perform automatic acts. This depends on some unknown modification of cells in the cortex and centers, some special damage to a particular region, which may be permanent or transient. When the obscurity clears up and events are recalled in part, the injury is removed; when the confusion continues a pathological decay has begun. This failure to recall events of the past is the most significant symptom of brain decay and dissolution, the reversal of evolution. In a recent murder trial, the prisoner, an inebriate, had for years a progressive failure of memory, and yet he had performed a certain routine work without suspicion of brain incompetence. It was held that this fact of failure of memory could not be considered as evidence of inability to comprehend the nature and consequence of his acts. Further study of this case revealed dementia and delusions, and yet the man was hung as sound and responsible. Inebriates always suffer from failure of memory which takes on widely varied forms and degrees. The inebriate may have the delusion that his memory is sound and clear, and will unconsciously supply the defects by imagination and stoutly affirm they are real. He may by a dim sort of intuition retain a conception of his conduct under certain conditions, especially if they are along automatic lines of previous acts. It may be seriously questioned if any inebriate

ever has a sound clear memory of events that occur during the drink period, and whether interested or not he is never a safe witness of past events. Memory of drink storms in these cases are always confused, although some acts may be clear, and certain motives and reasons may seem to have governed, but in reality they were merely after-thoughts.

The action of alcohol increasing the circulation of the blood in the brain may seem to give greater sharpness and distinctness to the memory for the moment, but the inevitable reaction both confuses and blurs all these impressions.

When the brain is in a state of great activity bordering on delirium, impressions of events follow each other so rapidly that they cannot be organized or incorporated as fixed facts.

The anæmia following the diminished blood circulation makes it more impossible to recall the events whose registration was imperfect. This alternation of excessive circulation and diminution of the blood in the brain, following from the use of alcohol, is early apparent in the failure of the higher governing centers and changes of memory.

The strain on the heart from alcohol raising and lowering its activity is followed by muscular and valvular changes, disorder of the nerve plexus and lesions, that can be studied and observed.

The same strain and damage occurs in the brain, and the blunting of the moral centers and derangement of the memory are the unmistakable evidence of it.

Along this line there is a great need of accurately observed facts from which future generalizations can be made that will confirm or correct the present theories. The sad want of knowledge was most startlingly displayed in the recent testimony of an American alienist, who swore that the continuous use of spirits for twenty years had in no way impaired the brain of the prisoner. Also that he had observed persons who had used spirits for a longer time who were of sound mind. To the unthinking public such statements seem to have some confirmation in the chronic unstudied

cases that go about automatically without attracting attention. Change the surroundings and occupations of these cases, and the mask of health disappears. Almost any general examination will reveal degrees of dementia and brain degeneration, with decay of memory, morals, and all the higher brain centers in such cases.

The study of the memory in inebriety will open up a new field of facts and break up the delusive theories that are now repeated as if they were absolute facts.

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#### RELATION OF INEBRIETY TO CRIMINALITY.

Alcohol used either in moderation or excess always deranges sensation, and the brain centers which receive and determine the value of such impressions. Intoxication is an illustration of the extreme derangement of the senses and the controlling brain centers. False impressions of every description come from all the senses, and the brain is unable to correct them, hence false judgment, unreasoning acts and conceptions.

Associated with this is the delusion of mental health and clear accurate judgment of his condition and the surroundings. This condition is present in every drinking man, only differing in degrees. One who uses alcohol at intervals will recover from this derangement more or less during the free interval. If the interval is short the derangement is not repaired, and if the drinking is excessive it is doubtful if restoration is ever complete. It may be stated as a rule to which there are few or any exceptions, that all inebriates have deranged senses and defective brain conceptions and power of control.

This can be verified by a careful study of the mental processes and acts of the person. He may appear in public and to superficial observers to have no impairment of the senses and brain, and he may even act and think wisely along lines of automatic every-day life, and be mentally unsound and incompetent.

These defects are the essential factors of criminality. The senses send false impressions to the brain, and the brain is unable to correct them, hence false thoughts, false acts, and abnormal conduct. Criminal acts come from inability to understand the relation of surroundings, and to adjust the conduct to the varying conditions of life. The criminal acts of the inebriate spring from this confusion of senses and judgment. Acts are misinterpreted, motives are ascribed to conduct that have no reasonable basis. Illusions and delusions come and go with increasing frequency, and finally become settled conceptions that are systemized and cannot be corrected. Delusions of sexual wrongs lead up to assaults and homicide; delusions of persecutions have the same ending; delusions of strength bring on reckless conduct and insane acts, together with unreasoning credulity and equally strange suspicion and want of confidence. Nearly all the crimes committed by inebriates are assaults against persons and delusions of ability to understand and act in relation to business and ethics along unusual lines of conduct. Such persons forge notes, misappropriate moneys, engage in dishonest transactions of every form, sustained by the delusion of superior skill to conceal it and ability to avoid the legal consequences. While an inebriate may think and act along automatic lines with judgment and honesty it is doubtful if he can take up any new business or line of conduct and pursue it sanely and with integrity. The motive to do right may be unimpaired, but the damaged senses and imperfect brain cannot control and regulate conduct, and keep it up to a high ethical level. The study of this side of these cases very strongly confirm the statements of the irresponsibility of inebriates, and indicate the danger of trusting them in places of responsibility and power.

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A SPECIAL meeting of the Association for the Study and Cure of Inebriety has been appointed to discuss "*specific remedies*" for the treatment and cure of inebriety. This

meeting will be at the New York Academy of Medicine in the early part of March ; and will consist of a number of short papers by different members of the Association on the various phases of the secret specific remedies now so prominent in the public mind. This meeting is called for the purpose of showing the position of the Association on the general question of secret remedies and empiric methods of treatment, and also to refute the statement that its members are in sympathy and using the same means of treatment.

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### PNEUMOPARESIS IN INEBRIETY.

In 1888, Dr. Richardson of London described a form of pneumonia, in which sudden failure of nerve force seemed to concentrate in the pulmonary and vascular systems. There was no acute stage, no pain, only dullness, moist and bronchial rales, slight cough, intense weakness, depression, and death within twenty-four or forty-eight hours. This he called pneumoparesis, and believed that it came from premature exhaustion of the nerve-supplying centers. He also believed that it might be due to sudden pressure or shock to the nerve centers or its plexuses, or to the sudden generation of some chemical product which, like amyl nitrate, reduces to paresis the organic nervous supply. This term appears to describe a large number of cases of so called pneumonia following inebriety. The following is a good example. An inebriate in apparently fair health and vigor, from whom the alcohol had been removed for over two months, and still under treatment, became suddenly alarmed with the fear of impending death. Intense prostration and increased heart's action with slight cough, and increased temperature. Some dullness and coarse rales appeared a few hours before death, which followed twenty-eight hours after the alarm of dying. There was no pain and no apparent fever, the temperature went up steadily to one hundred and eight, the pulse raised to one hundred and thirty, then descended, fluctuating back and forth

down to sixty and death. Intense depression, ending in low muttering delirium, followed. In another case a chronic inebriate in active life at the head of a mercantile house, suddenly called a lawyer, made a will, and went home saying he was going to die. The family physician could find no symptoms or change except mental depression. In a few hours dullness, rales, and cough appeared, no pain was present, and death followed the next day. Many instances are noted of the sudden overwhelming impression of death that comes to inebriates, and no examination will give any indications for such belief. The idea will be followed by a low form of trembling emotional excitement, with slight cough, expectoration, and prostration. The patient will go to bed and die in a few hours, and a *post mortem* will reveal congestion of both lungs. There is, probably, in most of these cases a tendency to disease of the lungs. A marked consumptive heredity has been masked, or taken on the alcoholic phase, then suddenly the alcohol is given up and pneumoparesis follows from some unknown exciting causes. In three cases of this character, the parents had died of consumption, and a marked heredity was present. One began the use of alcohol as a preventive to consumption, and became an inebriate, drinking regularly to excess for ten years. He then came under treatment, recovered, went into active business in the most encouraging circumstances. He seemed in good health and cheerful, and in the height of his prosperity was seized with a fear of death. He went to bed, physicians were called, and no indications of such a termination were found. In twenty-four hours dullness, cough, and rales appeared, and the next day he died. The second was of marked hereditary phthisis, at twenty-four had an attack of pneumonia from which he fully recovered. He had used wine at the table from early life ; at thirty became a periodical inebriate, and six years later gave up spirits and became a temperance lecturer. Two years after, in the midst of an exciting temperance revival, he became suddenly impressed with the idea of death. He made a farewell address to the



audience, went to bed, and at once cough, expectoration, and dullness appeared, and death followed in ten hours with all the symptoms of acute pneumonia. In the third case, the same consumptive heredity was present, and inebriety had been of an irregular character, coming and going with long intervals for ten years. After a severe drink paroxysm, the same intense mental depression came on, and acute pneumonia without pain or fever ended in death in a few hours.

Many cases are not so prominent, where the same hereditary tendency exists, but in all the characteristic depression and fear of death are marked symptoms. In two cases the history indicated attacks of pneumonia and pleurisy, before and coincident with the inebriety, creating a strong tendency to merge into this form of disease. In one case, a reformed inebriate who had abstained for two years, but who was a gourmand in his habits, and suffered from indigestion and nutrient troubles, had the same fear, sudden collapse, and death. Here it seemed possible that some chemical product had formed and produced paresis of the nerve centers controlling respiration.

In a recent case, an apparent robust beer drinker suddenly settled up his business, bade good-by to his associates, and went to bed, saying he was going to die. His friends thought his mind was affected, and a consultation of physicians was called. No symptoms of any kind were discernible except the idea of impending death, with feeble heart's action. The next day acute congestion of the lungs, and death followed. The treatment in all these cases has little or no influence. Where spirits have been given, the fatal termination has been clearly hastened. The nerve stimulus to the pulmonary circulation is arrested, and the supply is exhausted, and death follows the same as in other states of nerve failure. In inebriety, the higher nerve centers suffer, the continuous paralysis from alcohol of all the organic nerve centers sooner or later ends in exhaustion which may be sudden or gradual. This may appear in acute inflammation of the kidneys, ending in sudden nerve failure. The

prominent symptom in both cases is intense mental depression. Where the kidneys are affected, this mental symptom may come from the non-elimination of poisons that are absorbed by the blood and act on the brain centers, producing delirium and coma before death. Where it is failure of the nerve forces acting on the respiratory centers, death follows from asthenia. In both cases treatment is useless, stimulants increase the degeneration, and it is wisdom to treat the dominant idea of death in the mind of the patient.

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DR. ALEXANDER PEDDIE, whose portrait appears in this number, was the great pioneer in Scotland who first urged that inebriety was a disease and curable by physical remedies. In 1854, he startled the medical world by showing that delirium tremens could be most successfully treated without stimulants or opiates. He urged the immediate withdrawal of these drugs from the beginning of treatment, a plan which has only recently been recognized and come into active practice.

Four years later, in 1858, he urged the necessity of the separate legalized treatment of dipsomania as a disease of similar nature to insanity, giving a great variety of facts and statistics that was recognized as both true and startling. In 1861 he repeated these statements in a vigorous paper before the National Association of Social Science. These papers were very widely circulated, and gave him a national reputation as a pioneer student in this field of study. In 1872 he gave very important testimony before the Parliamentary committee on habitual drunkards, which has since become classic in the literature of this topic. In 1876-7 he held a very spirited controversy with Dr. Bucknil, who denied both the theory of disease in inebriety and the possibility of cure. Since this time Dr. Peddie has contributed many very clear sensible papers on inebriety which have been republished in this country and translated into many foreign languages. These early papers of Dr. Peddie may be said to have been

the first and most influential in forming a correct conception of the disease of inebriety.

A few years after Dr. Peddie's papers appeared, Dr. Dalrymple began a vigorous agitation of this subject, which was followed by the Parliamentary Inquiry of 1872, in which the late Drs. Parrish and Dodge of this country testified. Then followed Dr. Kerr and others, who have carried the subject up to the present. Outside these very important studies, Dr. Peddie has been a frequent contributor to general medical literature, and has published a very entertaining biographical sketch of Dr. John Brown, better known in this country as the author of "Rab and his Friends." This volume will shortly be republished in this country. He was Harvaian orator in 1890, and was president of the College of Physicians and Surgeons of Edinburgh in 1877, and has received numerous titles and honors from many distinguished societies both at home and abroad. Dr. Peddie has been honorary member of the Association for the Study and Cure of Inebriety for many years.

Dr. Peddie is now eighty-two years of age, and has been a general practitioner in Edinburgh during all these years. He graduated at the Royal College of Physicians and Surgeons, and was for many years an assistant to Mr. Syme of the famous Minto Hospital at Edinburgh. His father was a popular clergyman of the dissenting faith, and his wife was the daughter of Dr. Selkirk, a noted surgeon of the early part of the century. Over half a century has passed since Dr. Peddie became an active practitioner of medicine, and yet to-day he is still at work. He has lived to see his views of inebriety (which at first were opposed) now accepted and defended by societies of leading medical men in nearly all civilized countries of the world. In the rapid evolutions and revolutions of the drink problem, Dr. Peddie's name may be forgotten, but the history of the literature of the subject will be inseparably bound up with his early pioneer efforts to rouse and concentrate scientific interest on this topic. Our American readers will take much pleasure in studying the strong, clear-cut lineaments of this octogenarian, who long

ago wrote and urged what is so *clear* and sensible to us to-day. Both our *Society* and *JOURNAL* extend the warmest greetings and hope that his life's journey may be still more extended and full of good works, whose influence will continue in the future.

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### THE PAN-AMERICAN CONGRESS.

A rapidly-growing interest is gathering about this first great congress of physicians in the new world. Although it will not occur until September of this year, the preparations are nearly all completed ; the various sections are arranged, and the papers to be read are announced, and the success of the congress is assured beyond all question. The gathering of over a thousand physicians from both continents, and the reading of more than a hundred papers on all sides of the science of medicine, will be merely the externals of this great forward movement.

The narrow provincialism of medicine is breaking up ; dogmatism in medical practice is passing away, and the tendency of all scientific culture is to concentrate and unite all efforts and studies on one broad path of progress. This congress is a practical recognition of this fact, and will do more to raise the character and standard of science than the ethical discussions of a century.

Central and South America and the West Indies are parts of the continent that will occupy a very important place in the civilization of the coming century. The time has come to enlist its many physicians in one confederation for the study of the problems of medicine. This congress will be historic and preliminary to other and larger gatherings in the future. To its projector and secretary, Dr. Reed of Cincinnati, the world of science owes a debt of gratitude, and to the other officers, who have so ably assisted in this work. The papers to be read cover a vast field of the most practical topics in medicine, and among them a prominent place will be given to inebriety, and its allied diseases. It will be a

historic gathering which no medical man can afford to miss. Send to Dr. Reed of Cincinnati, Ohio, for circulars and preliminary announcements.

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### THE NEW YEAR.

Another year brings the subject of the disease of inebriety and its physical treatment more prominently before the public, and the evidence on which this fact is based is accepted, and now recognized in all medical and scientific circles.

The bitter criticisms of the disease of inebriety, the journal and its writers, are almost entirely confined to clergymen, obscure physicians, and drinking specialists, who are out of the drift of scientific progress. The severe critics of a few years ago are now almost exclusively engaged in showing that inebriety is first a vice, then a disease, and drawing lines between these stages. Some alienists have made a sad exhibition of non-expertness in wild denials of heredity in inebriety. One quite eminent teacher and writer has placed himself on record, as doubting all heredity of alcoholic diseases, and in the secular press declaring that the secret specifics for the treatment of inebriety must contain some great truths. The usual bitter protests and letters which came to the *JOURNAL* from physicians and medical clergymen are disappearing. In the first ten years of the publication of this *JOURNAL* each issue was followed by a wave of criticism, consisting of personal letters pointing out errors and false statements, and sending papers to be published in the *JOURNAL* contradicting the facts it supported. Recently this has died away, and now only sneers and sarcastic contempt is heard, with epithets of cranks, enthusiasts, and unreliable persons. The *JOURNAL* has not stopped to engage in these windmill battles, or reply to the large number of critics who wished to correct its principles. The final truths concerning the disease of inebriety and its treatment are not yet in sight, yet there are abundant hints and intimations

that they can only be found along this line of scientific research. The evidence pointing to the disease of inebriety and its curability is rapidly accumulating, and no one can predict what the final outcome or conclusion this mass of facts will develop. Each year the JOURNAL becomes more valuable as a record of this growth and movement.

The great wave of empiricism that is just now passing over the country is a very significant sign of the times. It points to a great change of public sentiment and restless reaching out for other remedies than the pledge and prayer. In the light of all history it is the same old empiric stage which marks every advance of truth. The age of credulity is always quickly followed by that of reason.

To all our friends the JOURNAL sends its greetings and warm assurances that the problems of inebriety are far beyond all our theories, opinions, and plans of treatment. No one yet has earned the right to speak dogmatically, or to assume that final truths have been found on this line of work. We are all explorers in a new land, and the few facts at present outlined constitute a very small part of the wide continent before us.

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#### ERRORS AND MISTATEMENTS.

The December number of the *American Journal of Medical Sciences* contains a paper "On the Differentiating Action of Alcohol on the Nervous System, with observations on its toxic symptoms," by Prof. Robertson of Glasgow, Scotland. He calls attention to the great diversity in the external forms of the body, and believes that the same variety extends to the arrangement of the elementary cells and fibres of the internal organs. The individualities and differences of disposition and habits, and so-called temperaments, are due to corresponding varieties in the combination of chemical and physical structures, of brain and nerve cells. The different degrees of sensitiveness and readiness to take on or resist disease, exists in some peculiar inherent force that is a part of the organ. He asserts that alcohol possesses the power

of differentiating this property to a high degree, the proof of which is the diverse phenomena of intoxication.

Then comes the old theory "that alcohol is a revealer of character and true disposition." That "alcohol when taken unveils the natural brain and nerve characteristics." This theory has no support from any study of cases, and is a curious error that is persistently repeated without possible reason or support in fact. The author then distinguishes some of the phenomena following the use of alcohol, into motor and sensory disturbances. Another group he calls vasomotor and glandular abnormalities, and a fourth group is called psychical manifestations.

He asserts that many of the peculiar symptoms noticed in poor people who drink in Scotland, are due to fusel oil in the spirits. Five cases are given to illustrate the disorders of the motor power from alcohol; and case five, who has drunk for seventeen years is said to have "all his faculties acute, and mind as clear as ever."

After discussing disorders of the sensory system, he makes the following startling statement in reference to cases of delirium tremens: "Patients have come under my care who have had from twelve to twenty attacks of delirium tremens, whose intellectual faculties after they emerged from the effects of their last excesses were not found to be appreciably impaired in strength." This statement should be fortified with some account of the quality of the intellectual powers of the man at the beginning.

Such a statement would have been an immense help to a southern physician, who had delirium tremens several times and carried a heavy insurance, and also passed others in like condition for large insurance policies, as sound and good risks. He manifested great indignation at the ignorance of the medical officers of the company who insisted on canceling all such engagements, and who refused to believe an attack of delirium tremens was harmless to the brain, and the longevity of the policy-holder.

This article is a good illustration of much of the confus-

ing literature that exists concerning the effects of alcohol. Beginning with theories that are untrue, a few clinical facts are strained to support and build up some previous conception and theory. Such study and record of cases are misleading and reflect on the capacity of the author. No careful study of these cases would ever lead to such conclusions, and no writer or teacher should trust to the prevailing theories of alcohol or its effects — more especially when it is possible from clinical study of cases to ascertain facts that can be trusted.

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THE following is from the annual report of the Washingtonian Home, under the care of the distinguished Dr. Day.

On the individual the effect of vicious alcoholic indulgence is disease of the body, as we have seen. Sooner or later it must come. Intemperance cannot dwell in a sound frame, or at least it never does. Disease of the mind, too, is not far off. It may be delirium or insanity, temporary or confirmed; or it may stop short of that, resting at senile driveling and childish folly. The moral sense is blunted, and the better part of man sustains both degradation and decay. The man is dying, and, if not restrained, will soon be dead.

Drunkenness is the scourge of our land, and the main secondary cause of its spread most certainly seems to be the false dietetic and domestic place of alcohol. Undo this fatal error; put back this perilous drug whence it came — into the medicine-chest and laboratory — and then, I believe, a master stroke will have been achieved in favor of temperance.

How far the Washingtonian Home has been instrumental in correcting these errors in mankind, more particularly those of our own city, no one can tell. One thing we do observe, that it has in a considerable degree removed the remorseless curse from many homes. We also know that many have been restored to lives of usefulness and honor. More than this: we know that good and salutary influences have gone out from us to all parts of the civilized world, and good tidings have come back to us, manifesting the truth that our theory and practice in relation to the treatment of inebriety is the true one, and its healthful influence is spreading more and more, wherever the curse of intemperance is found.



COMPULSORY TREATMENT OF INEBRIATES.—At the quarterly meeting of the Society for the Study of Inebriety, held in London, the president, Dr. Norman Kerr, spoke of the recent remarkable growth of public opinion in support of more drastic legislation for the care and treatment of inebriates. There was a general consensus of opinion in favor of the compulsory reception and detention of those who had lost all power of voluntary application for admission to a home for inebriates for curative purposes. Several of our colonies had, by legislation, adopted compulsion in such cases, as had some other countries. The time was opportune, he said, for a resolute and widespread agitation in support of this proposal of compulsory admission and detention, which had practically originated with the medical profession. At the instance of the president it was resolved to invite an expression of opinion in favor of compulsion, by individuals and by medical and other associations, and to urge the presentation of petitions to Parliament by all persons interested in the care and treatment of diseased inebriates. Dr. W. Wynn, Westcott, deputy-coroner of Central London and Middlesex, read a paper on "Alcoholic Poisoning in London, and Heart Disease as the Fatal Result," in which he summarized the results of a tabulation of 1,900 inquests held in London by himself. Of these cases two-fifths were children and young persons under 16 years of age. The remaining three-fifths, or 1,150, supplied 255 cases in which medical evidence testified to alcohol as a direct factor in causing the death. This gave a proportion of one death due to alcohol in every 4.5 cases, a rise in percentage since 1888, when the proportion was one in 5.25 cases in the same district of the metropolis. Of these deaths due to alcohol, 38 were suicidal, 47 accidental, and 170 from natural (or unnatural) causes. Of this last class 73 died of syncope in consequence of fatty disease of the heart, leaving only 97 to the account of all other diseases. Again, of all the deaths due to syncope, there was proved alcoholic excess in more than one-third of the cases. He regarded alcoholic intemperance as the most

frequent and important of all the causes of fatty degeneration of the heart — a disease which was very difficult to diagnose and still more difficult to cure. Mr. F. A. A. Rowland, solicitor of the Supreme Court, followed with a paper on "The Principle of Compulsion as Relating to Inebriety," in which he held that legal restraint in the case of disease must depend upon its peculiar circumstances. On the whole, Mr. Rowland believed that there ought to be compulsory power, and that provision should be made for the poor.—*Times*.

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**INHERITED INEBRIETY.** — William Albert Heaslip, four years old, died suddenly under peculiar circumstances Sunday morning at his parents' home on the top floor of No. 398 Fifth avenue. He was the younger of two children of John and Alice Heaslip, who have the care of the apartments and offices at this number. The child when very young was subject to cramps and to relieve his pain the mother gave him small doses of whisky. A taste for alcohol was thus early planted in the infant, and when he learned to talk he would cry for whisky. Though the cramps were soon outgrown, the fondness for alcohol remained and was kept up by the parents every now and then yielding to the boy's abnormal and unnatural taste.

Some friends called upon the family Saturday night and whisky was opened. When they left, a bottle containing a heavy toper's "swig" was left uncorked on the table. While the parents were asleep Bertie arose early Sunday morning and, sighting the bottle with the familiar odor, drank the contents. When his parents awoke about 9 o'clock they found the child very sleepy and hardly able to stand. He was put to bed and quickly fell asleep. When he awoke a couple of hours later his appearance alarmed the father, who hurried for Dr. Charles H. Gulick, of No. 30 West Thirty-sixth street. The doctor saw at once that it was a hopeless case of alcoholism. The child died in an hour. Deputy-Coroner Jenkins will make an autopsy to-day.

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## Clinical Notes and Comments.

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### INEBRIETY AND JURISPRUDENCE.

A series of four lectures will be delivered in the Hall of the Medical Society of London, 11 Candos Street, Cavendish Square, W., on successive Tuesday afternoons in January, 1893, by Norman Kerr, M.D., F.L.S., President, Society for the Study of Inebriety; Consulting Physician, Dalrymple House; Chairman, British Medical Association Inebriates' Legislation Committee.

I.—INTRODUCTORY — "Inebriety and its Treatment," 10th January, 1893, 5.20 o'clock.

II.—"The Relations of Inebriety to Insurance," 17th January, 1893, 4 o'clock.

III.—"Inebriety as a Plea in Civil Cases," 24th January, 1893, 4 o'clock.

IV.—"Inebriety and Criminal Responsibility," 31st January, 1893, 4 o'clock.

E. J. AYDON SMITH, L.S.A., L.M.S.

(Hon. Sec. Society for the Study of Inebriety.)

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### COCILLANA — AN INTERESTING ADDITION TO THE MATERIA MEDICA.

Respiratory inflammations always form a large proportion of the physician's cases. A Bolivian remedy which gives promise of much therapeutic efficacy is cocillana, which was introduced a few years ago through the researches of Professor H. H. Rusby, the eminent botanist.

Experiments were made with it by many medical investigators, who found its action very satisfactory in catarrhal inflammations of the respiratory organs, in coryza, hay asthma, bronchitis, acute and chronic, influenza, and pneumonia.

It possesses also laxative and purgative qualities, and

has been employed successfully as a substitute for ipecac and abomorphia in catarrhal conditions.

Parke, Davis & Co., who introduced the remedy to physicians, will supply reprints of articles affording information concerning its therapeutic application, and invite the medical profession to test its virtues further by clinical experiment.

They have, after much difficulty, obtained an amply supply of it, and will be glad to afford any facts desired concerning this or any other of their new remedies for respiratory affections.

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### THERAPY OF PHENACETINE.

*John V. Shoemaker, A.M., M.D., Philadelphia, writes as follows :*

Phenacetine was originally introduced into medical practice as an antipyretic, and subsequently was found to possess analgesic powers. In diseases attended by hyperaxia, such as rheumatism, pneumonia, typhoid fever, and phthisis pulmonalis, phenacetine exerts a very happy effect in about half the dose of antipyrine, the ordinary dose being from 3 to 8 grains. The mortality of the typhoid fever of children has been very materially reduced by the employment of phenacetine. The fall of temperature does not occur until half an hour after the drug has been taken, and the effect continues from four to eight hours. As an antipyretic, phenacetine is considered by many good authorities as the safest and most efficient member of the aniline group. In epidemic influenza, phenacetine rapidly relieves the muscular pains and favors diaphoresis; the catarrhal symptoms subsequently require other remedies.

In ordinary colds, one or two five-grain pills of phenacetine remove all symptoms. The combination of solal [or salophen] with phenacetine is especially useful in influenza and rheumatism.

The analgesic effects of phenacetine are very marked in various forms of headache, including migrain and the headaches from eye-strain, having the advantage over antipyrine in not so frequently causing a rash.

In the neuralgic pains of tabes dorsalis, in herpes zoster, and intercostal neuralgia, five grain doses, given every hour for three or four hours, usually afford complete relief and cause sleep.

Phenacetine is extremely useful in chronic neuritis, and, according to Kater, is unsurpassed in the treatment of cerebral disorder due to excessive indulgence in alcoholic drinks.

In whooping-cough,  $\frac{1}{2}$ -grain doses dissolved in 10 drops of glycerine are readily taken by children, and afford prompt relief, permitting sleep and ameliorating the attacks.

In delirium, a dose of ten grains of phenacetine usually affords a quiet sleep.

Mahnert considers phenacetine a specific in acute articular rheumatism, as it reduces fever, relieves pain, and lessens the duration of the attacks. It has been found useful in some cases of gonorrhoeal rheumatism, and is worthy of more extended trial in this rebellious affection.

In insomnia from simple exhaustion phenacetine acts admirably.—[*Shoemaker, Materia Medica, Pharmacology and Therapeutics, Vol. II.*]

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The *Phrenological Journal* for January is a great advance in appearance and contents over the past. Evidently, it has caught the evolving spirit of the age and has pressed ahead, carrying phrenology to a much higher level. Under the charge of Dr. Drayton, this journal has taken high rank as a popular educational periodical almost indispensable in every family. Send to Fowler, Wells & Co., of New York city for a year's subscription at \$1.50 per year.

THE disinfecting fluid of the American Sanitus Co. of New York city, is one of the most practical disinfectants that can be placed on the market for all conditions and under all circumstances. Try it and its merits will be apparent.

F. Colet Larkin, M.B. & C.M., of Kingsbridge House, Avenue Road, East Cliff, Ramsgate, Eng., on Jan. 10, 1892, writes :

“ It may interest you to know that I have had a most satisfactory result from the administration of your bromidia in a case of sleeplessness, after a slight apoplexy, with partial paralysis of the right cheek and arm. The patient (male 63 years old) suffered from weak heart, and before coming under my care had been given sulphonal, paraldehyde, etc., without sleep being obtained. The first night here he received one

drachm of bromidia and got seven to eight hours' quiet sleep without any ill after-effect from the drug. The same dose continues to give the patient some hours' sleep every night.

*Dr. Abbotts'* granules give promise of becoming very popular, and should be tried by every physician.

A sharp quack has opened a shop on the Bowery in New York, for the cure of the drink craze. He uses *Warner's Bromo Potash* in connection with Syrup Ipecac, and claims marvelous results. The Bromo-Potash will always relieve the drink craze for a time, and is in common use at many institutions.

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THE SPECIAL INFLUENCES OF ALCOHOL—  
THE MORALS.

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BY T. L. WRIGHT, M. D.,

*Bellefontaine, Ohio.*

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In considering the influence of alcohol upon the human organism we approach that division of our subject which treats of the effects of alcohol upon the moral qualities.

(a) The nature of conduct depends, of course, very much upon the discriminating powers of the intellect; and if these powers are deteriorated by alcohol one avenue to inebriate vice and crime is made manifest. (b) But it is found that the inebriate nature is frequently an immoral one, even when there is no present drunkenness. In such an event it may be supposed that noxious principles other than those which produce intoxication are inherent in alcohol—or else are developed secondarily in the system by alcoholic influence—and these lead the moral nature astray. (c) Or, finally, it may be presumed that organic degenerations induced by some subtle and toxic impression of alcohol—such as degenerations of the brain, heart, and other bodily organs—do themselves tend to produce, through indirect channels, improper and immoral actions.

In truth, alcohol acts upon the moral nature in all these several ways; and they will receive attention, though without any further systematic classification.

The paralyzing impressions of alcohol are not of equal force in every part of the nervous organism. Sensibility is not reduced everywhere to a common level. There is disintegration or incoherence of powers and functions rather than simple depression — some attributes being disturbed and disabled more than others. The explanation seems to be this: The grosser faculties and propensities of the physical man are more fundamental and *established* than the refined sensibilities of his moral nature. Hence, while the inhibitory qualities of alcohol exert comparatively small power over the brutish instincts of the animal man, they may easily deaden the moral feelings. Criminal proclivities are relieved from the obstructions and protests of conscience. Alcoholic anæsthesia destroys the moral sense, while it has very little effect upon the more sturdy and deeply rooted instincts and appetites of the animal nature. Of course, this leaves the animal proclivities practically in control.

Upon this subject Dr. Clouston, of Edinburgh, remarks: “It is now generally recognized that, as the moral faculties were the last to be evolved, they are commonly the first in brain disease to disappear. It should not be forgotten that alcohol poisons as well as exhilarates, and affects more strongly the highest brain functions of emotion and control.” And again: “A long course of drinking will often destroy the power of inhibition in men of the strongest brains. Men of splendid self-control have lost their controlling powers so as to disregard the common decencies of life — and in this respect have sunk far below the level of a well-trained dog.” Dr. Norman Kerr says in his book on *Inebriety* (pages 228–231): “Alcohol is a mighty master of inhibitory force — the most effectual destroyer of the faculty of self-control. Serious as are the injuries inflicted by intoxicants on the intellectual faculties, the loss of the inhibitory capacity is a hundredfold more detrimental.”



The disorganizing nature of the alcoholic influence upon morals is displayed in the difficulties which beset every effort to describe it. Lawlessness cannot be illustrated by set rules, nor can disorder be arranged under established principles. In his work, *Alcoholic Inebriety*, Dr. Joseph Parrish declares: "Crimes are undoubtedly committed by persons who are under the influence of drink. One amongst such persons takes his draught of whisky in just such quantity as suffices to harden his conscience and nerve his arm for the intended deed. He may be the possessor of a criminal mind—a criminal first and a drinker afterward. On the court records he has no right to appear as a drunkard." The well-known jurist, Noah Davis, of New York, asserts: "There can be no doubt that the vast majority of crimes, especially those of personal violence, find their cause in drunkenness. In point of fact, many persons first subdue their conscience by preparing to commit crime through drink."

This is the testimony of a learned physician and a learned lawyer to the fact that, according to one, alcohol "hardens" conscience, and, according to the other, it "subdues" conscience. But, say they, it not only deadens the sensibility of conscience, but it does so to such a degree that it makes possible crimes darker than any born of a criminal mind unaided by the co-operation of alcohol. If the actually criminal mind, therefore, is incapable of fulfilling a criminal intent unless conscience is first smothered by drink, the power of alcohol in subjugating the moral feelings and impulses must indeed be great.

When the influence of strong drink is so decisive in strengthening the determination in the commission of great offenses, how effective it must be in fortifying the interest in the commission of small ones. It is not to be supposed that this process of subduing conscience is applicable to criminals only. Alcohol paralyzes the conscience of any one who partakes of it, let his motives in drinking be what they may. The occasional inebriate may drink alcoholic liquors without

any clearly-defined purpose ; certainly without the slightest intent to commit an unlawful act. Yet the poison affects him as it does others : it renders conscience torpid — insensible, and he is peculiarly liable to be led into irregular and disgraceful conduct. The criminal who drinks “just enough to nerve his arm for the deed” no doubt is of the opinion that alcohol *will* so nerve his arm, but he is probably in error with regard to the facts. Alcohol simply blunts the rising qualms and stills the feeble outcry of his conscience.

While pointing out some moral obliquities that often arise from the alcoholic habit, theft and lying may be noticed. Although there is much in common in the features of thieving and lying, there are, nevertheless, some differences to be observed in them, and especially when associated with the drinking habit. The lying of inebriety has its birth mainly in the dipsomaniacal diathesis, and it is very commonly resorted to under a neurotic stress, either with the object of obtaining the means of intoxication or of concealing the intent to become intoxicated. The dipsomaniac will not hesitate to lie in the interest of his driving neurotic propensity. He may be easily inveigled into other vices when drunk, but they are vices having some direct interest or collusion with his morbid constitution. He will not usually be apt to steal. Should he do so, it may be surmised that he is verging on *paresis*, or at least that his intoxication has temporarily assumed the features that properly belong to paralytic dementia. But these are exceptions. Thieving does appear to be a habit capable of being sometimes developed from the actual disabilities of the drunken state itself. It is, I think, upon the whole, more likely to characterize those who become inebriates from choice and lack of moral principle than the true dipsomaniac, upon whom a neurotic constitution has imposed a compulsory inebriety. When the craving for intoxication becomes so urgent as to materially absorb the mind and feelings the lying and deceit begin. “The craving must be gratified at any cost,” says Dr. Peddie. “The victim becomes regardless of honor and truth, unaffected by ap-

peals to reason or self-interest, by the tears of affection, or the suggestions of duty, either to God or man."

That theft is far from uncommon in drunkenness is well known. Inebriate stealing may often betray strange and peculiar incentives. The theft of drunkenness is sometimes explained by the hypothesis that alcohol simply exposes a man's real nature—*in vino veritas*; and, indeed, it is thought in some quarters that if a man is wicked enough to drink he is also bad enough to steal. It is not likely that a person who makes himself liable to the penalties of theft will, if in his right mind, steal such things as are of no value to him, or steal in such fashion as will necessarily result in exposure. For example, one man when drunk always stole Bibles; another stole spades; another was punished for stealing his seventh tub. There is something more here than the simple impulse to steal for gain. A distinction should be made between the criminal who, from force of habit and inclination, pursues his unlawful avocation impartially, drunk or sober, and the man who is never guilty of dishonest practices unless he is under the influence of liquor.

A young man took away a horse in the presence of its owner. He was drunk on alcohol. He told his name correctly as he met people on the road, and told also where he lived. He finally sold the horse. Upon trial he was acquitted on the ground that he was too much intoxicated to form a rational intent. Again, while drunk, he stole another horse and tied it in an unfrequented place, forgetting what he had done with it. Upon advice he plead guilty and served one year in prison. When liberated he again got drunk and stole a third horse. The court declined to punish in consequence of the peculiar mental traits exhibited in the transaction. Once more, while intoxicated, he stole a horse, and he is, at this writing, in prison for the offense. This man is a thief only when drunk. He steals horses—nothing else.

There is another point of view whence the characteristic injuries inflicted on morality by alcohol may be observed. It

is known that certain brain centers and brain fibres are the physical bases of the manifestations of the moral nature. When, therefore, alcohol disturbs and distracts the whole nervous system its evil influence is as certain to impress the moral as it is the intellectual or the motor capacities.

The nerve centers concerned in the moral exposition, when operating normally, associate the various nervous movements of the human mind and body with each other. They unify related particulars in nervous action, and also discriminate between and classify them. They determine the character and real worth of the mental movement as a whole, fixing its actual compatibility or incompatibility with the natural order of things.

The importance of the system of nerves known as nerves of association cannot be too highly estimated. Dr. Maudsley remarks: "The habitual co-ordination of thoughts and feelings is the basis of consciousness and personal identity." And again: "When co-ordination of function in the brain is overthrown, the consciousness of personal identity and responsibility is also destroyed." When even the casual drinker becomes fairly intoxicated the normal co-ordination of the several movements pertaining to the brain is disturbed, and it so remains until the drunkenness is removed. Unless there is a clear conception of individuality there is no practical idea of personal rights; while out of the notion of rights grow the feelings of responsibility and duty — in other words, the moral nature. It is evident that whatever tends to hinder the function of the nerve centers operative in displaying the properties of morality must impress injurious characteristics on these properties.

It appears, then, to be a potential quality of alcohol to repress the moral capacities, and thus foster the assaults of temptation. The crimes of drunkenness are not commonly the outcome of premeditation and malice. They are likely to be sudden and impulsive. The natural defense against the commission of such crimes — the nervous basis of the moral exhibitions — is disabled. While this nervous defect

present in drunkenness may be inconsistent with premeditation in the commission of crime, yet it is the more dangerous to society from the fact that it is withdrawn from the supervision of the rational mind, that being also disabled. There is, therefore, no limit to alcoholic crime. It may raven in the regions of frenzy, knowing no law, and being totally insensible to restraining influences of any kind.

These considerations show the importance of morality both in the causation and repression of drunkenness. They also show the difficulty of applying the powers of the moral nature fairly to a solution of the problems of inebriety. Indeed, they teach the indispensable lesson that, in dealing with inebriety, the moral powers must be aided by proper conceptions of the varied and even diverse elements that enter into the nature of the inebriate diathesis. This is the more important, as there is much confusion of mind with respect to the moral powers as agents in establishing the alcoholic habit, and the same powers as agents in overcoming that habit after it has been established. Alcohol seems to increase the susceptibility to criminal influences in a mind naturally inclined to wrong doing. It likewise implants a susceptibility to criminal influences in a nature constitutionally honest and sympathetic; for the state of drunkenness has for one of its invariable attendants an obtuse and lethargic moral sense.

There are certain conditions of depraved morality wherein alcohol, although a prominent factor in producing a mischief, does not occupy the position of an absolute and independent cause. It has associates that are invested with contributory powers, and they do their part in disabling the moral nature. Some reference to these will be proper in order to reach enlightened convictions respecting the moral relationships of inebriety.

It is a property of alcohol to *slow* the physiological process of waste and decay in the bodily organism. Alcohol has therefore been called a food, "a waste-restraining food." In other words, the several emunctories of the body are so occu-

plied in eliminating the poison of alcohol from the system that they are incapable of thoroughly performing their legitimate duties. Effete material accumulates in the blood and in the tissues. This may be perceived in the retention of the poisonous substances — urea, carbonic acid, and other waste. After from twenty-four to thirty-six hours of hard drinking the head aches and the brain becomes greatly disordered, and, in fact, the whole body is saturated with a number of deleterious substances. If liquor is now abandoned, as from an unwilling stomach, these secondary poisons irritate the nervous sensibilities to a degree beyond description. There is the utmost distress of body, combined with impatience and bitterness of mind and disposition. The moral tendency is strongly toward violence and hatredness. The inebriate again, perhaps, resorts to alcohol, hoping to realize the pleasing effects of recent and uncomplicated intoxication. This renews to some extent the prostrated energies of the drinker, and, through anæsthesia, mitigates the pains of mind and body. But we now have not only the poison of alcohol to deal with, but we have alcohol *plus* carbonic acid and urea, as well as other subsidiary and violent passions. In a situation like this the secondary poisons may possibly overwhelm the native cautionary instincts of an individual, and crimes of violence may ensue.

This is the state of mind, in truth (wrongly attributed to the *intoxicating* properties of alcohol), out of which are evolved quite frequently that class of atrocities regarded as peculiarly alcoholic. Actual intoxication, indeed, may not be present. Steady drinking of small quantities of liquor will gradually bloat the body, besot the mind, blunt the morals, and, through the (so-called) *waste-restraining power* of the poison, fill the blood with a pernicious *débris*, while it brutalizes and infuriates the disposition.

This line of thought might be greatly extended, but I will refer at present only to one other illustration. In *chronic inebriety* there are, as a rule, degenerations in the substance of important organs. These change in various ways the com-

mon action of alcohol upon the system. Degenerations of the brain, or kidneys, or heart, or liver impress and modify the current influences of alcohol. It follows that alcohol, with these degenerations added, will affect human nature differently from its manner before the physical degenerations were established. This means that the effects of alcohol, pathological and psychological, are not the same in the chronic inebriate that they were in the same individual earlier in his drinking career.

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### THE INEXORABLE FACTS OF HEREDITY.

“I have drank whisky every day for thirty-five years,” remarked a gentleman of sixty, rather proudly, “and I don’t see but I have as good a constitution as the average man of my age; I never was drunk in my life.” He was telling the truth, but to learn the whole truth you would have to study his children. The oldest, a young lady, had perfect health; the second, a young man, was of a remarkably nervous and excitable temperament, as different from his phlegmatic father as possible; the third, a young lady of seventeen, was epileptic and always had very poor health. Did the father’s whisky-drinking have anything to do with these facts? The instance may be duplicated in almost every community. Think over the families of your acquaintance in which the father has long been a moderate drinker, and observe the facts as to the health of the children. The superintendent of a hospital for children at Berne, Switzerland, has found by careful observation, that only forty-five per cent. of those whose parents used intoxicating liquors habitually had good constitutions, while eighty-two per cent. of the children of temperate parents had sound bodies. Of the children of inebriates, only six per cent. were healthy. Can any man “drink and take the consequences,” or must his children take the consequences?

THE RATIONAL BASIS OF THE TREATMENT  
OF ALCOHOLIC INEBRIETY.

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By LEWIS D. MASON, M.D.

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A large majority of inebriates, fully two-thirds of those who have applied to our asylum for treatment, have had some complicating disease or injury, in addition to their inebriety. Oftentimes such disease or injury was the exciting cause of the inebriety, in all instances acting as a complication, retarding, if not preventing, the cure of the inebriety. In some cases, the disease or injury preceded the inebriety, and, as we have stated, was apparently the exciting cause; in other cases it still existed as a complication, an obstacle that must be removed if we would cure the inebriety; and again in some instances there existed diseased conditions directly traceable to the alcohol itself, that, in addition to the withdrawal of the principal cause, the alcohol, we must also directly treat as the special indications pointed out. Among these diseased conditions directly due to the habitual use of alcohol we may enumerate alcoholic gastritis, acute or chronic hepatic disturbance to which the gastric derangement is often a secondary condition, a foul breath, coated tongue, and a urine loaded with uric acid, the nervous system showing a marked reflex disturbance. We need scarcely refer to the vast number of neurotic conditions, vaso-motor, central, or reflex. The whole catalogue of nervous and mental diseases would have to be recited to cover the neurotic conditions to which alcohol may give rise, constituting true alcoholic neuroses: epilepsy, neuritis local or general, various forms of degenerations of the spinal cord, of the cerebrum, of motor or sensory nerves, or of nerves of special sense. Suffice it to say, that there is not any organ, gland, nerve, or tissue of the body that is exempt from the degenerating effects of



alcohol; even the bony skeleton in dogs made chronic alcoholics has undergone special structural changes.

Sometimes we find not only one, but several, organs diseased in the inebriate, all directly traceable to alcohol. The majority of inebriates coming under our observation have been inebriates for ten years, on the average, and in many instances for longer periods.

So, then, as far as alcohol is concerned, we must expect that the average inebriate is more or less diseased from alcohol when he applies to us for relief, for he is not only physically disabled by alcohol, but mentally weakened, indeed on the border line between sanity and insanity, and sometimes well over this line.

The mental balance oscillates between these two conditions. A careful study of the Report of the New York State and County Insane asylums for 1888 and 1890, inclusive, developed this fact, that alcoholism as the primary or primary associate cause stands first among the ascertainable causes of insanity. It heads the list. One-fourth of the cases of insanity recorded in the above report are directly traceable to alcohol. In this connection we must not forget that drunkenness and other forms of dissipation oftentimes precede an attack of insanity in an individual hitherto, it may be, perfectly sober and correct in his habits. Such an outburst of drunkenness is the advance guard that precedes the insane crises, that will be soon markedly developed. We must, therefore, discriminate between the *insane* drinker, with whose insanity the alcohol had not anything to do as a cause, and the insane inebriate, or the one bordering on insanity, with whose condition alcohol had everything to do.

Of 600 cases tabulated by me I found :

persons	had	1	attack	alcoholic	mania
22	"	"	2	attacks	" "
9	"	"	3	"	" "
7	"	"	4	"	" "
1	"	"	5	"	" "
10	"	"	6	"	" "
2	"	"	7	"	" "
1	"	"	8	"	" "
1	"	"	10	"	" "
<hr/>			<hr/>		
166	"	"	46	"	" "

So that every fourth or fifth inebriate that comes before us will have passed through an attack of some form of alcoholic mania, in some instances several attacks.

The proper inference to draw from these facts is that we are dealing with persons not only physically but also mentally enfeebled.

Having thus determined the physical and mental condition of our patient as far as alcohol is concerned, what next? Are there any other disabilities that may still further handicap him, or retard or even prevent the cure of his inebriety? A careful study of several hundred cases of inebriety has enabled me to answer this question, and the conclusions that I have drawn have been further confirmed by other observers in a similar field of research. While alcohol is largely responsible for the various neurotic conditions that affect the inebriate, it is also true that antecedent to the alcohol habit conditions have prevailed that may have been the exciting cause of the inebriety, antedating it by many months, if not years.

We recognize heredity as a grand predisposing cause of inebriety, but as we have to deal more especially with the *direct causes* of inebriety, we shall simply refer to it.

Among the direct causes of *inebriety* we enumerate *blows on the head*, resulting in concussion, in some instances in fracture of the skull, with or without depression. While these injuries may not be serious enough to permanently incapacitate the person from the activities of life, they nevertheless have engendered some sub-acute chronic cerebral disturbance that has eventually proved the exciting cause of the inebriety.

*Epilepsy*, while often of alcoholic origin, sometimes antedates the alcohol habit. About one in fourteen of the inebriates in our records are epileptics. With regard to neurotic affections in general, we may state, that while alcohol is largely responsible for this, in many cases a history of painful neuralgias, or other forms of neuroses, precedes the history of inebriety and accompanies it.

Among the complicating diseases which are also frequently the exciting causes of inebriety we find :

*Syphilis*, which exists in a very large proportion of inebriates. About one in four admitted into our institution suffer from syphilis in some form, either in its secondary or tertiary manifestations. When we understand what an important part syphilis occupies in the etiology of the various neuroses, to ignore or fail to recognize its relation to the inebriate would be to fail to appreciate his true condition.

*Stricture of Urethra* and venereal disease are also common among inebriates.

*Phthisis*, more especially that form known as fibroid phthisis. According to the records of our asylum five or six per cent. of the inebriates that passed under our care had phthisis ; but as we do not admit cases of marked phthisis and reject those that apply for admission, the above must not be taken as a fair average of the prevalence of phthisis among inebriates. I am convinced it is much greater.

Dr. Reynolds, one of the attending physicians of the Brooklyn Home for Consumptives, reports that of 166 patients treated during the year ending September, 1892, " fifty of these (forty-five males and five females) were habitual users of intoxicating liquors. Facts of this nature are ascertained with difficulty, but it is reasonable to suppose that the personal or parental use of intoxicants is, in the majority of these cases, responsible for the disease."

To say that the inebriate is liable to and experiences many of the ills that flesh is heir to, but faintly expresses his condition. Suffice it to say that the average inebriate, in addition to the burden that alcohol imposes on him, represents in his person also, conditions that belong to the province of the physician or surgeon. Fully two-thirds of the inebriates that have passed under my notice have been so handicapped by disease or injury ; *two, then, out of every three inebriates that come to you for the treatment of their inebriety will be found suffering from an associated or complicating disease or injury.*

Can the conscientious and intelligent practitioner ignore this fact? In view of all these facts, what we ask is, the rational basis for the treatment of alcoholic inebriety.

No physician in his sound mind will recognize a symptom or a series of symptoms as the disease proper, but merely as the signals of distress hung out by a diseased system. As some one has very aptly said, "neuralgia is the cry of a diseased nerve." The thirst of diabetes, the excessive diuresis, parched mouth, progressive emaciation and weakness are the symptoms resulting from an excess of saccharine matter in the blood and urine, the result of a disturbance of the glycogenic function of the liver, neurotic in its origin and probably due to some irritation in the neighborhood of the fourth ventricle.

Now we believe that true dipsomania, or "involuntary drunkenness," "inebriety from necessity, not from choice," has its origin in the nervous system and is called out either by central or reflex disturbance. It may be some day the pathologist will unveil the secret cause of dipsomania, and put his finger or turn the lens of his microscope on the special nervous lesion, or it may be that the experimental physiologist will give us a more definite solution of the problem. But we know this, that although we cannot trace a purely idiopathic origin for dipsomania, it has repeatedly been proven that injuries or diseases that produce disturbance of any portion of the cerebro-spinal axis, whether this disturbance or irritation be central and so direct in its effect, or peripheral and by reflex action, may be the exciting cause of dipsomania. We know also from direct experiment on the normal constitution and from the condition of the sensory nerves of the average habitual inebriate, that alcohol has marked anæsthetic properties in the various painful neuroses, and that in pain from any cause alcohol is frequently used as an anæsthetic. As a common instance, and one of every day occurrence, we may allude to the use of alcohol in painful menstruation, from any cause.

Many persons afflicted with chronic painful disorders resort to alcohol for relief, and so in time acquire the habit of its use and suffer from its deleterious effects. Indeed, alcohol in the older days of surgery, before the discovery of anæsthetics, and in modern times when ether and chloroform could not be had, has been resorted to for its anæsthetic properties. But outside of the range of painful diseases we come to the wider range covered by the term neurasthenia or nerve exhaustion, and here the great army of the overworked, underfed, ill-nourished, mentally-worried neurasthenics crave alcohol as a *stimulant*, a spur, which, for the time being, will serve its purpose, until the spur becomes a scourge of serpents that drives the miserable victim to despair, ruin, and death.

The dyspeptic, who uses at first the milder form of wines to stimulate a weak digestion and so provoke a fictitious appetite, by degrees accustoms himself to the stronger alcoholic liquors. Gastralgia, and even the earlier forms of stomach lesions or intestinal trouble, may find a temporary panacea in the use of alcohol in some form. And so we might go on and enumerate the long list of diseases for which the laity use, and, we regret to write, the medical profession prescribe, alcohol. If we did we should almost exhaust the nosological list.

We have thus considered extensively the fact that the average inebriate suffers from diseases or injuries independent of his inebriety, antedating it and oftentimes being its exciting cause, in order that this fact should enter largely into the basis of the rational treatment of the inebriate, as well as the diseased condition that results directly from the habitual use of alcohol.

To simply deprive the inebriate of his alcoholic draught, to simply withdraw the alcohol, and to leave him burdened with his manifold diseases, alcoholic or non-alcoholic, would not only be unprofessional, but inhuman. We must, there-

fore, for the time being, ignore the alcoholic craving, or regard it simply as a symptom of an underlying condition, which provokes it. Then carefully search for this condition, and examine the person before you. Inquire into his heredity, his antecedents, his personal physical and mental condition. Having made your diagnosis, establish the treatment, and direct it principally to the diseased conditions that underlie the inebriety. In other words, you simply treat the inebriate as you would any other patient. I am convinced that if the inebriate had been handled this way during the past, in the same way every intelligent physician deals with any other disease the inebriate would have long ago been pronounced curable, and inebriety would have been cured, in the same sense that other diseases are cured. Such, I believe is the only rational basis for the treatment of inebriety. We have no general specific to offer, no "universal remedy" that cures all inebriates in the same way, in the same dose, and in the same period of time, of whatever race or color they may be, or whatever physical or mental condition they may be in. Take, for example, one hundred inebriates presented before us, without special selection, one hundred average inebriates, 25 will be syphilitic, 5 or 6 or more will have fibroid phthisis, 14 will be epileptic, a certain proportion will be the subjects of cystitis, stricture urethra, chronic malarial poisoning, neuritis, general or local, incipient general paralysis, or one of the many conditions that affect the cerebro-spinal axis, or the general nervous system. It is safe to say that fully two-thirds of these 100 inebriates will be suffering from diseases other than those directly due to alcohol, and, as regards alcohol, all will be affected in a greater or less degree by alcoholic degeneration of lungs, heart, stomach, liver, kidney, or of the nervous system, in proportion to the length of the period in which alcohol has been used, and the quantity and character of the liquor consumed.

Not only must we consider the presence of special disease, and the presence of alcoholic degeneration, but also

other complicating or associated habits, the use of opium, chloral, cocaine, etc., or other drugs. Sometimes an inebriate will be the subject of several diseased conditions, medical or surgical, and also one or more associate habits.

Let me cite two cases in point now in my private practice.

*Case A.* Direct inguinal hernia; strictured urethra; he is impotent; attributes this to his rupture; has dragging pains about the loins, has mal-assimilation, attacks of acute dyspepsia, with vomiting; although only fifty years of age, has lost all his teeth except three. This condition, in addition to his habit, the free use of whisky, about a pint daily, explains easily his gastric and liver complication. He has drunk more or less all his life, last few years to excess.

*Case B* has double inguinal hernia, habitual constipation; had hemorrhoids and fissure about five years since; was relieved by an operation; from his youth had repeated attacks of hystero-epilepsy, has had repeated attacks since whenever he drinks to excess; has had acute alcoholic delirium twice. A year ago fell while intoxicated, fractured shaft of left femur, splitting off internal condyle, resulting in partial ankylosis and moderate shortening of limb. I have my suspicions that B uses chloral, opium, or some other drug, in addition to alcohol; in other words, he has an "associated habit."

So we will see that each inebriate must be dealt with as an individual case, having its own special needs, and, therefore its own special treatment.

What, then, does the rational treatment of inebriety include?

*First*, entire control of the patient. This is essential, indeed a *sine qua non*. In some instances, in fact in a larger number of cases than one would suppose, the inebriate will "commit" himself voluntarily to the authorities of the asylum for a definite period. Only about 187, at Fort Hamilton, out of 600 cases, were involuntary commitments, the

balance voluntary. This may possibly be explained on the ground that the inebriate and his friends desire to avoid the involuntary form of commitment, which is attended with more or less publicity, and the usual period of which is six months, whereas the voluntary applicant is received for three months. The laws of the various States concerning the control of the inebriate are sufficiently full and explicit to meet his case.

*Second*, not only should control of the person of the inebriate be secured, but the privilege to exercise that control for a definite period. As has been said, this varies from *three months*, the voluntary period, to *six months*, the period of involuntary commitment. But experience has shown that even the latter period is too short to secure the best results and the full benefit of treatment, so that in many instances the patient is recommitted, when his term of commitment has expired. In such case the proper legal form is gone over again. It may be affirmed that, other things being equal, the degree of benefit the inebriate will receive, and the possibility of a permanent cure, will depend largely on the period of the duration of the treatment, and *the ratio of success will be in proportion to the length of the period of treatment*. In the majority of cases one year should be spent under asylum medical care or espionage. Erratic, spasmodic, or interrupted treatment is irrational, useless, and harmful. Moving from one asylum or sanitarium to another, spending a short period at each, and without benefit in any, is extremely detrimental and demoralizing to the patient, as well as to his friends, and brings on "asylum treatment" an undeserved opprobrium. This unfortunate condition of affairs will be apt to increase as asylums increase, and would be best avoided by all asylum medical superintendents insisting upon a full term of commitment, and then using all their influence to carry out this end. Some understanding or rule might exist among inebriate asylums so that they could co-operate in this matter to the mutual advantage of each other.



It will thus be seen we advocate not only an entire control of the patient, but also that control for a definite time. It is irrational to suppose that the inebriate of many years' standing, sometimes a lifetime, can be suddenly and in a few weeks thoroughly reformed, his system thoroughly restored, his defective nervous organization renovated, the evils of a defective heredity, personal defects, and individual idiosyncracies overcome, and the individual completely restored to health, his personal liberty, and his social status. To assert this would be to assume the pretensions of quackery, and to foist upon the credulous public a most consummate fraud. This is not the age of miracles, and broken down constitutions, defective nerve force, mental and physical degeneracy, the *product* of years of irregularity, dissipation, and disease are not recovered from in a few weeks. The process of *degeneration* has been slowly at work, steadily producing defects in nerve cell, muscle cell, and organs of special sense, and impairing the mental powers. The process of *recuperation* or building up must necessarily take time to be thorough, effectual, and in any sense permanent. And finally, control and a proper period for treatment provided, we shall need a *place* in which to exercise both to the best advantage. This is all important.

*Home treatment* is out of the question. We will dismiss this suggestion with a single word: it is neither the proper place, nor could we exercise the necessary control. An asylum or sanitarium is an absolute necessity in the treatment of the inebriate. It may be of a public or private character; it may be located in a village, town, or city, or be strictly suburban; in either case it should have ample grounds; hence, a suburban or out of town location is preferable, on the consideration of space and economy. Especially is such a location a necessity for all pauper inebriate asylums, for in this case agriculture will form a large part of the occupation of the inmates, and land suitable for farming purposes will be necessary. This plan is similar to the treatment of the

chronic insane adopted for several years past, and now being carried out in several of the States with regard to the pauper inebriate. The plan will be observed with extreme interest by those engaged in the care and control of the "pauper inebriate."

Upon the whole, a suburban asylum, with ample grounds for the exercise and occupation of the inebriates, is preferable to an institution in a town, city, or village, with limited space about it. Such grounds can usually be secured in the neighborhood of towns or cities, and readily accessible to the center of population of any given place. Admitted to such an institution, the authorities of which have full control of the person of the inebriate for a definite period, before instituting any form of treatment, or even assigning the patient to a common ward, he should be kept under observation until his case is somewhat understood. He may be on the verge of an attack of delirium; he may be mentally unsound, and, his case being masked by alcohol, this true condition may not have been understood. He may have some contagious disorder that would unfit him for the general ward. It may be well to assign him to a receiving ward for a few days.

His history, heredity, antecedent personal history, and his present physical and mental condition noted, all complicating diseases, all injuries, should be carefully recorded. The record blank which has been in use at the Fort Hamilton asylum for many years is a very complete one, and we presume that when all the questions indicated on the blank are answered, we shall have obtained a reasonable insight into the physical and mental condition of the patient. We make, of course, a thorough physical examination of his case, and let me suggest the propriety of a urinary examination in every case admitted. Complications some times set in shortly after the patient is received, in which stupor or coma, more or less profound, is a prominent feature. A careful urinary record at such a time would be valuable in making a proper diagnosis. But the question

naturally arises, what dependence can be placed on the testimony of the inebriate as to his heredity, antecedents, etc., that is the subjective history of his case. The family physician and the immediate family of the inebriate must be relied upon. If their testimony tallies with the patient's statements we shall have two or three witnesses to the fact recorded. In other words, we have the same sources of information that the authorities of an insane asylum have, in addition to whatever may be of value in the testimony of the patient, which we can exclude or accept as circumstances may determine. The family physician or the physician last in attendance, or the physician in charge of some hospital, either general or special, may be able to give us some important data about the case, a history of previous attacks of alcoholic delirium, head injury, or other complicating disease or injury.

We must note any *associate habit*, especially that of opium or morphine. Not unfrequently the alcohol and opium habits are associated. In such a case the opium habit would take precedence in point of importance, and the treatment would have to be directed especially to it. In such a case usually the alcohol could very soon be withdrawn, and the treatment for the opium habit at once instituted.

*Remedial Measures.* As has been said, we have no general specific remedy for the treatment of inebriety. The duty of the medical attendant will be to treat all complicating diseases, whether their origin be alcoholic or non-alcoholic, all injuries or complications of a medical or surgical nature, all phases of mental and nervous diseases, and to put into operation, in addition to the usual treatment, all measures which oppose disease by psychical means, as advocated and practised by leading specialists, such as are included in the special and latest branch of therapeutics, namely, psycho-therapeutics. In brief, the therapeutical indications of each case will be determined by the special wants of each case.

*Diet and Hygiene.* The diet should be plain, nutritious, and sufficient, and of good quality. It may be possible to conduct some pauper institutions on thin soup and water gruel and bad bread, but an inebriate asylum cannot be conducted successfully on this plan. Meat, milk, eggs, strong broths, a concentrated and highly nutritious diet is necessary for the inebriate, at least in the early stages of his treatment. He is dyspeptic oftentimes, and has intestinal derangement as well. Pepper and highly spiced foods are naturally craved by the inebriate, and he ought to be allowed these in moderation. Onions might form an inexpensive addition to the food of the inebriate in public institutions. As to whether a purely vegetable diet and the exclusion of a meat diet, as has been advocated by some, is of any special curative virtue, we are not prepared to state; but the principle holds good. The inebriate, having oftentimes a weakening digestion, both gastric and intestinal, requires food that is easily digested and assimilated. Hygienic measures, we may say here, as elsewhere, are embodied in those rules of health that pertain to the care of the person, bathing, massage, regular exercise, etc., regular meals, regular hours of sleep. It has been stated that inebriate criminals incarcerated as a penalty for their crimes in some penal institutions have at the end of their term of imprisonment been discharged as thoroughly cured and sober men, such a result being attributed to the regular hours, regular meals, steady employment, the outcome of the prison rules and discipline. In private institutions for the wealthier class of inebriates all these details as to diet and hygiene should be carried out.

*Employment.* In an institution of a public character, the pauper inebriate must be employed. In the average poorhouse or almshouse the occupants are old and decrepit or inefficient. Of course, in an insane asylum few if any of the inmates can do efficient work; but this condition of affairs does not exist in the inebriate asylum. With an occasional exception the average inebriate is oftentimes a good workman, capable of doing good work when sober;

and we will find that most of the trades and various occupations in which handicraft is a feature have their able representatives among the inmates of the inebriate asylum. Sociability on the part of the inmates should be properly encouraged, and a common room established where games, reading, and any form of innocent amusement allowed. Occasionally concerts, lectures, or other entertainments may be given, and if possible the inmates allowed to prepare such entertainments for themselves and their friends. Much amateur talent of a very respectable character can be secured, and now and then a "professional" inmate will add his services to the common cause.

The religious desires of the patient are important, while not necessarily compulsory. Chapel exercises should be held at regular stated intervals, and the officers of the institution attend with regularity, and so influence the inmates to attend also by force of example. We must not forget there is a psychical side to inebriety, and we must use every effort that appeals to the moral and intellectual nature of the inebriate, as well as to his physical wants, and the special treatment which his diseased condition calls for.

Having passed through the routine treatment, and his period of voluntary or involuntary commitment drawing to a close, what shall we do with reference to the future of the inebriate who is soon to leave our care? We may here state that it might be well, prior to the final dismissal of the inebriate, to test him awhile by giving him his liberty occasionally, thus putting him upon his "parole." In some instances patients have by their own request and desire remained at the Fort Hamilton asylum as boarders, going to their business every day, returning at night, until they felt strong enough, morally and physically, to sever their connection with the institution. When a patient leaves the institution he is warned of the possibility of a relapse, and advised as soon as he feels a tendency to resort to stimulants to at once return to our care, or should he relapse not to prolong his debauch, but at once return to the institution. We

deprecate most decidedly the action of any superintendent of any asylum who would refuse to receive a former inmate because he had relapsed. Some cases with which I am now familiar are doing well who relapsed several times, and whose treatment extended over several years, at various periods.

*Change of Climate.* There are diseases that are notably benefited, if not cured, by change of climate. This is particularly so with reference to certain forms of pulmonary diseases and diseases of malarial origin. So it is with regard to inebriety. A change from an enervating climate to a healthful, bracing, tonic atmosphere cannot fail to be of benefit. This factor should always come up in the consideration of the treatment of the inebriate. Other things being equal it would be well for an inebriate living on the seaboard to seek his treatment and relief for his inebriety at some institution located inland; the reverse also is true. Climatology with reference to the inebriate would prove an interesting study, and would result in facts of practical importance.

*Change of Employment.* Of all indoor employment, painters are peculiarly susceptible to inebriety. Of all outdoor employments, coachmen, car drivers, and truck drivers are especially liable to become inebriates. *Special employments bear a certain causative relation to inebriety.* The question might naturally arise whether or not the inebriate had better, on leaving the asylum, go back to his old employment, especially if the tendency of that employment would be to expose him to those causes that would again precipitate him into inebriety, or whether it would not be well to select some employment that would be attended with the least percentage of risk. In all cases of asylum treatment it would be well to follow as closely as possible the future history of our patients, and if possible protect them against all causes that might produce a relapse.

In brief, then, we believe that the rational basis for the treatment of inebriety includes :

*First.* Proper legal restraint and control of the person of the inebriate.

*Second.* The ability to exercise this control for such a length of time as experience shall decide necessary.

*Third.* A building and grounds properly located as to healthfulness, space, and accessibility.

*Fourth.* A nutritious and abundant dietary.

*Fifth.* All sanitary measures and surroundings conducive to the restoration of the patient to health, and his maintenance in a state of health.

*Sixth.* Such therapeutic measures as each case may determine.

*Seventh.* Proper employment and all means and appliances that may administer to the physical, mental, and moral wants of the patient.

*Finally.* Change of climate, change of occupation, and such other conditions in the environments of the patient as may best prevent the possibility of a relapse.

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IN the Academy of Medicine in Paris, a very valuable paper was read by Dr. Lardier on "Alcoholic Intoxication and its Prophylaxis." The author furnished a large number of statistics in support of his thesis, supported by observations which he had collected in all countries. After stating that in twenty years, from 1870 to 1890, the consumption of alcohol had quadrupled in France and from 1 litre 46 centilitres per head had risen to 4 litres 40 centilitres, Dr. Lardier insisted on every possible force being put into operation to fight against this intoxication. He concluded by stating that the Jewish race was that in which alcoholism had made the least ravages. In America the law permits of drunkards being incarcerated, and out of 18,000 alcoholics locked up at New York, the number of Semites was almost insignificant. Dr. Lardier attributed this fact to ancestral influence, the love of work, and also the characteristic sobriety of the race.

SPECIAL MEETING OF THE ASSOCIATION FOR  
THE STUDY AND CURE OF INEBRIETY.

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This meeting was held at the hall of the New York Academy of Medicine, New York city, March 23, 1893. The topic for discussion was the "Secret and Specific Cures for Alcohol and Opium Inebriety." Dr. Day presided and made the opening address, of which the following is an extract:

*Gentlemen of the American Association for the Cure of Inebriates:*

We meet once more as an association, organized on November 29, 1870, for the purpose of inaugurating a movement for the amelioration of the most unfortunate of our race. Our organization has set in motion active thought, which has already resulted in much good, not only in our own country, but in Europe and among all English-speaking people of the world. At that time the foundation-stone of our principles was laid and it comprised but few words,—that "inebriety is a disease" and should be treated as such.

Several institutions had been before that time established, and now the sun does not set without casting its shadow on an institution for the care and treatment of the inebriate.

These institutions have been established in the full faith that many of the evils of inebriety are susceptible to successful treatment, and that in a large number of cases inebriety might be eradicated and cured by strict *régime*, appropriate therapeutic measures, and by proper restraint in an institution designed and conducted for such purposes.

This belief has been confirmed by the experience of many years, and from certain data in our possession we have reason to believe (and in fact we know) the number of patients successfully treated and restored to lives of sobriety and use-



fulness will fully equal the ratio of cures in any of our insane asylums, or recoveries in our hospitals for the treatment of other diseases.

During the last generation much diligent inquiry has been made by medical men and also by philanthropic laymen into the nature of alcohol and its action on the human system and its mental development.

As the first result of this inquiry much scientific knowledge has been gained and published to the world. This has brought out the empiric (as has always been the case especially on the lines of medical inquiry), who comes mounted on a high horse splendidly regaled with golden trappings to allure and decoy the gullible public. The press and pulpit have been called into requisition to deceive the already broken-hearted, with promises of certain relief. No class of men have more minutely studied the weakness of human nature than these charlatans. They know the effect of well embellished advertisements, and they know that certain persons will claim to be cured through the psychological influence of the golden glitter therefor; hence bread pills are no myth.

The central object of this society is to ascertain a knowledge of the causes and remedies which can be applied to the prevention and cure of inebriety. Our united experience contradicts all possibility of finding any specific remedy or any mysterious means that will check or restore any victim of this drink disease.

The problem of the reclamation of the inebriate is the one about whose solution this society is particularly concerned. Hence we insist on the use of every remedy of value, but at the same time gives special emphasis to rational scientific means.

In order to furnish a solution of any problem an hypothesis in which to proceed is necessary, and it is well understood that a true hypothesis will enhance all the conditions of the problem. A theory in any given case must account for all the phenomena of inebriety. The question then arises,

what theory will account for all the varied conditions of inebriety? It is very clear to an ordinary mind even that the excessive use of intoxicants affects the whole being, both moral and physical nature.

A disease is a derangement of any of the vital functions, or departure from, in any degree, from any cause, the condition of normal health, and this applies literally to the condition of one who has for any length of time imbibed quantities of alcoholic drink.

We hear much about removing the appetite for alcohol. Quacks play upon that string. They claim to have some mysterious drug which removes the appetite. This is all a myth. When such cases are under proper treatment and the system toned down to a normal condition, his nerves quieted so that he can obtain sleep and rest, a healthy appetite for food restored, a new hope is awakened and he is placed on the high road to a reformed life; then the appetite for alcohol is laid at rest and never will be awakened unless he returns to intoxicants again; then he will find the old slumbering monster will arise with all its accustomed power and vigor.

It must be remembered that we are dealing with one of the most subtle diseases, the nature and pathology of which is now receiving the attention of the best minds, and the closest investigation of any subject connected with mental diseases. These investigations will open a wide field for thought, and much good to mankind will be the result, light will shine into dark places, and present mysteries will vanish before the light of scientific investigations.

However commendable the motives and purposes of the many busy workers in the temperance field at the present time, there seems to be a great expenditure of force and but little compensatory result. Feeling and enthusiasm are admirable qualities characteristic of all great reformers, but success cannot always be achieved by feeling and enthusiasm alone.

In all matters pertaining to the more important interests

of society, or comprehensive knowledge and consideration of correlatable facts, and an adjustment of activities and recognized principles, generalized from such facts, are indispensable to any success.

The applicability of one well ascertained law or uniform result of natural activities — for example, the law of gravitation as affecting motion, or the law of evolution as affecting organization — is almost unlimited; and he only should be called a philosopher, or regarded as a statesman, whose thoughts and actions are directed by a knowledge of such principles as must necessarily determine results.

I believe to be significant of underlying principles too important to be overlooked by workers who are worthy of success, but fail for reasons not difficult to comprehend, that our work is for the centuries and not for the months and years.

I observe a common error in those who labor in this cause. They expect immediate results, which in a general review we do not observe. Temperance is having a steady growth. As I observe it, the only agency which has been the real factor in its advancement during the last fifty years has been scientific and educational, and so must it be in the future. Our association is doing much on this line of activity. It is slow, but its fruitage is certain. False teaching is always active. A lie will outrun the truth fifty to one. Falsehood sows tares, while truth comes slowly along, and error is uprooted, and truth has an eternal abode on earth.

The experience of the past encourages activity in all movements for the extirpation of this evil. Not indeed in our day, if ever on earth, will it disappear. But the vision which comprehends history sees it yielding day by day to human effort, blessed of heaven.

Dr. Day spoke of the many great delusions which had been prominent in the past. A century ago *Perkinism* was prominent. Thousands of clergymen, physicians, and others believed in the virtue of two small rods called tractors of steel and brass, which were used by passing them over the diseased parts.

A pair of these tractors were exhibited, and the evidence of enthusiastic men who believed in some secret virtue imparted from them was described at length. Later it was found to be a rank imposition and humbug; from it the author grew very wealthy. The doctor described the present "gold cure craze" as a similar delusion, only using coarser methods and attempting the impossible by means and methods concealed from others, appealing entirely to the faith and credulity of the victim. This craze is building up an army of incurables that will be recognized soon. He closed, saying that this meeting was simply to show the medical world our full recognition of this modern delusion, with all its tempest and roar, and our protest against the mysterious credulity and empiricism that would place us on a level with these experts, simply because of our silence.

Dr. Norman Kerr, the president of the English Society for the Study and Cure of Inebriety, sent the following paper, which was read by Dr. Holbrook :

#### SPECIFICS FOR INEBRIETY.

A hankering after "quick returns" is not confined to ordinary trade. Though the legitimate treatment of the disease of inebriety, like the treatment of any other malady on sound scientific principles, is now fairly well known and recognized; the friends of the wretched inebriate are often so utterly broken-hearted and the woe-begone victims themselves so helpless, that there is a continual wail for some specific which will, *volens volens*, convert the narcomaniac into a sober person. A few minutes' indulgence in that rare pastime of the present superficial age — thinking — ought to convince anyone possessed of ordinary intelligence and common sense that no such panacea can, from the origin and development of this disease, ever be found. But this widely felt and despairing yearning for a royal road to temperance constitutes a demand which has been met by the supply of an army of preparations and processes alleged by the proprietors to be endowed with the power of curing inebriety in

a few weeks, a miracle which puts the miracles recorded in the Bible altogether in the shade.

One so-called remedy consists of a mixture of fourteen different drugs dispensed twice a week at a continental dispensary. Some of these specifics claim to "cure" all but a trivial percentage of cases, others 100 per cent. One of the latter proceeds upon the plan of "no cure, no pay," undertaking to return the money paid for treatment, if (the conditions having been complied with) the inebriate is not cured in three weeks! A third, like many others run by trading companies only a few months old, employs no injection. It is said to be harmless to a child, and to have also cured 100 per cent. I live in hope of some day coming across a "cure" which will cure 101 per cent.

All this is not enough. There are potions, powders, mixtures, pills, tabloids, and other pharmaceutical preparations which are warranted to cure an inebriate without his knowledge and cause an aversion from intoxicants, even if taken unconsciously in tea, or milk, or any other article of diet.

All this is but a pandering to an unthinking and morbid cry for some supernatural agency to accomplish miracles, the operations of the healing power of nature being too slow and too undemonstrative for a world in a hurry. True medical science should lift up a warning voice against the dangers of such attempted "short cuts" to sobriety, which often proves to be the longest way in the end.

The reputable practitioner of medicine has no secrets from his professional colleagues, and hastens to make known to them, for their information and criticism, any discovery which he may make in rational therapeutics. As regards legislation, there ought to be a law enforcing stability of composition on all pharmaceutical preparations, with registration and an open statement of the contents. The eager rush of inebriates to any place where it is dogmatically and persistently declared that there is a specific which will cure inebriety in a few days or weeks, is but a manifestation of the

phenomena of mental contagion, a purely psychological epidemic, of interest chiefly to the student of mental science. Of course a certain proportion of the cases will be benefited under any method which raises expectation of betterment.

Not so does nature work. Her procedure is modest and silent, though efficient. If we have at heart the true welfare of the wretched subject of inebriety we will lend no countenance to boastful ostentations and secret talismans ; we will deal with the inebriate as afflicted with one of the most distressing diseases to which flesh is heir ; we will endeavor to trace back the predisposing and exciting causes of his malady which, having been unraveled, we will do our utmost to remedy. Inebriety, or narcomania (that is, a mania for intoxication by any intoxicating agent), is a complex disease, calling for mental, moral, and medical treatment. We will, then, intelligently study the special characteristics of each case, not over-riding but attempting to aid the healing power of nature in her beneficent and divine mission of healing health and comfort ; not in secrecy for purposes of gain, but openly and straightforwardly before all men, for the cure of the diseased, the rescue of the fallen, and the encouragement of our weaker, despairing, and faint-hearted brothers. Thus will we truly show by a loyal and consistent professional life that, in the noble and inspiring words of Oliver Wendell Holmes :

“ Our mission is to save.”

Dr. E. C. Mann, President of the New York Academy of Anthropology, Superintendent of Sunny Side Hospital, Brooklyn, N. Y., read the following paper on *Science vs. Folly*, in the treatment of the disease caused by the abuse of stimulants and narcotics. A plea for the suppression of the nostrum, patent medicine, and specific in rational therapeutics :

The art of the physician consists largely in watching the organs which are essential to life. He must also watch carefully the state of the nervous system. In all acute diseases, he insists upon perfect rest and has his patient remain in bed, while the diet should consist mainly of liquid food. The

chronic diseases are more or less complex. There is no occasion to watch the heart and circulation so closely, while we have to watch the reparative condition of the injured structures. As a rule, these structures are obstructed by some difficulty of the blood, some mechanical cause. In chronic diseases we must direct our attention largely to the organs of nutrition. We must then turn our attention to diet. The patient should be liberally supplied with oxygen, taking a moderate amount of exercise in the open air and sunlight. In prescribing drugs, it is a great mistake to suppose that tonics are always necessary. In a large majority of cases we shall find some imperfection in the gastric organs. The capillaries and small veins become overloaded often. We must also watch the muscular and nervous organs. We may discover difficulty in the eliminative organs. We must, of course, try to ascertain the cause of the local disease ; morbid elements may be held in the blood. We meet in a large majority of cases with a depressed state of the heart and nervous centers ; from the symptomatology of disease we form our diagnosis. The glory of rational medicine, which is a broad, liberal science, recognizing no "pathies," no schools, but seeking after exact science, willing to adopt everything that will relieve suffering humanity, is a system of therapeutics based upon pathology ; which treats of the origin and nature of the cause of the changes in the body, symptomatology, and a good diagnosis.

The difference between science and folly, between knowledge and ignorance or charlatanism in the practice of medicine, is the difference that exists between the man who, as a pathologist, studies the modes of actions of organs when they are alive and warm, at the bedside of the patient ; which study goes hand in hand with clinical medicine and which takes cognizance of disease which lies dormant in the body, as in inherited diseases, and of all the disordered conditions of the body, and whose effects are to antagonize these results produced, and get rid of the condition which produced these results ; who, as a pathological anatomist, studies the active

alteration in the tissues which the disease has produced, the anatomy of diseased organs, *post-mortem*, and gives us a solid basis ; who, as a clinical physician at the bedside, carefully examines the subjective and objective symptoms of disease, and, in his investigation of the latter, learns the condition of the digestive powers, and the whole gastro-intestinal tract, the pressure of the blood and its condition, the respiratory apparatus, the heart, the skin, the secretions and excretions, the locomotory powers and the nervous system, the genito-urinary organs and kidneys, and who, from the collective phenomena of signs and symptoms of disease thus elicited, makes his diagnosis, and, as a skillful therapist, prescribes remedies best calculated to relieve the perversion of the functions of the structure of the body ; and the ignorant pretender and charlatan who, alike ignorant of pathology, pathological anatomy, symptomatology, diagnosis or therapeutics, knowing little as to how people live and still less as to how they die, boldly rushes before the public with a specific, nostrum, or secret remedy that is to cure a perversion of the functions of the structures of the body, those functions and those structures of which he is profoundly ignorant, and not only deludes the public, but, I blush to own it, many seemingly of our own profession. It should be the aim of the scientific physician to see that the conditions of life are in the air his patients breathe and the food that they eat ; for if all the conditions of life co-exist in their normal state, life and health are inevitable. It should be his aim to see that the condition of primary assimilation, which consists of the changes which proximate principles undergo previous to their conversion into the blood, is properly carried out, and likewise with regard to secondary assimilation, which consists of all the changes by which portions of the blood are converted into organic tissue and are again removed from the system by a retrograde metamorphosis. It is by this process that the adult person retains very nearly the same general outline ; it is this power which gives us our life. Organic matter does not remain permanent ; this is tissue metamorphosis. This



retrograde action presents itself in the urine as urea, and this molecular death action is indicative of the life action. All this belongs to secondary assimilation. If the renewal is not equal to the loss, the body wears out ; and it is the physician's province to see to it that the renewal shall be more perfect, so that the individual may become more perfect and that development takes precedence of degeneration. We may not have so many patients, but the community will be the better for our having lived in it ; and the highest aim of the true physician should be the preservation of the lives and health of the people. See that those dependent upon us do not have half-nourished tissues, as a very large proportion of ailments come from deranged nutrition. See that they avoid everything that impairs the nutrition of the body, impure air, sedentary habits, and habits of intemperance. Do all in your power to stamp out endemic and epidemic disease and the so-called contagious and infectious diseases and the tendency to disease, which is inherited by inculcating sanitary and hygienic laws, a proper diet based on food values, and the avoidance of the use of alcohol as a beverage. Primary and secondary assimilation cannot be properly performed in an intemperate man or woman, neither can there be a right state and composition of the blood from which the materials of nutrition arise or a natural state of the nerves. It has taken a long time to teach people that inebriety is a disease ; yet it is a disease that, like all disease, consists in the perversion of the functions of the structures of the body, and it produces a certain definite group of symptoms. The use of stimulants and narcotics operate in the derangement of the conditions of life by interfering with primary and secondary assimilation. These deranged conditions of life produce certain states of the system, and deranged states of the system we call disease ; alcohol produces irritation, and irritation of a part causes an excess of action in that part that produces morbid affections. Irritation prevents nutrition and arrests the vital powers.

The new administration at Washington will exhibit the wisest statesmanship if they establish a national or United

States board of health, whose duty it shall be to look after the lives and the health of the citizens of the United States. The people can then be instructed how to live so as best to avoid the preventable diseases such as consumption, cholera, yellow fever, etc. The dangers lurking in diseased meat, impure water and milk and ice and badly ventilated apartments and undrained land and the use of nostrums and secret specific cures, would be, under such management, household knowledge. They would also be taught the physiological influence and action of alcohol upon man and his offspring, the want of which knowledge causes much loss to the commonwealth by intemperance and its manifold consequences of disease and death. *Intemperance is a very frequent and preventable cause of insanity.* One-third of all admissions to all asylums are due either proximately or remotely to the abuse of alcoholic beverages, *much crime is produced by it*, as the injury to the brain of the foetus due by drinking habits of the mother while pregnant, is irreparable and the child is born into the world with a defective organ of thought, prone to take on diseased action upon the application of even slight exciting causes, and with a predisposition to intemperance, insanity, and a proclivity to crime. A study of the physiological action of alcohol upon the human race shows that *it is not a food*. It injures body and brain, impairs normal cerebration, injures the structure of the brain and impairs its functional action, induces altered conduct and loss of ability, lowers intelligence and morals, and affects all thought and conscious action. It kills out high intellectual ability by incapacitating the organ of thought, it confuses the finer operations of the brain and mind, it paralyzes the will, dims the intellect, and lowers the moral sense. It destroys not only the physical, moral, and intellectual health of the person himself who uses it habitually, but also that of his offspring in whom it may be traced in imbecility, idiocy, and insanity, and other grave nervous defects. The use of it creates a new physiological want, a systemic demand which becomes in many cases peremptory and irresistible, resulting in the disease of dipsomania, the

great diagnostic mark of which is an irresistible periodical craving for alcoholic stimulants which are taken always in such cases to the point of intoxication, the will being powerless to restrain the disordered impulse of the unhappy victim. It is a great mistake for any person to suppose, as many persons seem to, that alcohol can ever confer upon them permanently an artificial working power above their normal state. Alcohol lessens the power of endurance and diminishes vital force. There is an absence of any real benefit from the daily use of either fermented or distilled liquors and tremendous danger of the alcohol habit supervening. The continued use of alcohol produces insanity by getting up a subjective morbid condition of the nervous system, which misleads the mind and conduct.

The ultimate condition of mind with which we are now acquainted consists of the due nutrition, growth, and renovation of the brain cell, and this is interfered with if the brain cells are nourished by a blood plasma containing an alcoholic foreigner. People often resort to alcohol to get energy and force which they could get much better from food. We should aim to have ingested into the body such material which, when brought under the influence of oxidation, will yield energy, which is the expression of vital activity. We want the largest working power for the amount of food taken. We want to eat the proteid food stuff, such as meat, fish of all kinds, eggs, oysters, milk, cheese and allied substances, taking only a minimum of the starchy food and vegetables, for the reason that their use requires an enormous outlay of oxygen and this necessitates the formation and handling by the glandula organism of the body, of an excessive amount of incomplete nitrogenous excrementitious elements. We can get by food, properly selected, great concentration of energy, physical ability and mental activity, so that we shall feel no need for alcohol to impart an artificial and temporary health which can only be replaced by distress and a desire for its habitual use. The oxidation of the proteids and their combined fats, plus a minimum quantity of cereal, supply all the energy needed every day. In this way, if we become proteid feeders,

we can withstand disease better, are capable of greater concentration of energy and mental activity, and can lead a longer and more successful existence without the necessity of even the daily moderate use of alcoholics than by any other plan of living, as we shall rely on a diet which requires the least vital force and oxygen to digest, assimilate, and appropriate it. The disease of inebriety is a disease exhibiting certain subjective and objective signs and symptoms and a disease which requires the utmost skill and care in treatment to remove the disease, build up the shattered nervous system, restore the lost will power, and remove the craving for alcohol. The same can be said of morphine addiction or chloral addiction. The disease of inebriety and the opium habit have their etiology, their pathology, and their therapy, and the permanent cure of these diseases is only to be accomplished by attention to fundamental therapeutic laws and not by patent medicines and nostrums or select remedies. The object of the profession of medicine is to protect the health and the lives of the people by removing the cause of preventable diseases by attention to sanitation and hygiene, and to cure disease, and it is the duty of every well-educated physician and surgeon and every government health commissioner to help root out the evil of patent medicines, nostrums, and secret cures for the treatment not only of inebriety and the morphine habit, but of any and all other diseases. Every professional man who has had a good college tuition is supposed to have mastered the laws of therapeutics, and there is no excuse for any man to recommend proprietary medicines of whose real composition he is entirely ignorant or recommend secret cures of whose real composition he is equally ignorant. If the people find that physicians and surgeons, who by education and experience are relied upon to educate the community, prescribe patent medicine for them, the people themselves will consider themselves perfectly justified in allowing the druggist to prescribe the same remedies for them and thus save an office fee, and this is already done to a very much larger extent than some physicians imagine. The responsibility for this rests

directly upon the profession themselves, and also to the failure of the medical college to teach and insist upon the duty of their graduates enlightening the public so that they may distinguish between science and folly, between honesty and imposture. Neither the profession nor professional journal seem to have the courage of their convictions upon this point. If I were the health officer of a United States board of health, I should deem it my most imperative and sacred duty to send out a public official warning to the profession and public alike for the preservation of the public health against the employment or the prescribing of nostrums and patent medicines and secret cures for any disease whatsoever. It is a terrible evil and demands no uncertain or wavering voice to antagonize it. The evil is fed and spread by the profession themselves, who should be the ones to crush and suppress it, and by those of the professional journal, who advocate and advertise many of these preparations.

The country practitioner naturally relies upon his city medical journal to keep him well informed and abreast of the times. He is a busy, overworked, illy-remunerated man. If he reads in the columns of his favorite medical journal the advertisement of a proprietary article or nostrum, or the advertisement of some secret cure, he takes it for granted it must be good or it would not have been allowed access to its columns. With this delusive belief he prescribes something for his patient, about which he knows only what the advertising columns of his journal have told him, or sends his patient away from home to be treated by a secret cure. If the nostrum interest is thus to corrupt the profession it is time for a new crusade. The heads of the medical profession are not men of mental indolence, therapeutic ignorance, or credulous dispositions, and you will never find such men announcing to the public that they have discovered a wonderful cure for this or that disease; this is confined to charlatans and quacks, who are both unscientific and dishonest, but rather, in their anxiety for the health and the lives of the people, proclaiming their discoveries and their methods, that

the whole of the noble profession of medicine may profit by them to stamp out preventable disease, relieve the diseases they meet at the bedside, and benefit mankind. We are in a position to-day to get a much higher degree of certainty in the administration of medicinal agents by the use of alkaloids, glucosides, resinoids, or organic acids, as medicinal agents instead of the often complex and variable crude drugs, which characterized old methods of treatment. These "active principles" are in many cases transmutation products, that is, they are obtained from the native substance by the action of a series of chemical reagents, and sometimes by the additional action of heat. Some of the alkaloids do not exist in the plant, apomorphia for instance, which cannot be extracted as such from the opium, but is made by the action of heat and hydrochloric acid, from morphia. In this new method of dosimetry, and particularly by hypodermatic dosimetry, we can by our knowledge of the exact chemical identity of our remedy and of the precise quantity injected into the system, determine the nature and degree of the effects of this definite substance upon the physiological processes both in health and disease, with a degree of accuracy hitherto unknown in the science of medicine. We know, furthermore, that an exact amount of the active principle reaches the lymph spores and circulatory channels when from its chemical nature we can give it hypodermatically. Never before, in the treatment of nervous and mental diseases, in inebriety and the morphine habit, have we been able to treat them so exactly and obtain such certain and permanent cures as we can to-day by dosimetry and particularly by hypodermatic dosimetry. What we need now is better-adaptable chemical forms of the "active principles" alkaloids, glucosides, or other definite active principle, and then we shall be in a position to have a new, exact, and scientific system of therapeutics. Hand in hand with this must go an exact system of feeding our patients which shall require the least vital force and oxygen to digest, assimilate, and appropriate the food ingested and give the most force and energy, and also careful attention paid to hydro-therapy

and electro-therapy. We shall thus get much quicker and more lasting recoveries in the treatment of diseases of the nervous system, inebriety, and the morphine habit.

The next paper, by Harold N. Moyer, M.D., Adjunct Professor of Medicine, Rush Medical College, Neurologist to Cook Co. Hospital, Chicago, on Specifics in the Treatment of Inebriety, was read by Dr. Shepard :

The term specific has been variously used in medicine. In some instances it is applied to a remedy which cures a disease in a way peculiar to itself. It also has been used to designate a remedy that infallibly cures a certain disease. The number of such remedies is exceedingly limited, and perhaps there are none that would come within a strict application of the latter portion of our definition. Quinine, in the treatment of malarial fevers, probably comes as near being a specific as we shall ever get.

It is apparent that we can only have specific remedies where we have specific diseases. The number of the latter have been increased considerably of late years. We need mention but one — tuberculosis. The specific nature of this disorder was followed by most extraordinary efforts to find a specific remedy ; thus far these efforts have not been rewarded. If, then, the number of specifics is limited by range of specific diseases, it is apparent that they must ever remain an infinitesimal part of our therapeutics. The number of diseases dependent upon a definite cause, and accompanied by constant pathological conditions, is exceedingly limited. As yet, the vast majority of named disorders are to be classed among the symptom groups, dependent upon a variety of causes, and presenting a most diversified pathology.

Inebriety is a symptom complex. It really is a condition, or state of being, just as insanity is. Its etiology is varied, and its pathology is infinite in its variety. What would be thought of one who should advance a specific for the cure of insanity, with all of its varied phenomena? The same remedy to cure parietic dementia and paranoia, melancholia and acute mania? While these conditions are all

grouped together because they are characterized by a disorder of the intellect, yet how varied is the pathological picture lying back of them. The same is true of inebriety. We have here a disease that is named after its chief symptom, the appetite for, and indulgence in, narcotics and stimulants; but, behind individual cases, we shall find as wide a difference in pathology and etiology as is presented by parietic dementia and paranoia. Therefore, to speak of a specific in the treatment of inebriety is to utter a philosophical absurdity.

Notwithstanding that the claim for a specific in this disorder violates the basic principles of pathology, numerous ones have been advanced by quackish pretenders without scientific training. Two of the latest, and those that have attracted the most attention, have appeared in the West, — one in Chicago, and the other in its near neighborhood. Both of these cures, unlike the previous psychological waves that had swept over the country, depended on the administration of drugs for their efficacy; in this was a recognition that inebriety was a diseased state, and usually involved something more than a perversion of the moral sense. The first of these, D'Unger's, or the red cinchona cure, can be dismissed with brief comment. By dint of newspaper advertising, "testimonials," and other quackish arts, the public were persuaded to try red cinchona. This was only to be obtained of the discoverer, who had all the true red cinchona there was in the market, and an eight-ounce bottle of the precious tincture cost \$25.00. Whatever merit there may have been in the treatment lay in the suggestion that they were taking something to cure the drink habit, as it is doubtful if it had any more power over the craving for liquor than would colored water or other inert substances. For a few weeks the praises of red cinchona were sung by clergymen, reformed inebriates, and the newspapers. Just as it was on the pinnacle of its fame the greed that was behind the movement discovered that its virtues were so great that it was no longer necessary for the victims to visit the office of the dispenser,



but wives with inebriate husbands could obtain some of the drug, place it in a cup of tea, and thus administer it without the knowledge of the person taking, and cure him, in many cases, against his will. Very shortly after this promulgation the craze died out, and the sun of red cinchona had set forever.

A second craze of this sort began at the small town of Dwight, near Chicago. Leslie E. Keeley began, some years ago, to treat a few inebriates, and claims to have discovered a remedy that would infallibly destroy the appetite for liquor. The nature and composition of these remedies he carefully secreted. For a time he had but a few patients, mostly the village drunkards of Dwight. Gradually his fame spread; patients came from adjoining towns, and finally the *Chicago Tribune* was induced to send four prize drunkards to Dwight. They were sent back in a few weeks, cured and rejuvenated. The daily press sounded the praises of the new treatment, and the victims of whisky crowded into the little town of Dwight by the thousands. Clubs were formed, a jargon in which were mingled such terms as "graduate," "shot," "dope," "student," "institute," etc., sprang up, and there was the psychological environment of the Washingtonian movement of 1840 reproduced plus the idea that inebriety was a disease, "bichloride of gold" was the remedy, Keeley was its apostle, and they were "cured."

In the beginning it is doubtful if Keeley had any idea of the value of his "discovery"; but after patients began to flock to Dwight, and the newspapers gratuitously exploited the treatment, then the craze was worked for all there was in it. At first the drugs used were spoken of as the "gold remedies," using the term in the sense of precious, employing bad grammar, just as later the term "bichloride of gold" initiated bad chemistry.

The treatment has doubtless varied somewhat with time, but the sheet anchors have been strychnine and atropin, the chloride of gold and sodium being of secondary importance, and an afterthought, necessitated by the term "bichlo-

ride of gold," in its turn dependent on the "gold remedies" of the early times at Dwight.

The following formulary are taken from an article by C. F. Chapman, M.D. (*Chicago Medical Recorder*, February, 1893):

No. 1. Tonic. Known in the institutes as the "dope."

℞	Aurii et Sodii chlorid.....	gr. xii.
	Strychniae nitr.....	gr. i.
	Atropiae sulp.....	gr. $\frac{1}{4}$ .
	Ammonii muriat.....	gr. vi.
	Aloin.....	gr. i.
	Hydrastin.....	gr. ii.
	Glycerini.....	℥ i.
	Ext. fld. Cinchon. comp.....	℥ iii.
	Ext. fld. Coca. Erythro.....	℥ i.
	Aquae dest.....	℥ i.

M. S. 1 drachm at 7, 9, 11, A.M.; at 1, 3, 5, 7, 9, P.M.

No. 2. The injection known in the institutes as the "shot."

℞	Strychniae nit.....	gr. 9 1-10.
	Aquae destill. ad.....	oz. 4.
	Potass. permangan. q. s. to color.	

Misce: Sig. Begin with gtt. 5., which equals gr. 1-40, and increase one drop each injection until the physiological effect is produced. Four hypodermic injections to be given daily, beginning at 8 A.M., then at 12 M., 4 P.M., and 8 P.M.

No. 3. Used with No. 2.

℞	Aurii et Sodii chlorid.....	gr. 2 $\frac{1}{2}$ .
	Aquae destill.....	ad oz. i.

Misce: Sig. gtt. 3, every four hours, in combination with the strychnine solution, for the first four days.

"This last prescription is used only for the moral effect, which is produced in the following manner: Five drops of the strychnine solution are drawn into the syringe, and then three drops of the gold solution are drawn in and mixed. This produces a golden yellow color, to which attention is called, and the patient is farther assured as to the reality of the presence of the gold by the stain left on the skin after the hypodermic needle has been removed."

Dr. Chapman gives further insight into the *modus operandi*

of the "Keeley Institute." He says: "In the room in which the hypodermic injections are given three bottles stand on the desk filled with different-colored mixtures — one red, one white, and one blue. In the 'red' bottle is the nitrate of strychnine solution; the 'white' bottle contains the atropine solution; and in the 'blue' bottle is the apomorphine mixture. In every case the 'red' and 'white' solutions are used; but where a patient is contumacious and refuses to surrender, the grand Inquisitor applies the 'torture,' and in addition to the 'red' and 'white' liquids, he exhibits the 'blue.' According to the jargon of the 'graduates' and 'under-graduates,' such a patient is described as having received the 'barber-pole.' Such a sickening effect is produced by this 'barber-pole,' or red, white, and blue treatment, that, after he has received it once, a patient will be seized with absolute terror when he sees the operator reaching for the 'blue' bottle."

It will be seen that the "dope" is the only one containing atropin in the first formulæ given by the doctor, while it is spoken of later on as being given hypodermically. It would seem that the first were in accordance with the original practice at Dwight, as many of the earlier patients attributed the sole good effects to the "dope." The "shot" appears to have been a later addition, probably, with reference to the use of apomorphia, when the other remedies did not inspire sufficient disgust for liquor.

We think that a careful study of these formulæ will convince any one that the chief active ingredient, and the one that is leveled at the appetite for liquor directly, is the atropin; the others are tonics and synergists. The strychnia, in the large doses in which it is given, must act as a powerful tonic in sustaining the nervous system, and in so far will reduce the *systemic* craving for alcohol. The effects of belladonna, or atropine, are those of a gentle stimulant, in small doses; in larger quantities it is an hypnotic, and if pushed, it is a powerful, depressent poison. It also produces a dryness of the lips, with a parched condition of the tongue, lips, fauces, and pharynx, with a huskiness of the voice. In dan-

gerous doses it causes nausea and vomiting. It will be noted that the drug affects either directly the terminal endings of the nerves of taste, or else it does so secondarily by affecting the blood supply of these parts.

It will be seen, on a careful examination of the drugs, and methods employed at Dwight, that they are exceedingly ingenious, to say the least. First, a drug capable of modifying directly the sense of taste. Undoubtedly there is much of truth in the statement of some inmates of the Dwight institution that liquor was exceedingly distasteful, and often excited nausea after the first injection. A marked loss of appetite, amounting sometimes to a loathing of all food, is a frequent accompaniment of the treatment. It scarcely needs argument to show what a profound impression this will make on the mind of the average patient. The powerful tonic and stimulating effects of the strychnia are not by any means to be neglected, and one which has been abundantly shown in neurasthenic states, a condition frequently found in inebriety. If these milder measures do not succeed in quelling the rebellious appetite an hypodermic of apomorpha is administered; the patient at the same time is given a bottle of whisky, and he attributes its rejection to an incompatibility of the treatment and the alcohol.

At first sight the treatment might commend itself, but it is to be remembered that it only overcomes the chief symptom of inebriety, the craving for alcohol. The real seat of the disorder in the ill-balanced nervous system is untouched. The drugs employed are exceedingly powerful, and the doses given border closely on the toxic. Already the darker side of this treatment is beginning to come to the surface, cases of insanity, severe nervous prostration, and even organic degenerations are beginning to be frequently noted as a result of the profound nutritional disturbances caused by these powerful drugs. At first, practically, all of the cases that were sent to Dwight were "cured"; but soon the percentage began to fall, and as the "graduates" learned of these failures the relapses became more frequent. Like all the

vaunted specifics, it, too, depended almost wholly upon the psychological element. The slightest breath was sufficient to dispel the psychic suggestion, and the whole thing would fall like a card house.

In the past year there has been a falling off of more than two-thirds of the number of patients at Dwight. This has been attributed to the establishment of branch institutes in different parts of the country; but many of these have closed their doors. Within a few weeks a large one has been closed in New Jersey, and the branch in Chicago went out of business within a few days.

In conclusion, we desire to reiterate our opinion that there never can be a specific in the treatment of inebriety. While there is much in the "Keeley cure" that is ingenious, it is doubtful if it can ever be turned to any practical account in the hands of the regular profession. Disconnected from the quackery and deception surrounding its administration at Dwight, its chief prop, the mental suggestion, fails, and then it will be of no value. There is nothing in it that leads one to think that it will supersede the time-honored methods of sequestration, the careful study of individual cases, and the adaptation of therapeutic and dietetic means to the needs of each case. Even in the few cases in which it may seem to be indicated its positive dangers will more than counter-balance the hope of usefulness.

Dr. Crothers read the following paper:

The more accurately we study alcoholic and opium inebriety the more impossible the assumption of specific remedies appears. The causes are so numerous and complex, and depend on so many conditions that are not understood, that the idea of a specific is an absurdity, with less foundation for belief than perpetual motion or the philosopher's stone.

Inebriety is an insanity, only far more complex, and often dependent on psychical changes of the brain, and the chemical effects from the spirits and drugs used, the effects of which are practically unknown. A specific to reach, or even

to neutralize, any of these morbid changes, would require a degree of knowledge that at least a century of progress will hardly reach.

From another point of view, the fact that we recognize inebriety as a disease, brings no information of the means and remedies for its cure.

To call inebriety a disease is to say that the morbid changes and processes of dissolution follow a uniform line of events which must be governed by uniform laws. Where these diseased processes begin, and where the use of drugs become the symptoms of such changes, or are the exploding forces that kindle into activity a train of degenerations that have come down from the past; what direction, and with what force these changes are going on, are the essential factors to know before any remedies can be applied.

There is no other subject upon which there is so little of scientific and common sense reasoning. The popular literature is altogether a confused medley of assumptions, without support from careful study of facts.

The assumption of specifics is the same faith process, demanding acceptance from the mere statement involved in mystery, and appeals to the emotions. The moralist, who asserts that the power of prayer and conversion is a true specific, places the theory of causes and remedy frankly and unreservedly before all. No selfishness, concealment, or quackery masks his efforts. The medical specific, beginning in mystery, clothed in assumptions of new facts, from new sources, and by means new and unknown to science, is infinitely inferior to the prayer and pledge specific. Even the legal remedies by punishment, and the methods by political parties, have the virtue of consistency, frankness, and honesty.

Appeals to the testimony of reformed or cured inebriates for evidence of the value of the remedy is the same old delusion which for half a century has prevailed along the line of temperance work. Some historical illustrations are familiar to all. From 1838 to 1841 Father Matthew, by his eloquent

appeals, secured five millions total abstinence pledges in Ireland, in a population of nine millions. The consumption of spirits dropped over half, and a new era of freedom from the use of alcoholic spirits began. Two years later the consumption of spirits rose to a higher level than before, and all this vast army of reformed men relapsed and became more degenerate than ever.

In 1840 the Washingtonian movement began, and crossed the country in a blaze of enthusiasm. Half a million men signed the pledge and claimed to be cured; the drink disease and problem seemed settled permanently. Five years later it had disappeared, and was only a memory of the past.

The testimony of Father Matthew's disciples, and the enthusiasm of the reformers of the Washingtonian movement, seemed to the unthinking conclusive in proof of the value and certainty of these methods. Reformed men posed as living examples of the treatment in every town of Ireland and America, and yet they all disappeared in a year or more simply because the remedies were empiric, and could not reach the disease.

Since 1845 hundreds of temperance revival waves have come and gone. Many thousands of enthusiastic honest victims have supposed they were permanently restored only to find out their mistake, and disappear. All these means and remedies used have been open and tangible. There has been no secrecy, simply an assumption of a certain chain of causes, to be met and cured by certain clearly defined remedies. The supposed cured men were equally enthusiastic and positive, and held themselves as examples to prove the truth of the means, as those who are now vaunting the secret gold-cure specifics.

An epidemic wave of gospel temperance is now passing through Connecticut. In Hartford eleven thousand persons have signed the pledge, put on the blue ribbon, and claim to be permanently cured. Curiously enough the "gold-cure specific" vaunters have joined this movement, and seek to make capital by combining the theory of disease and moral

depravity with specific drugs, pledges, and blue ribbon emblems. The testimony of the victims who assert that they are cured is the same, and by the same class of men who have been prominent in every temperance revival of the past.

Another view of these gold-cure specifics reveals the paradoxical position of claiming disease, and its curability in a brief time, by any remedy, secret or otherwise. The fact of disease makes the possibility of cure, by any chemical or other remedies, an impossibility in any brief period of a few weeks. There is no parallel to this in any range of medicine, or scientific investigation. No cure of any disease is effected except through long periods of time, and by slow processes of restoration, aided by nature and art. A fractured bone is only healed by the slow operations of nature. No secret remedies, no enthusiasm of the victim, can complete this process. The fracture and injury of the higher brain centers among inebriates must follow the same line of natural laws, and be governed by the same general conditions.

The absurdity of such claims would be quickly recognized, even if the remedies were made known. But when the remedies are concealed the subject becomes empiricism, unworthy of any serious attention. The absurdity becomes mountebankism, which thrives most when condemned and noticed.

For a year past our association has been the center of an enormous correspondence, pamphlet literature, testimonies, and efforts to enlist our influence to sustain this or that specific. The boldness and duplicity of some of the so-called discoverers of these specific remedies are phenomenal.

While it is unpleasant to note the credulity and dishonesty of the advocates of these specifics, it is cheering to realize that this is simply an empiric stage in the evolution of this topic, which is a part of the natural history of every great truth. The disease of insanity has passed the same period. The disease of epilepsy is just emerging from this empiric stage. Even now, the remedies to "cure fits," seen in the religious and daily press, are the dying echoes of



charlatanism that is past. Gold cures, mind cures, cinchonia cures, and every other cure for inebriety, that make claims as specifics, are simply beating up against the great trade winds of truth, depending on side currents of credulity, ignorance, and delusion, which will quickly die away. They are doomed by conditions and forces beyond any personality, or any possible condemnation from societies or individuals. Specifics for the cure of inebriety, *secret* or *open*, urged by any man or combination of men, are delusions and absurdities, opposed by all known principles of science. They are outside the lines of scientific work and development. Every advance in our knowledge of the physiology and pathology of the brain and nervous system brings the strongest confirmatory evidence of this fact.

This meeting of our association has for its central object, not to engage in a crusade or controversy, but to go on record as recognizing the nature and character of the much vaunted specifics of the day. To show that our silence is not approval or endorsement, but the claims of discovery, and the evidence urged to support these gold-cure specifics are not worthy the attention of any student of inebriety.

Truths of science are never presented concealed and covered up; they are never urged on the world for the central purpose of immediate gain. The real discoverer of any truth never sells out for money. If the truth is literal, and a discovery in science, its value to the discoverer is not to be estimated by dollars and cents. Its value, if real, is destroyed by secrecy, and enhanced by publicity. No real truth of science needs support from falsehood, exaggerations, and pretensions; and no statements can be called truths that cannot bear the strong light of searching study and criticism.

The alcoholic and opium specifics, of every grade and degree, from the white, tasteless lozenge put in tea and coffee without the knowledge of the victim, to the pretentious gold-cure, and the mysterious moon-dust gathered on the uplands of the Atlas Mountains; the flannel pad put through some galvanic process, and medicated, worn over the stomach of

the victim ; the opal injection obtained from the monastery at Mount Carmel, the product of an alchemist in ages past, the secret of which is only known to Baltimore druggists. Last, but by no means the least of this formidable army of specifics for the cure of inebriety is the improved double bichloride of gold, discovered by a physician living on the mountains of Tennessee, and never found to fail. These are only some of the most prominent, and comprise only a small part of the number of secret remedies that are now urged to cure the inebriate.

It would appear, from a casual view, that the intelligence of the average man was above this low level of credulity ; yet, strangely, it is not. Every one of these schemes are sustained by persons who write "doctor" before their names. Evidently the missionary fields of the world are not all occupied, and the specific hunter is still abroad.

The practical result of these specifics is a tremendous increase of the number of chronic cases, and their incurability. A very large percentage of all persons who use these remedies are made more incurable. This statement is sustained by the clinical facts in every institution in the country. These relapsed cases come suffering from more profound degeneration of body and mind. They display delusions, depressions, and low vitality, not seen in others who have not taken this remedy. My personal experience indicates that over sixty per cent. of all cases admitted to my hospital during the past six months have tried the "gold-cure" specific, and are among the most difficult to treat I have ever seen. This is the experience of many others who receive such cases. I am sustained in the belief that the use of atropina, strychnine, and apomorphia for two or three weeks in toxic doses is exceedingly dangerous for the average inebriate.

In my opinion, supported by others of larger experience, the continued use of any drug that will paralyze or depress the nerve centers to the extent of checking the morbid impulse for spirits continuously is perilously fatal to the final restoration of the brain.

The temporary use of the simplest narcotics, under the most careful observation, give strong intimations of what might follow from indiscriminate use of such drugs for any long periods.

Finally, I think I state the faith of all our co-workers when I say, that these specifics, with all their quackery, dishonesty, and pretention, are unwittingly helping on the cause of truth. Their boasts of disease and curability are rousing up inquiry, and agitating the subject. After a time this very agitation will be fatal to them, and helpful to the real truth. Inebriates, who are the new army of the insane, are not to be reached by specific remedies. Far above the levels of empiricism and quackery, they will be understood and treated in the near future.

The next paper was read by Frederick Peterson, M.D., Instructor in nervous and mental diseases, College of Physicians and Surgeons, New York, on "The Treatment of Alcoholic Inebriety":

There is no class of cases that comes under the care of the physician that presents greater difficulties in the way of treatment than those suffering from alcoholic inebriety. To the practitioner are brought such as are in the stage of alcoholic neurasthenia, such as present symptoms of acuter alcoholic conditions, such as have delirium tremens, such as are insane from the abuse of this poison, and such as exhibit actual organic lesions of the nervous system, like alcoholic neuritis and alcoholic pseudo-ataxia. Patients may come under his observation in any of these states, or in the intervals between paroxysmal outbreaks of the drink habit, when they may present no particular symptoms. He may be required to treat the *nervous* condition of alcoholic excess, and there may be lesions of other than nervous viscera demanding his attention, like gastric disorder and cirrhosis and their sequelæ. Thus, there are states for immediate attention, and there is the habit itself exacting his best judgment and skill in the way of eradication and prophylaxis against further excesses. There is, therefore, a wide field for therapeutic applications of great

variety, but into all of this region it is not the purpose of the writer to venture. Leaving out the treatment of the chronic organic conditions, such as lesions of the peripheral nervous system and viscera, our advice is generally sought to relieve the excitement or nervous exhaustion of a recent debauch, and to formulate some plan for combatting the tendency to recurrence.

In the first instance, the bromides and chloral are among our best agents when the excitement and insomnia are moderate in degree. When severe, we may have to employ some such remedy as duboisine,  $\frac{1}{200}$  to  $\frac{1}{100}$  of a grain by mouth or hypodermically. Strychnia should be used under all circumstances, as well in conditions of excitement as in conditions of neurasthenia following upon it. It is often an efficient hypnotic in these cases. It is the best given hypodermatically. The nitrate of strychnia is preferable, and may be administered in doses of  $\frac{1}{60}$  to  $\frac{1}{32}$  of a grain, every two to six hours. The beneficial effects of hydrotherapy are not to be ignored, and in all instances it is better to make use at first of the hot wet pack for insomnia instead of drugs internally, only resorting to the latter in the few cases where the former fails to induce the desired effect.

The hot wet-pack is thus applied:

A blanket 9 x 9 feet is spread upon the bed, and on this a sheet wrung out dry after dipping in hot water. The patient lies down upon the hot wet sheet, and this is then folded over him, and everywhere adjusted closely to the body surface, the blanket being similarly evenly folded over this, and other blankets added if necessary. The patient remains in this an hour, or longer — all night, if asleep.\*

Naturally the stomach should be attended to, and the intestines relieved.

Thus, the best treatment of acute alcoholism of any form may be briefly summarized:

(1.) Cut off all alcohol, and confine to bed. (2.) Blue pill

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\* Hydrotherapy in Nervous and Mental Diseases. By Frederick Peterson, M.D., Amer. Jour. Med. Sciences, February, 1893.

at night, followed by saline cathartic. (3.) Hot wet-pack for sleeplessness. (4.) Hypodermatic injection of nitrate of strychnia, gr.  $\frac{1}{60}$  -  $\frac{1}{32}$ . (5.) Water, milk, kumyss, broths, soup, meat-juice, raw eggs, arrow root, juicy fruits, and the like, when there is gastric disturbance.

This is the outline, in short, of a kind of treatment adapted to all cases of acute alcoholism, though, as before stated, bromide and chloral, or duboisine are indicated in a certain number of instances.

In chronic alcoholism, which manifests itself most commonly as a form of neurasthenia, the following should be the ordinary routine treatment:

(1.) Cut off alcohol. (2.) Hot wet-pack for insomnia. (3.) Disturbances of the alimentary canal to be met by aperients and dyspeptic remedies (rhubarb and soda, hydrochloric acid, and the like). The diet should be milk, eggs, and vegetable foods, meats rarely. (4.) Strychnia again the main agent to restore nerve-tone; best given hypodermatically, but may be given by mouth in combination with quinine, or in fluid extract of cinchona ( $\frac{1}{80}$  to dr. j.), or in infusion of gentian.

Having now briefly gone over what I consider to be the best methods of meeting immediate conditions apparent in any case of inebriety brought to the physician for advice and treatment, the more important question arises as to how to rid him of the habit — how to cure the disease of inebriety. This is a most complex question, and one that has for many decades commanded the attention of all men, laymen, lawyers, physicians, and charlatans. Either the desire for alcohol must be got rid of, or the alcohol itself must be made unattainable. To eradicate the desire appeal has been made to the enfeebled will of the victim by lectures, pledges, hypnotic suggestion, religious influences, and the like, sometimes with success; and drugs have been lauded by physicians, and secret nostrums by quacks, to accomplish the same end, sometimes also with success, though not so much through the merit of being an antidote to the desire for drink, as by virtue

of the support by faith or suggestion given the weak will of the patient.

On the other hand, to make alcohol unattainable, the law has been invoked to regulate liquor-selling in general, to prevent its sale to drunkards, to imprison habitués, or to commit them to inebriate institutions for a definite length of time. All of these means have been successful in individual instances. But no drug has been found that is always equal to destroying the desire, and the laws are inadequate as regards regulation of the liquor traffic and the isolation of the drunkard from his ruling demon. Sequestration in a penitentiary is limited by the law, and the writ of habeas corpus has been the evil genius of special institutions for inebriates. Many are committed to insane asylums, but after a few weeks of rest and treatment, the debauch is recovered from, and not being insane, the asylum has no longer the power to detain them. So they come and go several times in the year with the regularity of the seasons. The rich try the inebriates' homes, and the poor are condemned to the penitentiaries. They are "repeaters." Think of being brought up for the two hundred and forty-sixth time before a police court for drunkenness ; yet this has happened, and the defendant was a woman !

In the cases that generally present themselves to us, commitment is, as a rule, the last resort. We try moral suasion, occasionally hypnotism, and we make usually half-hearted attempts at treatment by drugs. We send them on long sea voyages on sailing vessels containing no liquor ; we try the watchful care of a companion or nurse. Sometimes these means are effectual, generally not. The despairing friends after a time resort to the advertising quacks. Their remedies are no more effective than those already in our hands, but it must be confessed that they often take more pains with each individual case than we do. Some of the advertised inebriety cures seem to be not only swindles, but cruel and criminal swindles. Several years ago, the chemist of the Massachusetts State Board of Health analyzed some of these so-called

cures for inebriety in order to ascertain how much alcohol they contained. The analyses published were as follows :\*

Scotch Oats Essence contained	35	per cent.	of alcohol.
The " Best " Tonic	7.65	" " "	" "
Carter's Physical Extract	22	" " "	" "
Hoofland's German Tonic	29.3	" " "	" "
Hop Tonic	7.	" " "	" "
How's Arabian Tonic	13.2	" " "	" "
Jackson's Gold'n Seal Tonic	19.6	" " "	" "
Liebig Co's Coc'a Be'f Tonic	23.2	" " "	" "
Mensman's Pep. Be'f Tonic	16.5	" " "	" "
Parker's Tonic	41.6	" " "	" "
Schenk's Seaweed Tonic	19.5	" " "	" "

The so-called gold-cure of Keeley upon analysis was found to contain no gold at all, but in each teaspoonful about  $\frac{1}{32}$  of a grain of muriate of ammonia,  $\frac{1}{16}$  of a grain of aloin, and 45 minims of compound tincture of cinchona. His hypodermic injection was ascertained to be composed of sulphate of strychnia, atropia, and boracic acid. The Keeley cure, while it has been doubtless effectual in curing some cases of inebriety, has not made use of any drug not long ago tried by physicians all over the world. One of the advantages of this much-lauded method is undoubtedly the effects of repeated suggestion. We have not been in the habit of paying that particular attention to inebriates that is necessary ; we are too prone to dismiss such a case with a mere prescription and some good advice. I may be pardoned for citing an instance of the value of continous attention. A young man of wealth was apparently a confirmed inebriate. Everything had been done for him on ordinary lines that could be done — drugs, moral influences, change of scene and occupation, the dismissal of his boon companions. I found a teetotal sailing vessel, and sent him to the South Seas and China, a nine months' voyage without a drink. He came back robust, healthy, hopeful, and had incipient delirium tremens from a

\* Medical Register, July, 1888.

debauch in a few days in a hotel. Before sending him to an inebriate institution for which I had made arrangements, I decided to give him one more trial. An occupation was found for him in a down-town office, and he was put upon the strychnine treatment, but was made to report daily at my office at a certain hour. This he did for a year. He has not tasted a drop for three years, and is married, prosperous, and happy. I believe the continued attention and suggestion of the daily visits to my office were the remedial agents in this case, the strychnine merely acting as a prop to his nervous system as he was passing through the ordeal of deprivation of his wonted stimulant. Since then I have had several other cases. Hypnotism I have tried once or twice with considerable success. The treatment I should outline for the removal of the habit, and which I have found often very efficacious is briefly as follows :

(1) The hypodermatic injection of nitrate of strychnia in the doses already given, at least twice daily, more frequently if possible, and always by the physician himself. The moral influence and personality of the physician himself are of great importance. By this frequent contact of physician and patient the effort and attention of the inebriate are kept continually at their highest pitch.

(2) A diet of milk, eggs, and vegetable foods should be enforced, meats being allowed but once daily.

(3) Regular occupation, regular hours, and the avoidance of the society of fast companions must be insisted upon.

(4) There is a certain class of patients to whom a substitute for a dram of liquor is at times imperative ; when the desire comes on it must be satisfied. The substitute must be at hand. With some of these, a combination of strychnia and fluid extract of cinchona (gr.  $\frac{1}{80}$  to dr. j.) taken with a glass of water, works very well. It is not always convenient however to carry a bottle in the pocket, so I am at times in the habit of prescribing powders composed of from twenty to forty grains of red cinchona bark, half a grain of capsicum, and three grains of powdered nux vomica, to be taken with a glass of water when required.



As I have already stated, the Keeley cure depends largely upon suggestion for its results. It has had many successes, but of course also many failures, which latter are seldom published to the world. I have had four Keeley failures under observation. One is now insane with complications of hepatic cirrhosis and chronic gastric catarrh, and their sequelæ. He will not live long. The second is also insane. The third is under treatment with me. The fourth has been apparently cured in a sanatorium for inebriates, and has had no liquor for over a year.

There is a multitude of cases in which no treatment yet devised avails to check the alcoholic propensity, and in these the only alternative is to put them out of the reach of alcohol. How difficult this is to accomplish is well known to us all. Commitment for three to six months, which is the longest period permissible in all the institutions I know of in this country, is merely temporizing. It should be commitment for one to two years or even more. It is a fact that the nervous system and the heart and other organs do not recover their normal equilibrium in less than two years after prolonged alcoholism, and sometimes even four to six years are needed to re-establish healthy function. Recently a step in the right direction has been taken by an institution in this city. For some five years I have been the attending physician of the House of Mercy, which is in charge of the Sisters of St. Mary of the Episcopal church. When they removed from the foot of West Eighty-sixth street to new buildings at Inwood, I induced them to form a department for inebriate women in the new quarters. The sisters became interested in the project and the trustees have had a bill passed by the New York Legislature which is quite unique in this country. This department of the House of Mercy is called the St. Saviour's Sanatorium. It is empowered to receive women inebriates either by voluntary or legal commitment. In the latter case, two physicians are required to make out certificates, and upon these a judge commits the patient for a year. Before the expiration of the year, she may be re-committed if it is deemed

expedient for another year. Hence, patients may be detained here for two years. This feature of extended commitment for a long period makes a new epoch in the history of such establishments. St. Saviour's Sanatorium is beautifully situated on the Hudson River in the upper part of New York city. The rooms and parlors are cheerful, pleasant, and inviting. Out-of-door exercise and drives, as well as in-door employment, and the companionship of the sisters and lady visitors are features of the treatment. Thus far there are accommodations for but sixteen patients, and these are selected from the refined and cultured classes, the institution being too small for the accommodation of all classes of female inebriates, even if it were possible or desirable to mingle people occupying different moral and intellectual stations in life.

There is also in this city a somewhat similar institution for male inebriates, the New York Christian Home, where religious influence is the chief remedial agent. I am convinced of the great usefulness of such influence in many cases.

One of the great drawbacks to all homes of this kind is the *tedium vitæ* from which patients are apt to suffer; there is not sufficient employment or recreation; the routine and monotony become irksome.

If I were to suggest an ideal means of dealing with inebriates, it would be the establishment of a little world in which alcohol had no place, but in which life with its various occupations, domestic arrangements, and amusements went on exactly the same. It would in fact be a colonization scheme, such as has proved so valuable in the case of epileptics and of the insane, only much more extensive and much more feasible. The problem involved is merely the exclusion of alcohol from all parts in the colony's affairs. It is true that this could not be accomplished in any region open to ordinary traffic, travel, and communication; even a Chinese wall built around such a colony would not protect it from the invasion of its enemy; it would find some means to percolate through. But I can imagine some Temperance Island so far removed from the main land as not to be accessible to small boats,

with only one harbor, five to ten or more miles in diameter, amenable to the laws of the United States, the property of a corporation of practical philanthropists, where all boats and baggage and merchandise would be thoroughly quarantined against the introduction of alcohol as if it were a comma bacillus, or the microbe of the Black Death. Here would be villages and industries, manufactures and arts, the commoners and the gentry, living in business prosperity and domestic happiness. Thither the drunkard would repair with his family and obtain a position, support himself and them, and lead a useful life as if such a thing as inebriety never existed. A majority of inebriates would emigrate there of their own accord, but certain ones would need commitment by law for three years. Such commitment, however, would be no hardship, for the rights of voting, of citizenship, the solace of society, the pleasure of following one's trade or calling, of earning a livelihood, and of living with one's family would make existence not only tolerable but blessed. The realization of such a project is not an "iridescent dream." It is quite within the bounds of feasibility. A small additional tax upon spirits and spirit venders would be sufficient to acquire some Nantucket and consecrate it to this noble purpose.

Dr. S. V. Clevenger of Chicago sent the following note :

There have recently sprung up throughout the United States institutions which advertise "Specific Remedies for the Treatment and Cure of Alcoholic and Opium Inebriety."

Some of the more intelligent of their patients claim that about ninety per cent. of cures have been effected in such places. I, personally, know of two ex-patients in whom epilepsy appeared after the alleged treatment, and there are reports of rapid mental and physical deterioration having occurred in many others, and occasional deaths.

In my opinion, the recoveries are such as could have been effected by almost any other combined medical and mental influence. The furore that has been raised over the subject having attracted a great number of such curable cases to these institutions and the attention of the public is noisily attracted

to the same results that are being obtained unobtrusively and more honestly, at such places as the Hartford Retreat, Washingtonian's Home at Boston, Fort Hamilton, N. Y., and other places.

Previously, the masses of inebriates had not been drummed up and secured so persistently. Many cases of dementia, impotence, and sudden death from cardiac insufficiency may be accounted for as occurring in patients who had, for long periods of their lives, habituated themselves to more or less stimulation until their life functions were adjusted thereto. The withdrawal of the accustomed potations acted as any other depleting influence would have done upon the weakest parts of their organization. I have known the same to occur in persons who had voluntarily become abstemious.

Dr. L. D. Mason of Brooklyn made the following remarks :

Rational medicine does not claim "specific remedies" among its therapeutical agencies in the popular sense in which this term is used — that is, as a reputed "cure all" — which in every instance, under all conditions, without regard to individual idiosyncrasies, climatic influence, or other environments, effects a cure.

Special remedies for special diseased conditions rational medicine does recognize and use, but not in the same sense that is claimed for so-called specific remedies. The error on the part of the vendors and advocates of patent medicines, nostrums, and "specific remedies," is, that they mistake the prominent symptom of a disease for the disease itself. Hence, proprietary medicines for coughs and headaches are given under all circumstances for coughs and headaches whatever condition may give rise to either.

Another point in which all specific or patent medicines err — as universal remedies equally applicable in all cases : They fail to recognize individual idiosyncrasies with regard to the action of drugs. Every practitioner of medicine with any experience knows that a drug that may act well on the

case of certain persons may be detrimental if not positively harmful in the case of another person ; he also knows that a medicine may be very useful at one stage of a malady, and very injurious at another period of the same disease. Now the vendors of so-called specific remedies ignore all these distinctions that rational medicine recognizes and insists should be observed, and boldly advocates the "specific remedy" as absolutely certain to cure all persons of whatever age, sex, or temperament, under all possible conditions—a claim that rational medicine from the very nature of things never has and never will make. The various specific remedies for the cure of inebriety from time immemorial have asserted this claim,—that of almost uniform success. Inebriety or the "drunk habit" or "drink craze" or "thirst for spirituous liquors" is but the active manifestation of diseased conditions that lie beneath the surface. These conditions are so various and the individual peculiarities and environments of the persons affected so different, that to assert any one remedy or method of treatment is applicable to all cases of inebriety under all conditions would be to make an assertion opposed to the teachings of medical science and clinical observation. The only proper method of dealing with the diseased inebriate is to carefully search for the underlying or foundation causes, of which the inebriety is merely the most prominent symptom. By following this course of rational treatment in this country and in Europe, over 50 per cent. of the cases of inebriety (not selected) are cured; a certain per cent. are benefited. We have reason to believe that a much larger proportion will be permanently cured when the underlying causes of inebriety are better understood, the period of treatment lengthened, and the time for treatment earlier put into operation, and we believe that all this will be accomplished. As it is now, the use of any special or "specific remedy" or the exhibition of remedies which, while they may temporarily benefit, leave serious if not fatal lesions as their after effects.

Strychnine is one of the most valuable of the drugs we

have to tone up the nervous system and stimulate the weakened heart's action, and in a measure take the place of the accustomed alcoholic stimulant without its detrimental effects. But the use of it or any other desirable drug does not prevent a proper recognition and investigation of the underlying causes of the inebriety.

However good or useful any one remedy may be, to assert that this or any other remedy or method is applicable to all cases of inebriety, would be to oppose the evidence we have to the contrary, as we have said, an evidence based on the experience which clinical observation has given to all conscientious investigators, in this as well as in all departments of medical science. We must not draw the conclusion because we have found a drug especially useful, that we must recognize it as a "specific," and use it to the exclusion of every other remedy or means of treatment. In brief, the rationale of the treatment of the inebriate may be summed up in a few words: A period of prolonged rest from all mental and bodily fatigue and exhaustion; *total* abstinence from all alcoholic liquors; nutritious, abundant, and easily digested food; proper hygienic environments; and, above all, the removal of any physical ailments or diseases that may have been the predisposing or exciting causes of the inebriety, and certainly retard or prevent a cure. These measures with such exhibition of drugs as the special conditions may indicate in each individual case, will determine the treatment. It is needless to add that the judicious practitioner will not, while he is endeavoring to cure his patient, administer drugs of such a nature and in such doses as may result in serious if not fatal effects to the patient, for we must not forget that in dealing with the inebriate, we are dealing with an individual very much broken down in health, oftentimes the subject of fatty degeneration of heart and vessels, or on the verge of some acute form of nervous diseases, oftentimes not far from the line of insanity, and not infrequently of chronic dementia. The inebriate is not a good subject for very active or strong medication, especially of those various drugs

that act in depressing the nerve center, or, indeed, actively congesting them; indeed, any drug, we may say, that has a pronounced effect upon the nervous system should be used with great caution in the case of the inebriate, and especially we may emphasize, as exceedingly detrimental and hazardous, its prolonged use.

In view of all these facts, and in order to secure the best comparative results of institutional treatment, all institutions should be opened to scientific observation and research.

To further this end we offer the following resolution :

*Resolved*, "That it is the sense of this meeting that all institutions for the care and treatment of those addicted to the use of alcohol, opium, or kindred drugs, should be under the supervision and inspection of a *State commission* which should consist of experts on these specialties, and which should exercise its duties, under the same privileges and opportunities as are now extended to a similar commission, consisting of experts on insanity, whose duty it is to supervise and inspect the care and treatment of the insane in the various insane asylums of the State."

This was seconded by Dr. Mann and endorsed unanimously. The meeting closed after a brief discussion.

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THE INFLUENCE OF ALCOHOL UPON THE SEDIMENT OF URINE IN HEALTH. — Dr. Glaser has just completed a series of investigations on the above subject in the clinic of Prof. R. V. Jaksch, who summarizes the results of his observations as follows :

1st. Alcohol in moderate quantity produces such a degree of irritation of the kidneys as to cause the wandering out of leucocytes and the formation of cylindrical casts; and in somewhat larger quantities giving rise to large masses of opalic and uric acid. The use of alcohol, he says, alters the solubility of the urinary salts, and this favors the deposition of oxalate of lime and uric acid.

2d. The effect of the ingestion of alcohol for a single time does not extend beyond thirty-six hours, but is cumulative by its continued use. — *Med. Times.*

## THE CARE OF THE INEBRIATE; MORE ESPECIALLY OF THE IRRESPONSIBLE CLASS.

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BY C. F. BARBER, M.D., BROOKLYN, N. Y.\*

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At the present time, when the attention of all interested in the care of the insane is being focused upon one object (the colonization of the epileptic), it seems quite apropos to draw some conclusions and consider the future of those unfortunates whose haven is either the penitentiary or asylum; the cause for the same being the uncontrollable cup.

I do not wish to consider the past — what has been done — but the future: what may be accomplished and what is best to do for those suffering from this uncontrollable habit. Nor do I entertain any idea in this paper regarding the so-called treatments, especially medicinal, which are held as cures for inebriety.

Hospitals and retreats with their special lines of treatments may open and close; Keeley cures may exist; so-called cures may be numbered by the hundreds or thousands, but the number of inebriates will be just as great and the deplorable condition of affairs continue.

Such being the facts it remains for us to consider the subject with the hope that some day there may be a result attained which shall solve the problem effectually as well as scientifically.

The police courts are not the places for these unfortunates, and certainly the jail and penitentiary are far from benefiting to those habituated to the use of intoxicating fluids. These people are not considered insane by the laws of this State, and cannot therefore be committed to an insane asylum; which perchance is a fortunate condition of affairs. They can only be committed to the Kings County Inebriate Asylum for a period of six months or one year, no longer.

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\* Read before the Kings Co. Medical Assoc., April, 1893.



Restraint further than a seven-foot fence is the only means of controlling them or their appetites. The success of this institution you all well know, and accordingly I need add nothing. Absolutely, there exists no suitable place for the cases under discussion. I am unable, after a careful consideration of the subject, to state what proportion of inebriates recover; at the best it is small, very small, that is a certain fact. That some do leave the habit I will not deny, but the mass, no matter under what influence or treatment they have subjected themselves, return to the cause of their trouble after a longer or shorter time. These being facts, the problem is still before us,—what shall we do with the inebriate? Twenty-nine days in jail, or a month or two on the Island will not cure them nor render them of benefit to their families or themselves. The medical profession seem unwilling to consider them insane, and so they are left to mar human happiness and reach an ignominious end. To digress a little from the subject in hand, by your permission, I will say that after observing the character, mode of life, and so forth, of some hundreds of inebriates, I have come to this conclusion, that the proper classification for inebriety is among the category of insane. I do not think there is a degree of doubt but that the periodic drinker should be classed under the heading of Periodic Insanity or its subdivision Folie-Circular.

The barriers which have been placed in the progress of the inebriates are threats, religious duties, and similar entreaties in other forms, hospitals, retreats, cures of all descriptions—and with what results? To my mind, there is no panacea, no cure for the inebriate at present. I am informed by a recent graduate of a Keeley institute at New Haven, Conn., that the officials of said institute no longer claim to cure, but simply to place the patient in a good condition, the rest remaining entirely with the sufferer.

The inebriate is virtually of unsound mind. His case may not be found under the nomenclature of insane diseases, but that is no reason why a class should not be injected into the category of insanity, under whose head this very prevalent dis-

ease might be placed. I shall not in this paper offer any term as a substitute for the word now in vogue (dypsomania) but will add that the word chosen should have a broader and more comprehensive meaning. Delusions or hallucinations are not perhaps as apparent to an observer in this class of patients as they are in the more commoner forms of insanity; but they do undoubtedly exist in many cases. One thing is markedly evident: he fails to comply with either moral or common law and his promises are not worthy of credence. His nervous organization is either hyper-sensitive or morose. His associations are degraded or degrading. His progeny are prone to neurotic diseases of more than mild character; and as a whole he is detrimental to society at large, and dangerous as a propagator of coming generations.

In referring to the subject under consideration, I have used the masculine gender, but only out of courtesy; for the female inebriate is as debased, if not more so, than her male companion in disease. Personally I see no way out of the difficulty at present. We must first ascertain what an inebriate is in the eyes of the law and medicine.

I believe in colonizing these unfortunates; or, if that is impracticable, I would compromise on an institution as large as Salpetere, at which place Prof. Charcot has all forms of neurotic diseases; said institution to be supported by the State. I refer to the French institution, not that it is for the care of those under consideration, but on account of its magnitude; several thousand females of all conditions are there cared for. I prefer colonization to any other way of caring for this class of disease, and virtually the institution referred to is the idea, but in a too limited degree.

A section of land, walled in, a wall if you please as high as the one which now surrounds our penitentiary and equally as substantial, should enclose the plot of ground. The buildings should be on the cottage or pavilion plan. The dining-rooms and kitchen should be in buildings set apart for no other uses, away from sleeping or living apartments.

Carpenter shops, mechanical occupations of all kinds,

farming and so forth should be enforced as well as encouraged, a daily paper published, and other literary work carried on. Many inebriates coming from the lower grades of society should be furnished educational privileges. Those who are fortunate enough to be able to pay for their care could be provided with quarters as per amount paid, but not be allowed to spend their time wholly in idleness.

I have observed that inebriates are extremely sensitive as to where they are sent, especially so when sent to an institution for the first time. To those who cannot pay, I would advise that they be credited with the amount of work accomplished, and the benefit derived after deducting an amount sufficient to pay their board should go to the support of their much-neglected families.

If the law sees fit, these habitués may be committed on the certificate of two physicians.

If the institution meets with a loss at the end of its year, the excise money should be called upon to reimburse the treasury of the institution. No patient should be committed for less than one year for his first stay. If subsequent conduct warrants a return to the institution, let the term be much longer than the first sojourn.

From my experience, I am inclined to believe that the great majority would spend the greater part of their lives there. I should be a strong advocate in favoring work for all classes, and of such a character that there might be a return for the same. If such an institution were established one fact is certain: the almshouses of our country would lose a goodly number of their population, and some of our periodic patients would have a more regular life to lead. These ideas may be considered by some as visionary, but so have others the realization of which has taken a lifetime.

The plan which I have placed before you I consider in advance of prohibition and decidedly more feasible. When certain States are endeavoring to enact laws to prohibit drinking physicians from practicing medicine, it seems to me the time is not far distant when laws of more rational and prac-

tical a nature would be enacted for the care of slaves to a habit which unfits them either for business or social life.

Since writing this brief paper, I have found in the last issue of the *JOURNAL OF INEBRIETY*, the latest report from the standing committee of the House of Lords, known as the Inebriates' Legislation Committee, as follows, in pursuance to Lord Herschell's motion to inquire into the best method of dealing with habitual drunkards, especially such as are at present repeatedly dealt with at the police courts :

"Your committee has for several years strongly urged the pressing need for decided and thorough-going measures for compulsory reception and detention (for purpose of cure) of such inebriates as have become so powerless of will that they have not resolution left to apply for admission to a home of their own accord. This, in your committee's belief, is the most important and urgent want, and should apply to all classes, due provision being made for the poor, at the public charge.

"In a bill presented by a member from Scotland, the following three measures are strongly set forth :— first, compulsory reception and detention ; second, reception and detention on the voluntary application of the patient, without an appearance before a magistrate ; third, contribution from the public funds. Your committee desires to point to Victoria as in possession of legislation which would be invaluable in Britain.

"In that colony, a county judge, on the application of any relative or friend, and a statutory declaration by two medical men, can send an inebriate to a retreat for any period not exceeding twelve months."

I was not aware when I wrote this paper that any steps had been taken in this direction, nor of the existence of this report, but am quite gratified to find that such men as Norman Kerr, M.D., G. B. Clark, M.D., M. P., R. Farquharson, M.D., M.P., and many others of equal note are urging this matter to an issue.

In this country, and especially in New York State, are the energies of those interested being directed in the proper direction. In the month of March, Mr. McClelland, in the

Senate, and Mr. Morris, in the Assembly, introduced a bill "for the selection of a tract of ground to establish a colony for drunkards." This is the first movement of the kind in this country; and while the project may fail this time, let us urge its passage at some early future.

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### THE NAME OF ALCOHOL.

The reservation of the name of *alcohol* for the product of the distillation of wine is modern. Till the end of the eighteenth century the word, of Arabic origin, signified any principle attenuated by extreme pulverization or by sublimation. It was applied, for example, to the powder of sulphuret of antimony (*koheul*), which was used for blackening the eyes, and to various other substances, as well as to spirits of wine. No author has been found of the thirteenth century, or even of the fourteenth century and later, who applied the word alcohol to the product of the distillation of wine. The term *spirit of wine* or *ardent spirit*, although more ancient, was also not in use in the thirteenth century; for the word spirit was at that time reserved for volatile agents, like mercury, sulphur, the sulphurets of arsenic, and sal ammoniac, which were capable of acting on metals and modifying their color and properties. The term *eau-de-vie* was given in the thirteenth and fourteenth centuries to the elixir of long life. It was Arnaud de Villeneuve who employed it for the first time to designate the product of the distillation of wine. But he used it, not as a specific name, but in order to mark the assimilation which he made of it with the product drawn from wine. The elixir of long life of the ancient alchemists had nothing in common with our alcohol. Confusion of the two has led the historians of science into more than one error.—*From the Discovery of Alcohol and Distillation by P. E. M. Berthelot, in The Popular Science Monthly for May.*

## INEBRIETY A SYMPTOM OF DISEASE: NOT A HABIT.

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BY D. H. MOUNT, M.D., BAYHEAD, N. J.

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Some observations as to the causes of intemperance have led me to believe that drunkenness is not a bad habit, but is caused by either of two things: a love of convivial habits and the companionship of those of like tastes, or some derangement of the system, most generally of the organs of digestion; and in the latter case is a symptom of a disease, which, like neuralgia, can often be cured if the disease which causes it can be reached.

Dr. Wilson makes the following four grand divisions of alcoholism:

1. Acute alcoholism,
2. Chronic alcoholism,
3. Hereditary alcoholism,
4. Dipsomania,

with numerous subdivisions; but for practical purposes suppose we call them all by the broad, plain terms, drunkenness of the convivial man and of the chronic drunkard.

How often do we hear it said of a man, "He is a good workman, but he will occasionally have his sprees, which last for two or three days, and then he will be all right again." Can there be any habit in this? A habit which is irresistible is something that is indulged in much more frequently, and with much more regularity than the ambiguous word "occasionally" would express. Now it is a fact that, as the years roll on, these occasional sprees are more apt than not to become more and more frequent, until at last it gets to become one continuous "occasionally."

Now, what is the reason for this occasional spree? Here is a man who is a good workman, a good salesman, or a good

minister of the gospel. Is it reasonable to think that this man deliberately and intentionally throws away his chances in life? Is it reasonable to think that this man makes himself miserable from choice? Is it not more reasonable to think that there is some power over which he has no control which impels him to drink to intoxication day after day?

Old miners who are miles away from any place where intoxicants can be had say that when they are feeling badly and can't eat, nothing does so much good as to go to the nearest town and "blow it out"—that is get very drunk for a day or two.

What is the explanation of this? Is it possible that in their case the liver has become sluggish and that the vomiting and purging which they bring on by their overdoses of alcohol really does give them the "cleaning out" which they speak of, and set things moving again until the next attack comes on? And would some remedy acting on the liver do the same work in a shorter time and quite as effectually as the spree?

But, you will say, all these bad symptoms which the miner complains of are present in the confirmed drunkard; and so they are; but we all know that in taking any medicine, especially in chronic diseases, the poison line shifts, and the dose has to be increased constantly until at last the remedy fails entirely and something new has to be tried.

Could not this, too, be true of the drunkard, who, unconsciously, at first employed a remedy for a disease which, in the course of time, has become less and less efficacious until at last it fails him entirely, and he is not comfortable unless under the influence of alcohol, and finally sinks into the so-called drunkard's grave?

If this is true, could not the disease which causes the drunkenness be reached by some remedy? And as the symptom neuralgia is often cured by the removal of a tumor or by attacking the disease which causes the neuralgia, so drunkenness may be cured by attacking that which causes it.

That drunkenness is hereditary in some families is, I think,

generally admitted. Some young men seem to take to intoxicants from the first, as their fathers did before them ; but so do some young men seem to develop consumption, as their fathers did before them. Some families seem to have in them the curse of one kind of hereditary disease and some another kind.

At times a whole generation may escape the dread disease, only to have it break out in the one following ; and as families in which consumption is hereditary should use great care to prevent the disease from appearing, just so families where drunkenness is hereditary should teach their children, from the first, the danger to which they are liable. The great trouble is that as many people have searched for a cure for neuralgia and not the disease which caused the neuralgia, so doctors have sought a remedy for drunkenness without taking into account the disease which causes it.

In considering the subject, the convivial drinker must be left out of the question entirely. He drinks because he thinks it a great pleasure ; he is perfectly healthy and would probably not drink anything could he find no companions to drink and talk with.

To be sure, his organs of digestion may give out at any time as any one else's might, and he, too, may drift into the remedy rather unconsciously and in the end drink for a far different reason from what he did in the first place ; and this too, I consider a good argument that drunkenness is a symptom of disease, because the convivial man hates the sight of an habitual drunkard.

The two men are as different as day is from night, and there can be little similarity between them. The drunkard is seldom or never from under the influence of alcohol, while the convivial man goes off for a day's fishing or to the races and has a "good time," gets "drunk as a lord" because somebody else got drunk, talks it all over the next morning as to who was the drunkest the night before, and then goes home and about his business until he meets with another crowd bent on having "a good time."



The drunkard is far different. He drinks because it makes him feel better. He is not apt to be jolly ; on the contrary, he is apt to be ugly toward those around him, or he is quarrelsome, or may be stupid and say nothing. The drunkard is generally miserable, so miserable that he often blows his brains out or in some other way makes way with himself, because, being sane, he knows his condition, but after frequent trials knows that he cannot stop drinking. This is the man of whom I would speak ; this is the man whom I claim needs the care of the doctor.

The drunkard has always been and is now shunned by the general practitioner, who tells him, when he is consulted, to "stop drinking," and then shoves him aside because he looks on him as loathsome. Just as well might the doctor treat the syphilitic patient or the small-pox patient in the same manner, were it not that small-pox is a recognized disease which is understood and has been thoroughly studied, while alcoholism has been comparatively neglected.

Another and by no means a small cause for intemperance is the quality of the liquor sold. From the debauch on one grade of liquor a man may awaken the next morning feeling in a comparatively good condition, while a spree on a poorer article makes him feel wretched and leads him to drink more of the same stuff in his efforts to "brace up" and make himself comfortable. Drs. Dujardin-Beaumetz and Andigé, in their report to the Institute of their researches on chronic alcoholism during 1879-1883, say that among the pigs with which they experimented the action of the impure alcohol was much more rapid and deleterious than from rectified alcohol. For this cause of intemperance the Prohibitionists are undoubtedly responsible in a very great measure, because he who desires a drink of alcohol will get it in one way or another, law or no law, and where the risk of selling is the greatest, there the newest and poorest liquor is invariably sold, hence the effect produced is much worse than in places where competition compels the seller to supply a comparatively good article.

If half the energy displayed by these exceedingly well-meaning people, whom I greatly respect, in trying to do a thing which they have not been able to accomplish after years of trial,— if even a small part of their energy could be devoted to the proper government of the traffic many of the saloons might be abolished and a better article sold to the consumer. As it is now too much encouragement is given to men to go into the traffic.

The seller can buy a gallon of whisky for, say, 85 cents ; this gallon, I am told, will average about 144 drinks, to say nothing of the water which he may add to the original gallon. One hundred and forty-four drinks at ten cents a drink is equal to \$14 40, a profit of \$13.55 ; therefore if the seller has only fifteen customers a day he will be making as much as if he worked by the day's work, provided the workingman can get work every day.

This the Prohibitionist could remedy by making the business less profitable, which could be done as follows :

M. Lancereaux, before the Académie de Medicine, November, 1885, after showing that alcoholics come chiefly from districts where wine is not produced, proposed the national adoption of the following measures :

1. Absolute liberty in the sale of cider, beer, and wine, on condition that they are of good quality and unadulterated.

2. Government supervision of the manufacture of spirits of all kinds and the granting of prizes for methods of diminishing their ill effects.

3. The imposition of the highest practicable tax upon spirituous drinks and an insistence upon both the good moral character, and a severe license in the case of liquor dealers.

4. The punishment of those found in the state of intoxication and the establishment of refuges for those who cannot abstain from the abuse of strong liquors.

In this country high license is being tried, but this still leaves the consumer unprotected and, because of the temptation of the seller to keep an inferior grade of liquor to counterbalance the high rate of the license, is rather conducive to intemperance than a preventive.

Of the reformed drunkard, so called, I think it may safely be said there are none where the predisposing cause still exists. One of the worse cases of alcoholism I have ever been called on to treat, was in a man who had abstained from intoxicants for four years. In his case, the cause, a bad, irritable stomach and a sluggish liver, had returned and brought with it the old irresistible craving for liquor. The reformed drunkard may point to his improved condition, etc., but if you look into the matter I think you will find that the reform began at a time when the conditions were changed. Cures of drunkenness have been reported, many of them, among which the administration of strychnine plays an important part, but I do not think that any specific will ever be found; rather would I believe that more attention will be given in the future as to what makes a man drink when he knows that it is for his best interests not to drink.

The disease theory of drunkenness dates back from the second century, when the Roman Ulpian urged the treatment of inebriates as sick and diseased. In 1747 Condillac, of France, urged the provision of hospitals. Since then many other eminent men, among them Drs. Rush of Philadelphia and Esquirol of France have urged the same thing.

The mention of the theory, however, has always roused such intense feeling that comparatively little has ever been done.

The following statistics by Baer, of Berlin, obtained from observations in England and Germany, comparing the years of life to be expected by persons of various ages, who were not handlers of alcohol, with the years of life remaining to those who used alcohol constantly, may be of interest.

Non-handlers of alcohol aged

From 25 years had before them	32	08	years.
" 35	"	"	25.92 "
" 45	"	"	19.92 "
" 55	"	"	14.45 "
" 65	"	"	9.72 "

Those who constantly had to do with alcohol had a future of

From 25 years of age		26.23 years.	
“ 35	“	20.01	“
“ 45	“	15.19	“
“ 55	“	11.16	“
“ 65	“	8.04	“

These statistics might be somewhat changed were small-pox or any other disease neglected or looked on as alcoholism is by most people.

In conclusion, let me again call the reader's attention to the fact that this is written for the poor, miserable man who sees his business drifting from him, day by day, without his being able to stem the current and who would help himself if he could, but has not the ability to do so. To this man I think the doctor can do good.

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DR. VAN HOFF in the *Medical Record* thinks that in *crime* there is need of studying the organism and its environment, also that the cause of crime and inebriety is often social and psychical, and therefore suggestive of a physical remedy which in the treatment is of great importance to society. Prevention and reformation are the requisites of dealing with crime. Science and intellectual honesty must come into the question of treatment before any results can be expected.

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DR. ROCHART OF PARIS says the modern disease of inebriety was born with the production of industrial alcohols, practically about half a century ago. The terrible progress of this scourge that the northern nations of Europe have drunk more than all others combined. In France, this consumption has been about 3.80 litres per head; in Denmark it was 16.51 litres to each person. The alcohols of commerce are extremely dangerous and poisonous as beverages.

## Abstracts and Reviews.

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### ALCOHOL AND INHIBITION.

Dr. Clouston of the Royal Asylum at Edinburgh recently gave a lecture on the above topic before the "Total Abstinence Society." The following is a summary of what he said:

Dr. Clouston began his lecture by saying that the taking or the abstaining from taking alcohol was not the simple question which it appeared to some people. There were historical, social, physiological, ethical, and other considerations that they had to bring before their minds before they could come to a decision on the question. In his lecture he used the physiological term *inhibition* rather than its ethical equivalent *control*, for the word inhibition had a physical as well as a mental application. Physiology taught that inhibition was one of the most important of all the conditions of life and of all the conditions of nerve working. The healthiest and the best brains hereditarily always had the greatest power of inhibition; inhibition was, in fact, the highest of all the brain's qualities. The increase of the power to exercise effectually the controlling part of the brain ought to be one of the highest aims of all education worthy the name. The action of alcohol on the brain varied very much in the case of different people. Alcohol taken in small and single doses acted almost exclusively on the brain and the blood-vessels supplying the brain, whereas, when taken in large and repeated doses, its chief effects were always nervous effects. The first effect of alcohol on the function of inhibition was to paralyze the controlling nerves, so that the blood centers were dilated, and let more blood into the brain.

In consequence of this flushing of the brain, the nerve

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centers of it were asked to do more work. It might be asked whether it was not a good thing that we had a drink which had the power of, forcing the brain to do more work than it could in ordinary circumstances. In some cases — in special emergencies — that was undoubtedly a very valuable agent at their disposal. A small quantity of alcohol would with some people make the thinking power quicker and clearer, the emotions deeper, and it would intensify the social instincts, and in no other way could they explain the almost universal use of alcohol among so many different people at feasts and social gatherings. In some brains, again, alcohol excited mere animal desires and appetites, and in others it stimulated the imagination so that for the time being a more ideal life was created, and no doubt this fact accounted for the craving for alcohol among people who led a humdrum life amid wretched surroundings. In the case of a few persons courage and resolution were increased by alcohol — he meant by alcohol in small doses — and in many persons the general feeling of organic well-being was increased. In many brains the effect of alcohol from the beginning, in however small doses, was to confuse all mental operations. While they had these effects, some of them good in their way for special purposes and special circumstances, there were two mental faculties almost never stimulated, but always lessened, by the use of alcohol — the inhibitory power and the higher creative and initiative power. Man had really never more self-control under the influence of alcohol; his moral sense and the compulsion of duty were never enlarged through the agency of that stimulant. It was a well-known fact that after the champagne had been passed round at dinner there was a feeling of exhilaration among the company; the tongue wagged more than usual, and there was less caution in the speech. Society would certainly not be so safe if all men were in the “champagne” condition always — and as to any initiative or original work of the highest order, he had no doubt that state of the brain — what he might call the “champagne” state — was not the

best time for it. Even granting that the stimulus of alcohol in certain brains gave better work than was obtained without it, he maintained that the man who worked constantly under that stimulus must pay the undoubted penalty of reaction, and that, taking his whole life and work, he would have secured more happiness, done more work, and lived longer had he depended on the natural brain stimulus. Up to that point he had been speaking of alcohol taken in small and single quantities; and were mankind always and invariably to limit its use to small quantities, and if all mankind had sound and strong brains and good heredity, there might, perhaps, be little need for total abstinence societies, for the evils of alcohol, taken in those small quantities, might then fairly be balanced against its benefits. But, unfortunately, physicians found widespread in society brains with a craving for stimulants that could not be controlled by the unfortunate victims — people with latent seeds of, and predisposition to, disease, bodily and mental, which small doses of alcohol could arouse into actualities. There were some people — reputable and useful citizens — who, when they took small quantities of alcohol, lost all self-control; inhibition with them stood in this position, that it was destroyed by the smallest dose of alcohol.

Control seemed to be the first quality to disappear in the dissolution of the brain, and alcohol was certainly a most potent agent in bringing out such a disease. There was, to his mind, no sadder chapter of history than the lives of poets and geniuses whom alcohol fed, then dominated, and afterwards killed. The repeated taking of alcohol in unfavorable conditions of life — sometimes over-fatigue, sometimes over-study — had the power of creating desires and cravings that were uncontrollable and hurtful, and which, if gratified, led to disease and death. The desire in those cases, no doubt, indicated a need, but it might not be the thing craved for that the system required. The craving might be for alcohol, but the need was for food and fresh air and proper conditions of life. Continued excess in the use of alcohol led to two

allied conditions—alcoholism and alcoholic insanity. He imagined that about half the suicides and murders in this country were due to the excessive use of alcohol—and those suicides and murders happened in the early stages of alcoholism and alcoholic insanity—and suicide and murder were the acme of all examples of the loss of self-control. About one-fifth of the insanity of the country was due to the use of alcohol. When the continuous use of overmuch alcohol did not lead to any one of those conditions, it led in time toward a kind of personal and social degradation, in which a mental, bodily, and moral change for the worse took place in the man. The man's self-control was lessened, and this might take place, although he might never be drunk, for "soaking," especially, led to this condition. Men following intellectual pursuits were especially apt to be victims of mental and bodily degradation through alcohol; for once they came under its subtle control, the craving for it in men of educated brains was perhaps stronger than in men of uneducated brains. Concluding, as he said, with some brief practical remarks applicable to them as students, Dr. Clouston said that, taking into account the period of life at which they as University students studied, the work they had to do, the unfavorable conditions of life under which they had to live from a physiological point of view, and the fact that neither he nor they knew the weak points of their constitutions as derived from their ancestry, he thought the student would have little reason to blame himself who totally abstained from alcohol.— *Temperance Record.*

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#### ALCOHOL IN MEDICINE.

Dr. B. W. Richardson delivered an address at the London Temperance Hospital recently, being a review of twelve months' medical practice in the wards of the London Temperance Hospital. At the outset he said that it was in the early part of 1892 that the governors of the hospital did him the honor of inviting him to become physician to their insti-



tution, and to take charge of twenty-five beds. He entered upon his duties in April last. He was left perfectly free to prescribe alcohol to the patients under his care if he thought such administration at any time necessary; the only stipulation being that if he did prescribe alcohol, it was to be as a medicinal substance, with a special note in the register of the facts of the prescription, the doses of the remedy, and the dates in every case. He thought this most fair to himself and to alcohol, and accepted the contract with all good faith and cheerfulness. He stated at once that from the commencement of the time during which he had had charge of patients he had not prescribed alcohol in any case. In making that statement he related a simple fact without prejudice, and without any shade of what was called "fanaticism." He was no fanatic for or against alcohol. He entered upon his duties with the clearest understanding that in its character as a remedial agent he could use alcohol at will. He also knew its actions. He knew it to be a good paralyzer, and that acting as such on the minute circulation it would open the floodgates of the circulation when they were resistant and would allow the nutritive blood to flow into the minutest point of its destination. He recognized alcohol, too, as an antiseptic, and was not blind to the fact that at much cost to the working powers of the body it might be made to act as a febrifuge. He had not, therefore, disdained to recognize its therapeutic position. He had availed himself only of a splendid opportunity of ascertaining on a large scale what could be effected in the treatment of *formidable diseases affecting various classes of people* without alcohol as a common remedy. He emphasized the words italicized for this reason. It might be assumed that some particular class of patients came to this institution for the aid it afforded—total abstainers, for example—who to some extent were favorable subjects for treatment without alcoholic stimulation, and it might candidly be admitted that if this were the fact the results gained would not be fair comparisons, because total abstainers were in the most remarkable degree the best

patients for recovery from all diseases, *cito tuto et ecunda*. But they had often more professed non-abstainers than professed abstainers in their wards. "Who enters here leaves alcohol behind," was their absolute rule, and they had no difficulty in carrying it out. He had never been solicited by any patient to be allowed alcoholic drink, not even for the stomach's sake. By way of illustrating the kinds of disease that had come under his care, Dr. Richardson enumerated a list of the first two hundred cases that had occurred between April and October, 1892. Of the two hundred, 116 recovered, or 58 per cent.; 44 were relieved, or 22 per cent.; 11 were discharged unrelieved, or 5½ per cent.; and 29 died, or 14½ per cent. The most favorable recoveries were those from diseases affecting the alimentary system, which had impressed him strongly as proofs not simply of the value of abstinence from alcoholic fluids whenever there was inflammation, irritation, debility, or relaxation of the alimentary surfaces, but, by comparison, of the injury inflicted in such cases by the administration of alcoholic fluids. In regard to recoveries from diseases of the nervous system he could not resist the belief, speaking from experience, that the non-alcoholic method was as sound as it was successful. The lecturer then gave an account of the lines of treatment, *minus* alcohol, and in conclusion said: For my own part I am satisfied that no aid I could have derived from "alcoholic stimulants," as they are called, could have bettered my results.

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#### PROGNOSIS OF CHRONIC ALCOHOLISM IN THE LIGHT OF PATHOLOGY.

Dr. Barlow believes that the results of clinical pathology give a reasonable basis for a more hopeful view of the possibilities of recovery than that generally held. He draws attention to the main features of that manifestation of chronic alcoholism, viz.: peripheal neuritis in search of any clue as

to lines on which improvement might be looked for in any attempt to repair in other organs. His working hypothesis is this: that alcohol in concentrated forms, given over varying periods, acts as a definite poison leading to an irritative overgrowth of connective tissue elements, but that where this poison is withheld and a chance given to the living organism, though there may be for a time a tendency to the extension of connective tissue change by continuity of structure, yet that extension is limited, and that subsequently, the normal tissue elements tend to be restored. The removal of degenerated myeline and the absorption of young connective tissue, is, he considers, no more wonderful than the absorption of provisional callus round a fractured bone. He further says: "We know that lead, mercury, etc., may produce results on the peripheal nerves exceedingly like those produced by alcohol; and just as with alcohol, if the dose of poison be too severe, death may ensue." But it is equally true, that if the irritant *noxa* be withdrawn and food assimilated, there is a tendency to complete restoration. In the recovery from alcoholic neuritis, the great factor is withdrawal of alcohol, the administration of food, time, and the natural tendency to elimination and repair. With respect to other results believed to be brought about by chronic alcoholism, there is no doubt that its existence makes the outlook much more serious in many acute and chronic diseases, and it often makes great difference as to chances of recovery. But we have attributed too much to its influence in the etiology of other diseases, especially of kidney disease and disease of the large and middle arteries. It is most significant that in a large number of cases of alcoholic cirrhoses of the liver, there is no albumen in the urine. But if with chronic alcoholism there are other existing causes of degeneration, as valvular disease or atheroma or granular kidney, then it is futile to expect that in such cases merely taking away stimulants will cure.— *Journal of Nervous and Mental Disease.*

THE DISEASE OF INEBRIETY FROM ALCOHOL, OPIUM, AND OTHER NARCOTIC DRUGS. ITS ETIOLOGY, PATHOLOGY, AND TREATMENT, AND MEDICO-LEGAL RELATIONS. Arranged and compiled by the American Association for the Study and Cure of Inebriety. E. B. Treat, Publisher, No. 5 Cooper's Union, New York city. 1893.

The popular literature relating to inebriety is as confusing as it is voluminous. Only within a recent period has any scientific study been made, and a few pioneer volumes have appeared rich with promise and suggestion of the work to be done. This field of medical study is not occupied except by a few persons far in advance, who are pointing out facts and conditions that another generation of workers must confirm and supplement. The first pioneer works of *Parish, Wright, Day, Kerr, Magnan, Usher*, and others, are now followed by the first great compendium volume, a volume which begins with the established fact of disease and the curability of inebriety, and proceeds to group the evidence and map out the facts on which this statement is based.

This work, covering four hundred pages, gives the results of all the medical studies of the best authorities up to the present time.

The reader is given a general outline view of this field and its bearings on this great problem of what to do, and how to check and prevent inebriety. The most satisfactory feature of this volume is the suggestiveness and glimpses of the possibilities from farther and more exhaustive study. The work already done, and the wide stretches of the unknown that open on all sides, rouse the keenest interest in the reader and give a value to this work that cannot be estimated. The readers of this JOURNAL will fully understand that no review, critical or otherwise, can convey an adequate idea of a work that aims to point out the present position of the study in this field. These are the books that practical men need. Like charts and maps, they point out the way in

the few outline truths, and their value in every medical library is equal to that of any encyclopedia.

This work is a natural supplement to the *JOURNAL*, and should be in the hands of every reader. The publishers have presented an attractive volume.

**MICROSCOPIC RESEARCHES OF THE CORPUSCULAR ELEMENTS OF THE BLOOD.** By M. L. HOLBROOK, M.D., New York city.

This brief paper is especially valuable to all physicians who have made any studies of the blood. It suggests to the amateur many very practical ideas of great interest, and indicates possibilities of new facts along this line.

We commend this paper to every specialist with a microscope.

**CRIMINOLOGY.** By ARTHUR MACDONALD. Large 12mo, cloth, 416 pp., with Bibliography of Crime, etc., \$2. New York, London, and Toronto: Funk & Wagnalls Company.

The science of crime and criminals opens up a vast field of great interests, not only to the scholar who investigates causes and sequences, classes and peculiarities, but to the ordinary thoughtful man who, recognizing the awful effects of crime, and realizing something of the almost innumerable number of criminals, desires to know of these phenomena in their relations to society, to the human race. In this age of "better things" we have been led to believe that while the punishment of criminals is necessary for the protection of life and property, yet the prevention of crime is the desideratum devoutly wished for. To effect this, as far as possible, is the problem to be solved, and those who are attempting its solution have investigated the causes of crime, not sin in the abstract, but crime in its awful concrete power. Find and analyze the causes, and then remove them, is the only scientific solution of this problem.

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Dr. MacDonald has produced one of the most valuable and suggestive works on this topic that shows something of the vast field that is just opening and possibilities of reaching the criminal never dreamed of before.

Some of the conclusions arrived at are as follows :

*First.* It is detrimental financially, as well as socially and morally, to release prisoners when there is probability of their returning to crime ; for in this case the convict is less expensive than the ex-convict.

*Second.* The determinate sentence permits many prisoners to be released who are morally certain to return to crime. The indeterminate sentence is the best method of affording the prisoner an opportunity to reform, without exposing society to unnecessary dangers.

*Third.* The ground for the imprisonment of the criminal is, first of all, *because he is dangerous to society.* This principle avoids the uncertainty that may rest upon the decision as to the degree of freedom ; for upon this last principle some of the most brutal crimes would receive a light punishment.

*Fourth.* The publication in the newspapers of criminal details and photographs is a positive evil to society, on account of the law of imitation ; and, in addition, it makes the criminal proud of his record and satisfies the morbid curiosity of the people. And it is especially the mentally and morally weak who are affected.

*Fifth.* It is admitted by some of the most intelligent criminals, and by the prison officers in general, that the criminal is a fool ; for he is opposing himself to the best, the largest, and the strongest portion of society, and is almost sure to fail. An extensive and exhaustive bibliography of crime of the best books and articles in the several languages follow. No other such bibliography has ever been issued.

The *Phrenological Journal* of New York city, is of great practical value to every physician for its accute studies in human nature and psychology.

A STUDY OF THE DEGENERACY OF THE JAWS OF THE HUMAN RACE. BY EUGENE S. TALBOT, M.D., D.D.S., Professor of Dental Surgery, Woman's Medical College, Chicago, etc., etc. S. S. White, Dental Manufacturing Co., Publisher, Chicago, Ill. 1892.

This admirably written brochure is replete with facts of much interest, and points to the anatomical changes going on in the race often overlooked. The study of anthropology is neglected by the medical men as a rule. Observing dentists note the changes in the maxillaries and teeth, and are really the best authorities in these fields of study. The author, Dr. Talbot, is one of the most distinguished students in this country. His studies of crania and maxillaries, extending over many thousand cases, with some conclusions grouped in this volume, are of unusual value to every dentist. This little work should have a place in every library, and will rouse new interest in this neglected field.

PSYCHOPATHIA SEXUALIS, WITH ESPECIAL REFERENCE TO CONTRARY SEXUAL INSTINCT. A MEDICO-LEGAL STUDY. BY DR. R. VON KRAFFT-EBING, Professor of Psychiatry and Neurology, University of Vienna. Authorized translation of the seventh enlarged and revised German edition. BY CHARLES GILBERT CHADDOCK, M.D., Professor of Nervous and Mental Diseases, Marion-Sims College of Medicine, St. Louis. In one royal octavo volume, 436 pages, extra cloth, \$3 net; sheep, \$4 net. Sold only by subscription. Philadelphia. The F. A. Davis Company, publishers, 1914 and 1916 Cherry Street.

The contents of this volume include chapters "On a Fragment of a Psychology of the Sexual Life; Physiology of Sexual Life, General Pathology, Sexual Pathology, Pathological Sexuality in its Legal Aspect." These chapters are illustrated with clinical histories of a large number of cases that to the average reader are very startling and almost incredible. The insanities and abnormalities associated with

the sexual functions are so complex and obscure that it has been a veritable *terra incognita* up to the present. This volume opens up this country, and the reader is brought face to face with facts and explanations which he never dreamed of before. This is one of the very few books that is entirely new to the average reader, and even the specialists will find nothing in English literature to compare with it. It is simply a grouping of clinical facts of the most intense interest physiologically and psychologically. Practically these facts throw new light on the sexual problems and enable one to form clearer conception of the means and measures of prevention and treatment.

We urge all our readers to procure a copy of this work. No modern library is complete without it.

LECTURES ON MENTAL DISEASES DESIGNED FOR MEDICAL STUDENTS AND GENERAL PRACTITIONERS. By H. P. STEARNS, A.M., M.D., Superintendent Hartford Retreat. Lectures on Mental Disease, in Yale University, etc. P. Blakiston, Son & Co., publishers, Philadelphia, Pa. 1893.

This is a volume of practical lectures delivered before students, and a treatise combined, covering a very large part of the territory of psychiatry. The first lecture on the "physical basis of thought" is the most interesting in the book. The others following are well illustrated, and generally clear statements of the leading facts of the various phases of mental disease. Evidently the author is an excellent teacher — solid, formal, stately, and exact, with but little enthusiasm, who conveys the impression of completeness in all his teachings. His treatment of the alcohol and opium insanities, of general paresis, and some other topics, are good illustrations. Notwithstanding this formal cast of style, the book is one of the best American treatises on the practical side of mental diseases that has appeared. It is replete with illustrations of cases which bring out and fix the leading symptoms of the disease very clearly on the mind. This for



the general practitioner is a great advantage over elaborate descriptions, and makes the text very pleasant reading. Both specialist and student will read this work with profit and pleasure simply because it is conservative, sound, and judicious, and the result of the author's long experience.

Such works never carry the reader into new lands, never point out possibilities and suggest new lines of study, but simply gather and group the present facts, which are eminently useful and valuable. Such works should not be condemned, but warmly praised; yet the reader is always impressed with the idea how much original work is lost in the bookish efforts to arrange and harmonize the theories of to-day, especially by specialists who are capable and in a position to extend the frontiers of truth beyond the present limits. Dr. Stearns's work is worthy of all commendation. The printers have brought out a very attractive volume.

*Modern Homœopathy*, by Dr. Browning, of Brooklyn, N. Y., is the Gould prize essay, and has the merit of being a dignified rational exposure of the frailties of this assumed system of practice.

The *Medical Mirror*, edited by Dr. Ridge, the organ of the British Medical Temperance Association, is an excellent journal, combining much matter for both for professional and popular readers.

*The Science*, published by Hodges & Co., New York city, is an excellent weekly that contains many very valuable facts on all fields of study. Such journals are far more valuable than secular dailies or weeklies. Every medical man should be a subscriber.

The *Journal of Hygiene and Herald of Health* is an old friend which has been forty-three years going out to the public with monthly advice on hygienic life and living. Dr. Holbrook, its veteran editor, has been and is a literal preacher of salvation by the use of means along the lines of physical

laws. Send for a copy to the editor, 46 East 21st Street, New York city.

The *Popular Science Monthly* continues to grow in interest and value, especially along lines of higher medical study. Many of the articles are résumés of the best thought not to be found in any other journal.

We have often referred to the *Homiletic Review* published by Funk & Wagnalls, New York, and take great pleasure in calling renewed attention to it. Send for a copy for examination.

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The *psychological studies* which throw new light on inebriety are increasing with great rapidity. Hypnotism is tried as a remedy, and the success in a few cases is promising not so much as a remedy, but as an open door for new truths and new facts in the causation and growth of inebriety.

The Journal of Psychology under the care of Dr. Hall of Clark University, Worcester, Mass., brings to the reader a new world of facts which indicates a rapid advance in observation and experiment. The various problems of inebriety and crime appear in a different light from every new fact in this field. The Society for Psychical Research, in their journal published in England and circulated among associate members in this country, have presented some exceedingly interesting papers on subliminal consciousness, the phenomena of trance, experiments in thought transference, and other topics. A section of psychology are to have a meeting and exhibit at the World's Fair. The Medico-Legal Association have formed a section and propose to make some researches in this field. This great activity should rouse up new interest in the phenomena of inebriety, and the morbid mental activities so familiar to all students of this subject. The few persons who have attempted to do anything in this direction are confused and bewildered with the vast number of facts which they are unable to group or classify; hence, they turn to some more practical side.

## Editorial.

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### THE HIGHER FACULTIES IN INEBRIETY.

The use of spirits or opium to excess is always followed by impaired and defective ethical sense. The higher faculties degenerate; love, faith, hope, and reverence change to hatred, doubt, suspicion, and despair. The moral tone and conceptions of right and wrong are lowered. Pride of appearance and respect for established customs, opinions of others, and the integrity of statement, word, and honor, all change and recede. The power of correctly estimating motives and conduct fails and becomes irregular and unreasonable; personal conduct and failures are the levels from which others are judged. Delusions appear, often excessive boldness or caution follow. These and many other symptoms may be present and be unnoticed, except to those who are intimate with the person. Not unfrequently such persons may conduct large business relations, and follow lines of automatic conduct in which these changes are not apparent. Irrespective of all drugs, these symptoms of defective moral faculties may exist; but when the special paralyzing action of alcohol and other narcotics are added, this part of the brain is literally destroyed. This is verified in the history of criminals and irregulars who are outlaws of society, who have little or no moral brain power. They are found to have in nearly all cases inebriate parents. The injury from alcohol and opium has concentrated on the higher moral faculties, and the children are moral defectives. This highest and latest formed faculty has started on a process of dissolution, which extends to the next generation, and unless checked by the engrafting of new force and vigor, will soon carry the race on to extinction.

The failure of the inebriate to realize the ethical relations of his life and adjust his conduct and thought to the claims

of duty and right is evidence of the failure of this faculty. He is morally blind the same as persons are color blind. If this faculty is undergoing dissolution in the family line, the addition of alcohol and opium will intensify it. Evolution extends to the separate faculties of the brain, some of which are evolving and developing, and others are breaking up and dissolving. Often insanity is simply failure of certain faculties or of certain functions. The intellect becomes affected and degenerates; the moral faculty breaks down and undergoes dissolution. A degree of instability may have come down from past generations, and the higher faculties have been imperfectly formed and lack in vigor.

This is illustrated in many ways in every-day life. The vast number of persons who are imperfectly developed anatomically, and within the observation of the senses, are illustrations of similar defects which exist of the physiological and psychological functions of the brain. Many persons are born with uncertain, retarded, and defective brain growths—brains that are unable to bear the least shock or strain, and when once exhausted never recover—brains which psychologically degenerate and undergo change and atrophy. This is often the basis and origin of inebriety, and is supported by clinical experience. Inebriety is especially marked by degeneration of the highest and last-formed faculties of the brain. Irrespective of all early causes it is a dissolution of these faculties. At present no one can determine where this begins or how much moderate or excessive use of spirits will make this condition apparent. No lines can be drawn, and the old theory of vice and sin up to a certain point and disease after is sure to be a stupid fiction. Many very interesting questions are raised from this point of view. Of what value are moral remedies alone to persons who have diseased higher ethical faculties? Is it possible for reformed inebriates to be teachers of morals, after years of continuous degeneration of this special faculty? How far can hysterical emotion and positive pledges and assertions restore a dissolving faculty, whose dissolution may have begun in the

past generation? The paralyzing action of alcohol on the higher faculties is unquestioned, and how is it possible to determine its extent and degree? By what means can this degeneration be checked and controlled? Is there any other way except by building up and strengthening the entire organism? How is it possible to ascertain whether the drink impulse is a symptom or the original cause? Who will dare to say that the inebriate has a sound brain and should be treated as one who could, but will not, stop drinking? It seems clear that degeneration of the higher faculties, either inherited or caused by alcohol, is a fact, the study of which will clear away much of the confusion now existing.

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#### ASSOCIATION MEETING.

The space which we give to the discussion of specifics for the cure of inebriety must not be understood as an indication of the importance of the subject. Nothing is more desirable for empirics and quacks than criticism and condemnation. This journal could receive a very large income for simply expressing and denouncing empiric schemes. These outlaws want notice either good or bad, and are always ready to turn criticism to their profit. Silence and neglect is death for the gold schemes as well as all other appeals to a credulous public. During the past year this journal and many leading members of our society have been annoyed by the use of our names as endorsing and using specifics. It seemed proper for our society to make a statement and go on record, not as bitter opponents or critics of any of these specifics, but as specialists who thoroughly understand them, and who consider their nature and claims beneath notice, to be classed with the natural bone setter, the faith healer, and the street vender, who promises immediate cure.

The constant appeals to the statements of cured victims is urged with hysterical positiveness, as if it was the strongest evidence. The silence which greets this is assumed to be conviction and prejudice in not acknowledging it.

All experience shows that the remedies used by these specific venders have been before the profession for years, and been tried repeatedly in every asylum without marked effects. Every scientific man in this field of study is open to welcome every new remedy or combination of remedies that promises any possible relief. But a nostrum that depends on secrecy, faith, and credulity is below all levels of common sense, and utterly unworthy of any notice. The practical effect of these gold-cure specifics has been to fill up all our asylums with new patients, many of which are relapsed victims, and rouse up greater interest in asylum treatment. From a selfish point of view every asylum manager should wish for a continuance of the "gold cure and other specifics," and seek to keep up the interest and excitement, simply as a matter of advertisement and personal advantage.

This journal and association are not purchasable, or in the market to help empirics and unprincipled men who sign M.D. to their names, or who pose as teachers of truth from the pulpit. They have their reward. The evolution of truth will regulate and finally dispose of all deception and fraud.

Our meeting has been simply a protest against any recognition or endorsement of any secret remedies for the cure of inebriety.

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Our sister society for the study and cure of inebriety in London celebrated the hundredth anniversary of one of the vice-presidents, Dr. Severin Wiclobycki. This remarkable man was born January 8, 1793, in Poland. The first thirty-five years of his life was spent in the army as an officer in the cavalry. He was obliged to leave the country as a political refugee. He came to Edinburgh and graduated in 1841, in medicine. From that time he has been a teacher and practitioner; the past thirty years he has lived in London. At present he is ruddy, energetic, healthy, military looking man. His eyesight is good, and the only infirmity from which he suffers is deafness. He has been a warm friend and advocate

of the recognition of the disease of inebriety, and its treatment in asylums. His life has been a practical illustration of total abstinence and healthy living.

Dr. Kerr gave a very interesting address, followed by congratulations, resolutions, and remarks from many eminent physicians and clergymen. Over three hundred and fifty guests were present, and after a pleasant service of speech, song, and collation, Dr. Kerr delivered the introductory lecture for a course on "Inebriety and Jurisprudence." The lectures following in this course were on these topics: "Inebriety and Insurance;" "Relations of Inebriety to the Civil Law;" "Inebriety and Criminal Responsibility." We hope to publish these lectures in the JOURNAL soon. This society is to be congratulated on its activity and popularity, due very largely to its distinguished president, Dr. Norman Kerr.

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#### A GREAT WRONG.

The *Journal of Insanity* makes a timely and vigorous protest against changing medical superintendents of insane asylums with the change of political parties. It says: "The pernicious effect of such a policy is so plain that we should feel as if we were insulting the intelligence of our readers by arguing the question. Men whose aspirations are for professional eminence and usefulness will hesitate about accepting positions in which such qualities count for nothing. Even if competent men are secured, they are sure, in a State in which parties are pretty evenly balanced, under such a system, to be turned out before they have acquired the experience that will enable them to do their best work. The inevitable tendency, under such conditions, is to the filling of the offices by men whose only object is to make money out of them, and who, knowing that the time is short, will 'make hay while the sun shines.'"

Every medical man should denounce this policy, and every society and journal should condemn it as degrading to the profession. If party and politics govern State charities

and determine what medical men shall control, their usefulness and value to the world is destroyed.

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The every-day practical knowledge of inebriety exceeds that of almost every other subject concerning the brain and nervous system. Yet, strange to say, the phenomena of inebriety is a mass of confused half truths, misconceptions, and delusions. The attempts of moralists to arrange in some orderly sequence the facts have added still greater confusion. The gospel temperance efforts, the revivalists, the politician, the reformed inebriate, and lastly, the quack with his specific, bring no solution of this problem. The only way to understand the facts of inebriety is by an accurate arrangement of the data with a study of all their relations and correspondences. This must be done as a question of science, not sentiment or emotion or matter of feeling. When inebriety is studied on this level, its truths can be known.

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It is noted in hospitals where ether is used frequently, that inebriates are hard to etherize. They seem to have some resisting force which requires double the usual amount and even then a state of muscular tremor exists which persists long after unconsciousness has been produced. Often this condition may exist for half an hour, delaying the operation greatly. Where ether is used alone a long time must be expected before stupor comes on, and unusual quantities are necessary to produce this result.

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LAUDER BRUNTON considers that the children of drunkards may have convulsions in early life, having had communicated to them from the parent, among other morbid conditions, an abnormal reflex-excitability and tendency to convulsions.



## Clinical Notes and Comments.

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### SOME EXCELLENT ASYLUMS.

It is needless to call attention to Fort Hamilton Inebriates' Home under the care of Dr. Blanchard, or Washingtonian Home presided over by Dr. Day, or the Walnut Lodge Hospital; they have all been so long before the public that neither praise nor criticism can affect their almost world-wide criticism.

Among the younger asylums we may mention the *Highlands* at Winchendon, Mass., under Dr. Russell's care; The *Falkirk* at Central Valley, N. Y., in the care of Dr. Ferguson, and *River View Home* at Fishkill, N. Y., by Dr. Watson. These are excellent home-like asylums under the care of trained experts. There are two elegant places in Canada that we hope to give our readers a more extended description of in the future; one, the *Homewood Retreat* by Dr. Lett at Guelph, where mental cases are received, and the other, *Deer Park Sanitarium* under the care of Dr. Elliott, a purely inebriate asylum.

Dr. Smith of South Wilton, Conn., has a beautiful home for nervous invalids of all classes; and Dr. Cook of Oxford, Ohio, presides over a really famous asylum in many respects.

In this cursory mention of a few of these places, we wish to call attention to rare facilities of each place for the care and treatment of drug neurotics and mental cases of all kinds. The management of each asylum is by trained experts and leaders who can give the patients the benefit of the highest medical skill in the country.

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**FRENCH TEMPERANCE SOCIETY.**—A reunion of this society was recently held, under the presidency of Dr. E. Vidal of the Academy of Medicine. The association awarded the two

Sèvres vases offered by the President of the French Republic to Dr. Paul Raymond ; a gold medal to Professor Villard, of Marseilles, for his lecture on alcoholism, delivered at the School of Medicine at Marseilles ; a silver medal to Surgeon-Major J. E. Marty, for his work on alcoholism in Algeria ; a prize of one hundred francs to M. Jean Durrieu, of Rieut ; and a prize of sixty francs to M. Pierre-Hilaire Durand, of Donjeur. Other medals and diplomas were distributed to those interested in the work of the society.

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INEBRIETY is a great wonderland of which we have but little information. We can only turn our attention to its great mountains and rivers, in order to get a general idea of the whole, and must leave it to those who follow to trace up and map out the minor features of the landscape. Years have gone by and we are still far from knowing the extent and nature of the country. Great advances have been made, but greater still grow up before the vista of the student and the explorer.

BILLS to appropriate money to pay for the cure of inebriates by the gold-cure plan, have been introduced in the Maine and Colorado legislatures. It is remarkable that *Ayers* and *Hood* with their sarsaparilla consumptive cure have not tried this plan. Where are the liver pill men ? and the magnetic belt cures ? and the specific venders for every disease ? Evidently they have fallen behind in the philanthropic march of the race.

IN 1891 there were in England one hundred and fourteen cases of death from opium chlorodyne and soothing syrups which contained opium. Sixty-two deaths came from chloroform ; aconite, belladonna, cocaine, and strychnine caused nineteen deaths. Nearly one-fourth of all accidental deaths by poison was caused by some form of narcotic. Many of these deaths came from some secret nostrum, in which narcotics were concealed.

IN Denmark the law provides that *all* drunken persons, soldiers or otherwise, shall be taken to their homes in carriages at the expense of the publican who sold them the last glass. In the Argentine Republic, instead of fining a drunkard they sentence him to sweep the streets for eight days. A similar punishment exists at St. Petersburg, where well-dressed men may be seen acting as scavengers.

The amount of money expended for intoxicating spirits in Great Britain for 1892 was decreased 350,000 pounds, which is unmistakable evidence of a change in public sentiment concerning the drink problem.

Two men of Dover, N. H., recently bought a quart of Jamaica ginger as a substitute for whisky, and drank it between them in two hours. One died within a few hours in convulsions, the other had convulsions and coma, and acute pneumonia three days later.

THE report of the asylum committee of the London Council of Asylums for Insane, state that the most potent causes of insanity of the inmates are heredity, alcohol, and brain injury.

*Alcohol, morphia, and tobacco* are not unfrequently active causes of hysteria. Ocular troubles caused by these drugs will be followed by the same disturbance.

*Morris & Co.'s Fireproof Safes* should be in every office and home in the country.

*Horsford Acid Phosphate* has become a standard remedy without a rival in this country as a nerve tonic and stimulant.

*Spaldings' Home Gymnasium* of New York city, is one of the best on the market. Send for circulars and catalogue.

*Bromo Potash of Warner & Co.*, make a combination of caffeine, and the bromides can be prescribed with the best possible results in all cases of nervousness and general debility.

Syrup of *Hypophosphites by Fellows* is a compound tonic of exceptional value. In all cases of morphia addiction and degeneration from excesses in the use of spirits, its effects are very marked.

*Cocillana* brought out by *Park, Davis & Co.*, is one of the new and startling remedies that acts so promptly on the

respiratory organs. It promises to be of great value and is worth an extended trial.

The liquid *Peptonoids* with *Cocoa* is an excellent nutrient and stimulant for the nervous system, and is of special value for alcoholic cases. Send to Arlington Chemical Co. of Yonkers, N. Y., for a sample bottle.

*Abbott's Dosimetric Granules* are very valuable where concentration and purity are absolutely required. We most heartily commend them as the finest preparations that have been put on the market. Send to Ravenswood, Chicago, Ill., for a circular.

Reed & Carnrick of New York have two valuable food remedies ; one is *Lacto Preparata* and the other *Kumysgen*. The latter is a preparation of kumyss ; both of them are pre-digested foods that are superior remedies in many cases of debility.

Dr. Edward C. Mann has removed his sanitarium for diseases of the nervous system, inebriety, and the opium habit, to Flatbush, Brooklyn, N. Y., where he has enlarged facilities for patients and several acres in lawn, shade, and pleasure grounds for patients, 28 minutes from Brooklyn Bridge by electric car. The medical profession cordially invited to call.

Dr. Breitbach of Dresden, Germany:—I have tried bromidia in a case of insomnia, caused by severe neuralgia, and the result was most satisfactory. Before I prescribed this preparation the patient always asked for injections of morphia, but never afterwards. I think that bromidia will be of great service in cases where one wants to wean a patient from the habit of taking morphia. I shall certainly continue to prescribe the preparation.

*Sulfonal-Bayer* of Schieffelin & Co., New York city, is one of the most valuable of the new narcotics we have tried. For the insomnia following the removal of opium and alcohol it has proved to be invaluable. We have given it a long time without any of the unpleasant effects noticed from the use of other remedies. In these cases only large doses of thirty, forty, and fifty grains are practical, and these should be repeated every one or two hours until the effects are produced. There can be no doubt that this is one of the most important remedies which has been introduced to physicians, and should be tried in all cases where a narcotic is indicated.

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This Journal will not be responsible for the opinions of contributors, unless indorsed by the Association.

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THE EFFECT OF ALCOHOLIC INTOXICATION  
UPON THE HUMAN BRAIN AND ITS RELATION  
TO THE THEORIES OF HEREDITY  
AND EVOLUTION.

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By A. FOREL, M.D.

*Prof. Mental Diseases, University Zurich, Switzerland.*

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Alcohol, even when diluted as in wine, beer, and cider, is a poison which changes pathologically the tissues of the body and leads to fatty degeneration. If the majority of men are still ignorant of this simple truth, and are disposed to laugh at it, it is owing to their deep-rooted, pernicious drinking habits, and the prejudices that have grown out of them. Men can always find excuses for their worst and most senseless habits, and interweave them into their ethics and æsthetics.

Some poisons are useful as medicines, such as corrosive sublimate, quinine, etc. I am one of those physicians that assign but a very subordinate position to alcohol as a medicine. A continued use of alcohol, as in wine, for example, offers no benefits, since the pretended stimulating effect is lessened by the repeated use, and the nuisance of chronic intoxication is increased.

The acute action of alcohol is that of a poison to the nervous system, especially to the brain, with a paralyzing result. The phenomena of drunkenness are transient, but in other respects are similar to those which are based on the shrinking of the substance of the brain, technically called *paralysis cerebri progressiva*, or *dementia paralytica*. It is true that in both these conditions there exist excitements, cheerfulness, loquacity, uneasiness even to frenzy, and raising the lower inclinations (or exciting the passions). But in drunkenness as well as in general paralysis these phenomena seem to be based more on the paralyzing of the checking centers of the brain than on any really stimulating effect. The pure rising of brain activity, as we observe in it strong normal mental excitement, although the checking plays some part, yet altogether it has quite another character more vivid and connected with raising the faculty of apperception, of activity of the senses, and with clearer consciousness. On the contrary, during intoxication our apperception and consciousness, as well as the co-ordination of the movements, are disturbed, the temporary intensifying of the instinctive impulses is apparently based upon the paralyzing of the apparatus of checking, so highly important to our well-ordered mental activity. Alcohol paralyzes the intellect, the sensations, and the will; but shows the contrary delusively to the dimmed consciousness. It paralyzes the perception of cold as well as that of warmth, therefore it seems to raise our temperature in cold weather and to reduce it in warm weather. Really it withdraws from the body heat and force, and paralyzes its activities, the basis of its life. Therefore, I can believe as little in its pretended stimulating qualities as in its pretended nutrient power. All judicious savants have long known this fact. We need to name only Dr. Richardson and his physiologist Bunge.

For years, as my school and other duties have permitted medical practice, I have administered alcohol as a stimulant in conditions of collapse and debility. But I have never witnessed an objective success. Subjectively, it is true,

patients felt relieved in consequence of the abatement of their pain and uneasy feelings. But a subjective delusion is no cure. It is true that the effect of the imagination as a brain-power over the body through the nerves is an important matter not to be underrated. But it is an element in all sorts of medicines. For its success it depends only on the intensity of the belief. It imposes apparent specific effects upon both physicians and patients, and perturbs the judgments of men in general, because it acts unconsciously. Upon this depends the successes of homœopathy in the miraculous cures of the so-called curative magnetism. With a good suggestion, colored water, and bread pills we stimulate, according to my opinion, just as well, or even better, than with wine. And we do no harm with it, while with wine we might. The physician before treating the human organism should take into consideration the question whether he may not hurt rather than help. How many reformed inebriates have relapsed through medical prescriptions of wine, beer, or cider?

Will a physician, for a doubtful medical effect, ruin a patient for his whole life? True, we may keep a patient by using narcotizing medicines of agreeable taste, as alcohol or morphine, which through feeling better, convince him he is better; which please him with us, but make him crave narcotics or become a slave of chronic poisoning.

Physiologists have found that alcohol diminishes oxidations, and therefore allows life with less food. On this the whole theory of economizing by alcohol rests—a real paragon of learned theoretical subtilty. Is arsenic a healthy food, because it makes fat and renders the skin fine and smooth? The red face shows degeneration of the paralyzed capillary vessels. Are the drinker's face or obesity signs of health? Who proves diminished oxidation an advantage to the body, and not, on the contrary, a great disadvantage, as statistics of mortality show irrefutably? Is it economically more advantageous to eat less and to drink more with more expense, and to become less healthy or even sick? The

food claimed to be "saved" by alcohol can only be carbonic hydrates, *i. e.*, quite cheap aliments, as potatoes, etc., while albumen can hardly be "saved" at all. Common-sense using all the elements of the problem, soon throws over this famous economizer, and justly calls it father of poverty and of misery.

The statistical bureau of Switzerland's new cards for the causes of death keeps the medical secret completely. The physician keeps the name and writes down only the cause of death, and sends the card directly to the bureau in Bern. Our statistics cover but two years and only the fifteen chief cities of Switzerland, with about 500,000 people in all. For 1891, of 3,409 deaths in adult males above 20 years, 366 show directly or indirectly alcohol as a helping cause; that is, 10.7 per cent. ascribed to alcohol. At La Chaux de Fonds, an industrial place, it is even 25 per cent., or every fourth man. Of the 366 death cases, only 188 were of the real working class, but 179 were persons of the so-called higher callings (officers, savants, business men, industrial people, artists, saloon-keepers, etc.). Of these 366, directly of delirium tremens, 105 died.

The consequences of the customary use of other narcotic stuffs, as opium, ether, morphine, coca, and hashish are very bad. Lewin's "Narcotics and Legislation," in the *Berlina Klinische Wochenschrift*, 1891, No. 51, a most important composition, should be thoroughly known. The vivid story of facts proves the author has closely studied and knows exactly the social poisoning as an expert physician. In the description of facts, I, unfortunately, must agree with him, but not so with his consequences and advices. We see here again that knowledge and judgment—facts and opinions—are separate things.

After treating the alcohol question, Lewin turns to other narcotics. Not able to say anything better, we cite literally the following masterful description of morphinism :

"Naturally, these explications lead to a condition which, according to my opinion of the regulation of the alcohol



question, as something inseparable from it, must, too, very soon give cause to a separate legislative act. Alcoholism takes most of its victims out of simple and skilled workingmen — morphinism from those who, by their public situation, education, and culture ought the least to come into the suspicion as subject to this passion without will and energy. This is the first essential difference between alcoholism and morphinism. The second consists in the circumstance, that the effect of morphine is not followed by those unpleasant, very conspicuous, exciting, and depressing effects which are produced by alcohol. Thus, in the course of a very short time, a large congregation of morphinists has formed itself, to which belong some of the best heads of Germany, artists and savants, teachers at the universities, diplomats, officers, and business men. If alcohol hurts the hand of the nation, morphine destroys its brain. This state was scarcely known, when, at the same time as Fiedler, I first reported such a case in 1874. And, alas, how well known it is now!

“Morphinism as a passion forms and grows in the domestic circle, and does not trouble the public in a scandalizing manner. But deeper and in more fatal ways the public life and indirectly the welfare of innocent people is hurt by the consequences, which the perfected morphinism is causing. It is said if individuals must suffer in social positions by this disease it is their own fault,—but in so far as government can, it should not leave drunkards in official positions, still less so morphinists. The reason for such a measure is not difficult to see. Except perhaps cocaine, no narcotic becomes such an exigency for the system as morphine. The hunger for morphine is much more urgent than the craving for alcohol. The drunkard can wait many hours after the effect of alcohol ceases before he is compelled to take a new quantity. The morphinist, however, when the time comes that the cellules of his system imperatively demand their irritation, is precipitantly and without resistance driven to a new dose. If he doesn't receive it soon body and mind begin to suffer.

“Under such circumstances a judge injecting or taking morphine cannot follow the discussion and decide clearly, or an examiner cannot fulfill his duty and judge as he ought to do. Moreover, after a certain time, notwithstanding the introduction of sufficient morphine, the mental faculties suffer and the moral feelings are damaged. The morphine-taking racer audaciously acquires the prize on the arena; the morphine-taking surgeon elegantly performs the operation; the clinical teacher ingeniously puts the diagnosis — yet they are lost men, to whom the morphine gives skill for a time, but keeps them on a slave chain becoming shorter and shorter. Negligence in all duties, loss of energy and producing force, partly also a being brought down to a very low ethical standpoint, soon follow, and, associated with many kinds of bodily ailments, at last render the picture of sufferings a disconsolate one. Since a definite cure of this passion is brought about only quite exceptionally, morphinists are, properly speaking, to be always considered as incurable people.\* Such state, when the body, especially the central nervous system, gives the motive for continuing the drug, when the will and all moral forces combined are powerless to resist the body, cannot be done away with, or at least very seldom so.

“The difficulty to make here a practical difference between wanton and medical chronic use of drugs is very real. One is a morphinist because of the pleasant state it produces, the other because it has first removed painful conditions of the body, later it has subdued evil effects, and at last from mere custom. A third group take morphine because it controls their chronic pains. Unfortunately, it is impossible in the public interest to separate these three groups. Proved morphinism or opiophagy, alcoholism, cocaineism, etherism, chloroformism, chloralism, sulphonalism, and perhaps also bromism, ought to exclude from governmental position. All individuals suffering from them

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\* Here we must oppose Dr. Lewin. Our experiences are much better, because we insist upon abstinence from morphine, from alcohol, and from all narcotic substances.

ought to be excluded from responsible positions ; if the caused pathological condition is far advanced, they should be deprived of their discretion, or they ought to be put into an inebriate asylum. I do not consider them able to dispose.

“A thorough legal arraignment must wait perhaps till morphine becomes artificially preparable and, therefore, cheaper, and alcohol having played its great role, morphine will take its place. Already this plague catches some who in the sweat of their face ought to earn their bread, but not their morphine. Many millions of people are slaves already of opium! Whoever should doubt the nature or extent of this passion may look to China, which has been conquered and enfeebled by it in so short a time. Read the descriptions of Prochewalski, to see how opium demoralized the militia, officers and soldiers, in Mongolia. The use of the drug is rapidly increasing, especially since the northern provinces of China cultivate the poppy, and have become independent of India and the indish regal prices. Beyond the oceans the Chinese have carried this passion and have given to Americans, men and women, the opportunity to indulge in the same vice. In one large city of America opium dens were discovered even for ladies, which pretended to be fine millinery-shops.”

The acknowledgment of the truth of the theory of evolution is pushed steadily into the foreground of our scientific conception of the world ; this in consequence reacts on our practical social life, and on our opinions about how to form the most advantageous human society.

Therefore, it is certainly timely to make some contemplations about the relation of the alcohol question and of abstinence to the future evolution of mankind.

We do not think man could adapt himself to the use of alcohol and narcotics, so that they would cease to hurt him, for the following reasons :

Experience teaches :

1. The general drinking and narcotic customs incessantly augment the production and the consumption — that

is, to increase the daily doses — which every man consumes in the average.

2. The “craving” (“Sucht”) which alcohol and all other narcotics produce drives to such augmentation with peculiar force when severe laws do not counteract.

3. Alcohol, and probably also all other narcotics, poison not only the individual, but also his sperm, the germs of his descendants.

4. The progeny of alcoholists, according to experience, are especially disposed to mental degeneration and to drinking excesses. Their resistibility against alcoholic liquors is never raised, but rather very much diminished. At first this may seem strange from the standpoint of evolution. Yet it becomes at once conceivable, if we know, as Prof. Weissmann has masterfully explicated, that the qualities and customs acquired by an individual during his life are never hereditary, except when the germinative plasma is itself changed. Then, however, not “a quality is transferred,” but, as in the poisoning by alcohol, the germinative plasma is directly hurt with following degeneration of the germ. The variability in transferring the dispositions, therefore, is not based on direct actions from the outside on the individual, but on the circumstance that those qualities which take their origin respectively result from the conjunction of a female with a male cellule out of two different individuals as new combination peculiar to the product or descendant — that those qualities are better saved when advantageous for this descendant than when they damage him; for on a long and healthy life of the posterity principally depends its preservation in the struggle for life.

That abstainers live longer and are healthier than even moderate drinkers of alcohol is proven by the statistics of the life insurance companies and of the insurance societies against sickness.

The drinking habit, as is well known, tends to lead a man to imprudent sexual actions, by which, on the one hand, he contracts very commonly venereal diseases, often rendering

the woman sterile and the posterity crippled, and, on the other hand, is kept away from matrimony and led to prostitution, and not seldom to premature impotence — hence, it is not difficult for him, who is not blind and prejudiced, to conclude that, in the struggle for life, man will never adapt himself to the drinking habit, but that gradually abstinence must triumph, because the drinking world will carry on things more and more extravagant, and will for that be by the abstainers outrun.

Exactly the same is true about the use of all narcotic drugs. The temperance movement ought to include all these in its combat. Lewin, whom we cited, has, it is true, another more pessimistic view, because he does not know the success of the Norwegian and Finlandian laws, and misconceives the temperance movement of all northern nations. But since in this only he errs, we can easily compose ourselves.

#### I. THE ALCOHOLIC INTOXICATIONS OF THE HUMAN NERVOUS SYSTEM.

The intoxication of the nervous system is conspicuous at the very first, often after very small doses. Alcohol is, in the first line, a poison for the nerves, and especially for the brain.

Expert physiologists have stated that poisoning by alcohol paralyzes every activity of the nerves. It is scarcely to be doubted that the excitement caused by alcoholic intoxication — yea, even the slight seeming irritation following the first glass — is based much less on an increased activity of the fine and most minute nervous apparatus of the brain than on a paralyzation of the complicated checking apparatus, which usually bridle the ruder instincts and impulses, as well as often also the too quick and imprudent running of the thoughts in the wide-awake man. Through all parts of nervous activity, from the enervation of the muscles and the simple sensation to the highest activity of the soul, the paralyzing effect of alcohol can be demonstrated. In mental effects,

the principal thing for us, alcohol paralyzes in the first line, and in the strongest manner the highest, most complicated, and finest, *i. e.*, the so-called ethic and æsthetic conceptions, conscience, and reason, the reflections of which (that are the combinations of conceptions) are the moving spring of the highest and relatively freest will, because adapted in the most adequate manner to the circumstances. The human will is always determined by complexes of partly conscious, but mostly unconscious, feelings and conceptions. All mental happening recognized subjectively — that is, by ourselves on ourselves — depends upon extremely subtle, combined molecular activities of the living brain-tissue on the nervous cellules with their feeling and irritating threads, the nerve-fibers. Therefore, the normal condition and integrity of human will and the normal condition and integrity of the human brain and its functions are vitally connected.

The acute or once happening alcohol poisoning of the brain is called intoxication or drunkenness. The individuality of the drinker and the quantity of the introduced alcohol diversify the intoxication. From a little, pleasant cheering up the mind and weakening the disagreeable feelings (slight dulling of conscience and of consciousness of all mental and corporal pains) — through all stages of excitation with loquacity, of the dimming of consciousness, of the paralyzation of language and all movements — it goes on to somnolence, apparent death, and even to real death, if enormous doses of very concentrated alcohol were taken. Intoxication reveals great individual differences: one is rather sleepy, another cheerful and talkative, a third sentimental and soft-minded, a fourth melancholic and checked, a fifth boastful, a sixth irritable and quarrelsome. In all of them, however, the weakening of the higher, especially of the ethic and æsthetic qualities of the soul, prevails in a prominent degree. Hence criminal statistics show that most crimes take place during intoxication, and that because to paralyze the higher checking apparatus causes the brutal animal instincts to rise. Hence the drunkard, too, loses the desire for the beautiful.

In spite of this, intoxication does not permanently hurt the brain-tissue, for the molecular storm produced in it by alcohol ceases by and by, if the poison has been removed from the system.

All poisonings of the body divide into acute and chronic. A division, however, especially important, where the poison is quickly eliminated from the body, as in alcohol, while in steadily remaining poisons (lead, silver, etc.) there is no distinct difference between the two. The chronic intoxication by alcohol is produced in two ways — partly by frequently repeated excessive doses (acute intoxications, drunkenness) ; partly by the daily use of moderate to excessive quantities of alcohol without drunkenness. *The chronic intoxication of the brain is by far the most important one.* Its first, lowest stage consists in two well-known results, common to all moderate drinkers who take small daily doses of any intoxicating liquor, like brandy, beer, or cider. The first one is becoming accustomed to the poison effects so that small doses, which, in the beginning, lead to slight, acute intoxication, are now no longer perceived. The second one, which varies enormously, is the craving, the longing for alcohol. In less sensitive people this craving is of small amount, and shows itself only by a very trifling unpleasant feeling, viz., that a usual agreeable enjoyment is missing. But in more predisposed people, or in those already alcoholized in a higher degree, it becomes an always returning and always stronger ravening for alcoholic liquors. In heavily predisposed ones it grows to an unquenchable thirst for alcohol, which requires always larger and more frequent doses, and influences all resting circles of conception so strongly that explications, confirmations, justifications of a more and more considerable use of alcohol are unconsciously obtruded upon consciousness and will by the craving for alcohol. These first two symptoms of the chronic intoxication by alcohol connected with the pleasant paralyzation of the disagreeable feelings and with the pleasant taste, which the daily drinker more and more finds in the alcoholic beverages,

form the foundation of the insidious, siren-like nature of the alcoholic liquors. In men who only exceptionally take alcoholic beverages these phenomena do not fully show.

The higher degrees of intoxication by alcohol, which alone come into consideration in our theme, can be divided into two groups — (a) curable and (b) incurable ones.

(a) *Curable degrees.* — To these belongs first a raising of the already-mentioned apparent resistibility (insensibility against larger doses of alcohol) and of the craving for alcohol. Further, quite gradually, according to the individual predisposition not before high or soon after relatively small daily doses of alcohol, there takes place a series of phenomena, of which sometimes the one, sometimes the other, is more distinct; weakening of the ethic, very commonly also of the æsthetic, feelings and conceptions, irritability of the character very often connected with emotional, soft temper, lessening of mental activity and faculty of apprehension; one-sided, stubborn dogmaticalness, want of intelligence in general, brutality of mind, mendacity, inclination to rabietic distortion, raising of impulses, combined with diminishing of the corresponding production of energy, partial sexual impotence, rhythmical trembling of all muscles (to be noted especially in more minute movements), etc. This slow change of the nature of the chronic alcoholized remains unknown to him until, after many months of abstinence, he is completely cured, he is able to account for it. This often, if at all, occurs in a complete way, after some years. In the higher degrees of alcoholism the character can become more than beastly, and show all transitions to complete mental disturbance: senseless jealousy, irritability and brutality, the most shameless recklessness towards weaker ones, especially towards women, the meanest cynicism, etc. In its highest degree alcoholism can produce senseless wrath, with insatiable thirst for blood. Sometimes greater, sometimes smaller, dullness of consciousness, feelings of anxiety, hallucinations, and delusional ideas of persecution, especially of jealousy, accompany these conditions.



In the course of chronic intoxication, often completely unremarked even by the whole company of the poisoned, there take place, not seldom unexpectedly, quick fits, which one has called delirium tremens (delirium alcoholism), and which suddenly betray the mistaken disease, hitherto slumbering. Usually, for producing such a fit, a disturbance of the accustomed way of the general functions of the body is sufficient, especially of nutrition — *i. e.*, a trouble of digestion, or the lying abed consequent upon a smaller or greater accident, or any other disease. The man in question must not necessarily have had an intoxication before, and not seldom has still the reputation of a quiet citizen, who does his duty, is respected, and, at the most, is accustomed to taking somewhat strong doses of alcohol. Soon after the derangement of the usual economy of life has occurred he begins to suffer from sleeplessness, restlessness, anxiety, strong trembling, terrific dreams, then also in the daytime of hallucinations, especially terrible moving visions of animals, and corresponding delusional ideas. The patient is often frightfully agitated, runs from anxiety with his head towards the wall, will kill his supposed persecutors, and dies in consequence of refused food and deranged digestion, combined with alcoholic fatty heart degeneration, and with brain exhaustion, particularly if fever or even pneumonia is setting in, and suicide is frequent in such conditions. Usually he recovers after some weeks, and I have often known the patient, and also his family, to think it a defamatory calumny when I declared the fit to be alcoholic delirium. To say such things was infamous, the man has not been a drunkard, he has never gone beyond the allowed quantity, etc. Not till my prophecy was realized, and further fits of delirium tremens occurred, did they hesitatingly admit it might have come from drinking.

Delirium tremens, consequently, is a mental disease taking place episodically in the course of the chronic alcohol intoxication. Curing this fit of insanity is, therefore, by no means equal to curing the chronic alcoholism. However, the fit of delirium always furnishes the irrefutable proof of

chronic alcoholism. But the reverse is not valid, for chronic alcoholism may exist in just the same irrefutable manner without any delirium, even without the precedence of any inebriation. In predisposed people still other mental derangements, as melancholia, mania, paranoia, etc., occur in the course of chronic alcoholism.

(b). *Incurable degrees.*—Chronic alcoholism usually lasts many years, mostly till death, since the only cure (the lifelong complete abstinence from all alcoholic liquors) is not only totally misconceived, but even in an incomprehensible way is marked as very dangerous, and that too from the medical side. But if the organs of the body, except the brain, have suffered less, and the patient does not soon die of a disease of the heart or the liver nor of a fit of delirium, the chronic alcoholicist may live many years. In case of continued excesses, especially in somewhat advanced age, about the fortieth year, or more frequently around the fiftieth, we sometimes observe symptoms pointing to shrinking processes in the brain tissue. All such are to be noted, especially the weakening of memory and a general dullness and imbecility of intellect and mind. This condition is very similar with a premature senile imbecility (*dementia alcoholico-senilis*), but may occur under certain circumstances in rather young people. It is incurable. As much incurable is the pronounced chronic alcoholic madness (*paranoia*), which, under similar circumstances, often develops with delusion of persecution. On the contrary, a peculiar mental derangement, which looks very similar to the general progressing paralyzation of the brain, that is the alcoholic pseudo-paralyzation with inarticulate language, mania with exaltation, etc., is not by any means always incurable, and is to reckon better than (a).

All this shows clearly that chronic alcoholism, as a whole, is nothing but an imperceptibly graduated disease of the mind or the brain. To him who might still doubt, it may be said, that the autopsy of the chronic drinkers shows thickened places of the meninges of the brain, gathering of water in the brain cavities, and in advanced cases distinct shrinking of the

brain. Further, we should still like to point to the just published annual record of the Nether-Austrian State lunatic asylums for 1889 (Vienna, k.k. Hof : und Staatsdruckerei, 1890). On page 7 it is stated that out of 549 men received in 1889 in the State lunatic asylum of Vienna, 135 fell sick exclusively by alcoholism, and 84 under co-operation of it. Consequently 40 per cent. of the male receptions was wholly or partly due to the beloved alcohol. We may at once add, that out of 115 fresh male receptions of the cantonal lunatic asylum, Burghölzli in Zürich, in 1890, 31 (that is, 27 per cent.) concerned exclusively alcoholic and morphinistic (3) kinds.

II. INDIVIDUAL PREDISPOSITION AND HEREDITARY  
TRANSLATION.

The more exactly we study the drinkers, that is, the chronic-poisoned by alcohol, the more we are convinced how enormously the individual dispositions differ (that is, the kind of reactions by the effect of alcohol on man), and on how different and complicated causes this disposition is based.

One is intoxicated easily by small quantities, and is believed by the public to be peculiarly unable to resist ; but he is often the least endangered, if he, in the rest, is in ethic respects well disposed and possessess an ordinary will, especially if the craving is not exceptionally quick developed in him. Another apparently stands ordinary quantities, but becomes in a short time "craving" (süchtig), that is, there is developed in him very early an irresistible longing for larger and larger quantities of more and more concentrated alcohol. This intense and early development of the craving has been called dipsomania ; it is always the proof of a heavy hereditary burdening, and very often appears only periodically (perodical inebriety, "Quartal-Trinker"). That this intense craving offers one of the greatest dangers, is without doubt. Another man is neither soon intoxicated nor in any special degree craving, but yet very deficient in ethic respect, weak of character, careless, unable to consider earnestly important problems of his future life. He is also very much

endangered and simply becomes a drunkard by the saloon-habits and the compulsory drinking of our society. In a large majority of our drinkers the trouble is still another one; they are simply the victims of human rage of imitation, of our social-drinking habits with their compulsory drinking connected with vainglory and braggartism, as well as of the popular delusion, that alcoholic liquors are healthy fortifying means. An extraordinarily insidious trap lies in the conspicuous, considerable faculty of resistance of certain people, who are able to consume large quantities of alcohol without getting intoxicated. They finally become chronic alcoholists, without observing it, without having had any intoxication; they seduce many others and endanger their progeny in especially high degree by the considerable alcoholization of the tissues of their system. Such people very often die of alcoholic degeneration of the heart, of the liver, etc., without having previously betrayed any considerable degree of chronic alcoholism of the brain, because in them other organs of the body are very often more inclined to alcoholic degeneration than the brain. In these things they are many individual differences. That poverty and misfortune often promote inebriety we will not deny, but this cause has been immensely exaggerated by certain tendencies. Usually it is, on the contrary, the inebriety which produces poverty. In very many cases the drinking habit and poverty are the two sister-products of badly predisposed brains, which fall as victims of our drinking habits. In well-off people, however, alcoholism rages scarcely less than in poor people.

It is already well known that inebriety, the chronic poisoning by alcohol, is transferred by the degeneration of the semen of man and of the ovaries of woman to the progeny of the drunkard. It is true, it very frequently causes in the descendants the above-mentioned irresistible longing for alcohol, but also a variety of other diseases, the children of the drunkards perishing in large percentage of debility of life, dwarfed growth, idiocy, mental diseases, and so forth. In modern times these facts have received an essential support by statis-

tical investigations of a most careful kind, among which the incredulous may take to heart especially the following:

Professor Demme, in Berne, "The Influence of Alcohol on the Organism of the Child." Stuttgart, 1891.

Dr. M. Legrain, "Heredity and Alcoholism." Paris, 1889.

Dr. P. Garnier, "Insanity at Paris." Paris, 1890.

For our question it is especially important to note the hereditary translation of the irresistible craving on the children by a father or a mother, who themselves did not possess this craving, but were drinkers only by custom or sociability. Very important for us is the further fact that in mental respects abnormally disposed people (psychopaths), as a rule, cannot bear alcoholic beverages, and become very easily inebriated.

### III. INEBRIETY IN ITS RELATION TO PSYCHOPATHIA AND INSANITY.

We have seen that the chronic poisoning by alcohol can produce not only the typical delirium tremens, but still other forms of mental troubles. Almost of the same great importance is the fact that the psychopaths, the so-called nervous people, and the insane, as a rule, bear the alcohol very badly, also when their disease has not its cause in alcoholism. Firstly, these people become very easily accustomed drinkers, and then often very small doses of alcohol are sufficient for them to produce considerable phenomena of poisoning. I saw severe delirium tremens with public dangerousness in psychopaths after the consumption of quantities of cider, scarcely to be called very immoderate (one and a half to two liters daily). Especially characteristic for the alcoholism of the psychopaths is the considerable prevalence of the mental troubles, of the changes of character, and of the nervous derangements in general. This is so evident that, very commonly in them, before the tissues of the body are alcoholically degenerated in a degree worth mentioning, we observe severe nervous and mental derangements, which sometimes look so similar to the non-alcoholic kinds of nervous and psychical

diseases, that the diagnosis is made very difficult. Yea, we can decidedly affirm that there are intermediate forms between alcoholic and non-alcoholic mental troubles, since the abuse of alcohol, even the simple use of it, gives in psychopaths not seldom only the last inducement for the outbreak of a slumbering psychosis, epilepsy, or a similar disease. We can, too, observe after the cure of such troubles, that the degenerations of the tissues of the body, as we find them in other cases of chronic alcoholism, are absent or developed in only a very low degree.

The facts just cited are of high importance. There are many more psychopaths among the drunkards than was formerly believed. The poisoning by alcohol and the psychopathy help and cause one another, the one always predisposing for the other: the poisoned becomes psychopathic and produces psychopaths; the psychopath becomes very frequently inebriate, and produces drinkers. This unfortunate circle is to be abolished only by curing the inebriety, that is only by abstinence, because a congenital (inherited) abnormal disposition of the germinative plasma as the psychopatha, can as such not be cured in an individual. On the other hand, a deeper investigation of the mental troubles shows more and more, that, by the inconceivable graduations of the psychopathia and of the deficient normality, they offer all transitions to mental health. We find a quite similar series of transition between the formally normal man having become inebriate only by seduction, sociability, etc., on the other hand, and the insane drunkard, the dipsomaniac or "Quartal-trinker," on the other hand. Nowhere is a sharp boundary-line.

It was frequently pretended that the dipsomaniac is incurable. That is not true. The experiences of the well-conducted establishments for the cure of drunkards (*vide* Christiania record, l. c., page 208, discourse of pastor Hirsch in Lintorf; besides this the first annual report, 1890, of the asylum for curing drunkards in Ellikon on the Thur), prove the curability of dipsomania. By abstinence the dipsomaniac is much better to be cured than the drinker, since birth defective in ethic respect and completely characterless.

We step here before an important question. In the ninth report of the Zurich Assisting Society for Lunatics, of 1884, as well as in the "Correspondenzblatt" for Swiss Physicians, 1890, April 15th, page 233, I have treated the importance of the constitutional insanity (psychopathies, diseases of character) which so often represent the transition to mental health, and I have emphasized how necessary it is for human society that such conditions are timely recognized, and the persons suffering from them are made inoffensive, if necessary, by limiting their liberty in special institutions. All this leads forcibly to the scientific conviction that the inebriate or the habitual drinkers are to be put in medical, social, and legal respect upon the same scale as publicly obnoxious psychopaths, and, therefore, are to be treated as mentally abnormal men. The delirium tremens, the other alcoholic mental diseases, and even the heavy intoxication are nothing else than mental diseases, and, therefore, to be fully equalized to the rest of the acquired mental diseases. The chronic latent poisoning by alcohol, the chronic alcoholism with its changes of character, is in comparison to the just mentioned alcoholic mental troubles about what the constitutional mental troubles are in comparison to the pronounced acquired mental diseases. The chronically alcoholized submits to the force of his craving with the same irresistible surety as the constitutionally insane to the power of his morbid impulses. His will is, as soon as the inebriety has reached a certain degree, amidst our given social circumstances, just as little free, stands under just as strong a compulsion as that of the constitutionally insane. He is bound to succumb.

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The subject of *Animal Speech*, which is now attracting much attention in the scientific world, will be treated by Professor E. P. Evans in the opening article of the August *Popular Science Monthly*. Professor Evans gives much striking evidence to show that animals communicate among themselves by vocal sounds, and that many of them learn the meaning of human speech.

THE RESULTS OF SCIENTIFIC INVESTIGATIONS CONCERNING THE EFFECTS OF ALCOHOL ON THE LIVING HUMAN SYSTEM.

BY N. S. DAVIS, A.M., M.D., LL.D., CHICAGO, ILL.

During the last fifty years our knowledge of organic and analytic chemistry, together with the invention and application of instruments of precision for conducting chemical, physiological, and pathological investigations, has increased with great rapidity.

*Pari passu* with each step in this rapid progress in developing the methods and means for strictly scientific research has alcohol as it exists in the fermented and distilled liquors attracted attention and investigation. Such investigation early demonstrated it to be a simple carbo-hydrate, consisting of carbon, hydrogen, and oxygen, and in a pure undiluted state actively destructive to both vegetable and animal life. It was found not only to destroy the vitality of such animal tissues as it came in contact with, but to retard or prevent their decay after their death. Further investigation, aided by the microscope, proved it to be exclusively the product of the action of bacteria on saccharine matter in the process called fermentation. It displays but feeble affinity for the oxygen or nitrogen of the atmosphere at ordinary temperatures, but a very strong affinity for water and both vegetable and animal albumens. When largely diluted, as in the various fermented and distilled liquors in use, it may be introduced into the living human system through the stomach, and its effects investigated with all the accuracy afforded by modern chemical and philosophical methods. The presence of diluted alcohol in the human stomach directly diminishes the digestive power of the pepsin, as shown by many investigators, and more recently by Hugouneng (*Lyon Medical*, March 1, 1892), and it holds in check the



secretion of gastric juice until it is absorbed, when the secretion returns. This appears to have been clearly shown by Gluzinski ("Deutches Archiv. fur klinische Medicin," B. 29, p. 423, Leipzig), who experimented on the human stomach by administering moderate quantities of alcohol with food, and withdrawing the contents of the stomach for examination at different periods of time. He found that the alcohol rapidly disappeared from the stomach by absorption, as there was neither aldehyde nor other products of alcoholic oxidation in the stomach contents, and very little digestion of albumen. But when the alcohol had been entirely removed a rapid increase in the acid secretion of gastric juice took place, and active digestion followed; and in some instances the secretion continued after the digestion of food was completed. It is evident that the direct contact of the alcohol with the gastric mucous membrane caused dilatation or congestion of the vessels and tubules, thereby checking the secretion so long as such contact remained, but as soon as it had been removed by absorption the congested vessels yielded a more rapid flow of secretion than natural. It is evident also that if the contact of the alcohol should be repeated daily, or several times a day for any considerable length of time, the gastric mucous membrane would become permanently congested and its secretion perverted, as seen in all cases of chronic alcoholism. The alcohol absorbed from the contents of the stomach is carried by the portal veins in part directly to the ascending vena cava and right cavities of the heart, and in part indirectly after distribution through the liver. From the right cavities of the heart it is carried with the current of blood through the lungs to the left cavities of the heart, and from thence to every part and tissue of the living body unchanged in form or composition.

Since Dr. Percy, many years since, so clearly demonstrated the presence of free alcohol in the brains of drinkers other investigators have found it present in the liver, spleen, kidneys, lungs, and muscles. Dr. J. E. Usher, in his recent

work on "Alcoholism and its Treatment," says: "In several cases, after death, I have been present when pure alcohol was obtained by simple distillation." That it does thus circulate with the blood through all the tissues of the body is further proved by the fact that it is readily detected in the eliminations from the lungs, skin, kidneys, and the glandular secretions generally. Conceding the well-established fact that diluted alcohol undergoes no digestive change in the stomach, but is rapidly absorbed and carried with the blood into all the tissues of the body, three questions of paramount importance are presented for solution: 1st. What are the effects of its presence on the blood itself? 2d. What are the direct effects of its presence on the various structures to which it is carried? 3d. What are the secondary or remote effects of its protracted presence as in cases of habitual or frequent repetitional use?

In answering the first of these questions, the fact, conceded by all chemists, that alcohol displays a strong affinity for the water, albumen, and hemoglobin of the blood must be kept in mind. Hence its presence in contact with these constituents of the blood could hardly fail to alter either their forms or functions, or both.

Using the microscope, Dr. B. W. Richardson of London early claimed that the presence of alcohol altered the natural contour of the red corpuscles and promoted their disintegration. Virchow, in studying the condition of the blood drawn from an inebriate, says he found "a decrease of water and an increase of fibrine and of colored clots." Dr. J. E. Usher, in his work, previously quoted, while prosecuting a series of experiments on the blood of persons affected with chronic alcoholism, says: "Repeatedly red corpuscles were found to be irregular in outline, presenting a contracted or shrunken surface. Apparently a partial coagulation had taken place, with a decided diminution in size. . . . The chief pathological changes noted are to be found in a contraction of the cells, with some evident exudation of the coloring matter, and an entire loss of their normal outline.

The leucocytes offer a striking contrast, being more numerous ; but, instead of disorganization, these cells indicate that a coagulation of the nuclei has taken place, and they seem to be enlarged or swollen in a surprising degree." He states further that the blood examined was less alkaline than normal, and that crystals were augmented in quantity. Magnus Huss and others have noticed in the blood of habitual drinkers an excess of fatty globules, and Usher says : "Anemia is not an uncommon concomitant of alcoholism, the blood becoming very poor and watery — the white corpuscles being much in excess of their normal quantity. The liquor sanguinis is poor in albuminoids, and the salts are usually in excess. So poor in hemoglobin may the blood become that it is not a singular thing to find the red corpuscles reduced to 60 parts in 1,000 parts of blood," which is less than half their natural proportion. In addition to the foregoing changes in the constituents of the blood, the direct experiments of Prout, Bocker, myself, Hammond, and quite recently Bodlander, have proved that the presence of alcohol diminishes both the absorption or reception of oxygen, and the exhalation of carbon-dioxide through the air cells of the lungs.

As the reception of oxygen by the hemoglobin and serum of the blood from the air cells of the lungs, and the elimination through the same channel of the carbon-dioxide, constitute the chief function of the lungs, the influence of alcohol in diminishing that function uniformly and in a notable degree, is one of its most important effects relating to its use either as a drink or a medicine.

Perhaps no fact in human physiology is better established than that oxygen is being constantly received from the pulmonary air cells by the hemoglobin and serum of the blood, by which it is conveyed in the arterial blood to every tissue of the body, and by its presence sustains nerve sensibility, secretory action, and all the metabolic or molecular movements that constitute assimilation, nutrition, disintegration, and excretion. Consequently whatever diminishes the capa-

city of the hemoglobin and serum for taking up the oxygen from the pulmonary air cells diminishes all the metabolic processes in the living body. That the presence of alcohol in the blood does thus diminish the capacity of the hemoglobin and serum for taking up the oxygen is not only proved by the diminished amount of oxygen taken up and of carbon-dioxide exhaled, as shown by the investigators just named, but also by the early and well-executed experiments of Bocker of Germany and W. A. Hammond of this country, showing that it diminished the aggregate of all the secretions and eliminations, and more recently by Mohilinsky, who experimented on fifteen healthy young men, a part of whom were habitual moderate drinkers and part were total abstainers. The amount of alcohol given to each varied from two to five ounces per day. In all those who had been total abstainers he found the assimilation of the nitrogenous elements of food and of fat or oil diminished; and in nearly all the retrograde metabolism or nitrogenous disintegration was diminished an average of nearly nine per cent. These effects are attributed by V. A. Manassein, Schmiedeberg, and Bocker to the influence of alcohol in inhibiting the systemic oxidation processes, dilating the blood-vessels, lessening arterial tension, retarding circulation, and lowering temperature. The experiments of Schulinus and Salzynski pretty clearly demonstrate that about ten per cent. of the alcohol taken into the blood immediately disappears, or, at least, loses its identity. As such disappearance is not accompanied by either increase of heat or of carbon-dioxide, or of consumption of oxygen, it cannot be from the sudden oxidation of that amount of oxygen, as is generally supposed. Moreover, alcohol at the ordinary temperature of the atmosphere, or of the human body, displays but a feeble affinity for oxygen, while its affinity for the elements of the serum and hemoglobin of the blood is very active. And that this active affinity of the alcohol causes some important molecular changes in the serum and corpuscular elements of the blood is not only shown by the decrease of water and the

increase of fibrine, as stated by Virchow, but also by its retarding, and when present in large quantity preventing, the conversion of hemoglobin into oxyhemoglobin, as fully demonstrated by Dr. George Harley of London, Dr. J. D. Kales of Chicago, and others. Dr. Harley showed that the addition of five per cent. of alcohol to fresh arterial blood completely destroyed the capacity of the hemoglobin for further oxygenation or for purposes of nutrition. Dr. Kales found that when absolute alcohol in varying quantities, from one to five per cent., was mixed with the freshly drawn blood, diluted with distilled water, it made no perceptible change in the oxyhemoglobin spectral bands at ordinary atmospheric pressure and a temperature of 98° F. Neither was there any evidence of the oxidation of the alcohol. But when the pressure was diminished by means of the air-pump the oxyhemoglobin was rapidly reduced by surrendering its oxygen, which did not combine with the elements of the alcohol present, but escaped in a free state. It was further shown that when the oxyhemoglobin was reduced in contact with the alcohol it was less capable of re-oxygenation than when reduced without the presence of alcohol.

The second question — What are the direct effects of the presence of alcohol on the various structures to which it is conveyed in the blood? — has already been answered in part by the facts quoted from Bocker, Hammond, Mohilinsky, Manassein, and others, to the effect that it diminishes in a marked degree retrograde tissue metabolism or oxidation processes and their products, such as carbon-dioxide, urea, phosphates, heat, etc. In fact, the results of all scientific investigations concerning the effects of alcohol on the metabolic processes in living tissues have shown that its presence retards those processes more particularly as regards the nitrogenous metabolism dependent upon the presence of oxygen. The influence of alcohol in lessening the internal distribution of oxygen and in retarding tissue metabolism necessary involves impairment or disturbance of the functions of every important organ. Its influence on the stom-

ach and lungs has already been stated. But, in addition to those statements regarding the effects of alcohol on the functions of the stomach, it is proper to refer to an unusually careful and extended series of experiments by Blumenau on five young men between the ages of 22 and 24 years. He gave the alcohol, diluted, from ten to twenty minutes before the dinner, consisting of soup, cutlet, and bread. The results are given in the *Annual of Universal Medical Sciences*, 1891, Vol. 9, letter 1, page 4, as follows: "1. During the first three hours after the ingestion, the gastric digestion is markedly retarded, which is dependent upon diminished digestive power of the gastric juice; in other words, upon a decrease in the proportion of hydrochloric acid present therein. 2. The diminution is especially pronounced in persons non-habituated to the use of alcohol. 3. Stronger solutions of alcohol act more energetically than weaker ones. 4. During the fourth, fifth, and sixth hours after the meal the digestion becomes considerably more active, the proportion of hydrochloric acid markedly rising. 5. Under the influence of alcohol the secretion of gastric juice becomes more profuse and lasts longer than under normal conditions. 6. The motor and absorptive processes of the stomach, however, are markedly depressed, the decrease being directly proportionate to the strength of alcoholic solutions ingested. 7. Alcohol distinctly retards the passage of food from the stomach into the duodenum. 8. On the whole, alcohol manifests a decidedly unfavorable influence on the course of normal gastric digestion. Even when ingested in relatively small quantities, the substance tends to impair all gastric functions. 9. Hence an habitual use of alcohol by healthy people cannot possibly be approved of from a physiological standpoint."

Glazer (see *Deut. Medicin. Wochensch*, Leipzig, Oct. 22, 1891) has given the results of an extensive series of experiments to determine the effects of alcohol on the urine and the kidneys. His conclusions are given in the *Annual of Universal Medical Sciences* as follows: "That alcohol, even in rela-

tively moderate quantities, irritates the kidneys, so that the exudation of leucocytes and the formation of cylindrical casts may occur. It also produces an unusual amount of uric-acid crystals and oxalates, due to the modified tissue changes produced by the alcohol. The effect of a single act of over-indulgence in alcohol does not last over thirty-six hours, but it is cumulative under continued use." Chittenden, in experimenting on dogs by keeping them under the influence of alcohol eight or ten days, found the elimination of uric-acid in the urine to be increased 100 per cent. over the natural proportion. The effect of alcohol on the total amount of urine secreted is stated differently by different observers, some claiming that it is increased and others the reverse. I think these contradictory results depend upon the coincident conditions in each case. It is well known that drinking freely of water directly increases the flow of urine; consequently if alcohol is taken largely diluted with water, as in beer, the influence of the latter may be sufficient to maintain an increase in the quantity of urine. But if the alcohol is taken without such dilution the renal secretion is both diminished and altered in quality, as stated by Glazer.

The direct effects of alcohol on the functions of the liver in regard to the quantity and quality of the bile secreted, have not been determined with as much accuracy by investigators as in reference to the functions of the stomach, lungs, and kidneys. But that it interferes with such secretion more or less, and still more impairs the glycogenic and ptomaine destroying action of the liver, is shown by the frequent and extensive changes found in the organ in chronic alcoholism, and the readiness with which habitual drinkers succumb to almost all acute infectious diseases. Of all the organs or important structures of the body, none are more directly and uniformly influenced by alcohol than the nervous. Carried in the arterial blood into contact with all the delicate nerve cells and fibres of the body, its immediate effect is that of an anæsthetic, diminishing the sensibility and impairing the natural functions, both sensory and motor. That it produces these

effects when given in liberal doses all concede ; and if the dose is large enough or frequently repeated, it suspends all sensibility and action, and life is ended. But it has been, and still is, very generally claimed that in small or moderate doses it is stimulating and tonic, increasing nerve sensibility and muscular force, and anæsthetic or paralyzing only in larger quantities. The same paradoxical or contradictory effects have been ascribed by medical writers to all the anæsthetics and narcotics, as ether, chloroform, opium, etc., but just when or in what quantity any one of them ceases to be a stimulant and begins to paralyze, no writer or experimenter has been able to decide. And an accurate analysis of the symptoms or effects produced by alcohol in every variety of dose from 4 grammes (3 i) or teaspoonful to a half pint, will show that no such opposite effects are produced at any stage of its influence. All who are conversant with the physiology or functions of the brain and nerves know that all sensations and muscular movements are regulated by nerve influence. The action of the heart and the movement of the blood in the vessels are directly under the control of the cardiac and vasomotor nerves, and some of the fibres of these nerves are excitors of action and others are inhibitors, and it is the regulating influence of the latter that keeps uniformity and harmony in the circulation of the blood. All our voluntary movements and sensations manifested by the cerebro-spinal nerves have also their excitors and inhibitors by which we are enabled to co-ordinate muscular contractions and relaxations in executing all our voluntary movements, however complex. Equally true it is, that our mental actions as manifested through the convolutions of the brain, are regulated by excitors or sensations, and inhibitors. Every individual whose brain is in its natural condition has frequent sensations, impulses, or excitors of mental action which he promptly inhibits or disregards. It is on the proper development of this mental inhibition that every person's self-control and sense of propriety depend. If these physiological facts are kept clearly in mind we shall be able to interpret more correctly the



influence of both small doses and large doses of alcohol on the human system. Thus a moderate dose circulating in the blood, by directly diminishing the sensibility of the cardiac and vaso-motor nerves immediately lessens the tension of the blood vessels, allowing them to dilate, and by simultaneously lessening the sensibility of the cardiac inhibitors, allows the heart to beat faster, but the efficiency of the circulation is diminished in proportion to the vascular dilatation and the cardiac frequency. At the same moment the presence of the alcohol is diminishing the sensibility of the cerebro-spinal nerves of ordinary sensation, and consequently the individual is less conscious of cold, heat, pain, weariness, weakness, or even of his own body-weight, not because the alcohol either warms or cools or strengthens, as is popularly supposed, but simply because it diminishes the sensibility of the nervous channels through which all sensations or impressions are conveyed to the seat of consciousness in the brain. At the same time the alcohol in the same moderate dose is so far diminishing the sensibility of the mental part of the brain itself as to impair both the acuteness of mental impressions and the mental inhibition ; thereby imparting a feeling of ease, lightness, and lessened self-control, that makes the person feel as though he could move with less resistance and accomplish more in a given time than before he took the alcohol. It is exactly this diminished cerebral and nerve sensibility produced by a very moderate dose of alcohol, which inclines the individual to talk without reserve, sing songs, dance, or fight, in accordance with his surroundings, that make both him and his friends think the alcohol a stimulant. Yet give him another dose of the alcohol and diminish the sensibility of his nerve cells and fibres a little more, and he still thinks he could do more and do it faster, while the greater loss of self-control and muscular co-ordination renders him incapable of either walking or talking with steadiness. Give him another dose and he soon sinks into a state of complete anæsthesia with neither muscular power nor mental consciousness. The process from the beginning to the end is one of progressively

diminished nerve sensibility and action, with no stage of increased force, either physical or mental. The truth of this has been abundantly demonstrated on every field of human labor, civil and military, physical and mental. And it is further demonstrated by the results of the most accurately devised experiments conducted by Prout, Boker, Hammond, Richardson, Ridge, Anstie, Harley, Sidney-Ringer, Dubois, Fife, Lauder-Brunton, Martin, Parkes and Wallowics, H. C. Wood, Reichert, Vierodt, Hervier and St. Layer, Smith, Perin, and Lehmann. After carefully reviewing the work of all these in the *Dublin Journal of Medical Science*, September, 1891, Dr. E. MacDowel Cosgrave concludes that "contrary to what has been and is supposed, it is found, from all these researches, that small doses of alcohol produce from the first a narcotic rather than a stimulating effect."

But I must hasten to the answer of the third question, namely, What are the secondary or remote effects of the protracted presence of alcohol in the system, as in the case of habitual drinkers? From what has been already said regarding the direct action of alcohol on the constituents of the blood, the internal distribution of oxygen, and on the metabolic or molecular changes in the tissues, we should expect its protracted use would produce structural changes of importance in every living structure of the body. And unfortunately the frequent opportunities for examining the bodies of those dying from chronic alcoholism have abundantly verified that expectation. The blood itself is found impoverished of its hemoglobin, corpuscular and nutritive elements, with an excess of excretory products. The secreting organs including the stomach, liver, spleen, pancreas, and kidneys, undergo fibroid, and sometimes fatty degeneration, with atrophy of their secretory cells. The lungs undergo the same fibroid sclerosis constituting chronic interstitial pneumonia or fibroid phthisis, though less frequently than the liver and kidneys. The changes in the muscular structures are more in the direction of fatty degeneration than fibroid. And, as remarked long since by Lancereaux and Trousseau, "The appearance

of the heart in alcoholism is quite special ; the fat does not merely line (or cover) the heart, but likewise penetrates between the muscular fibres, and induces atrophy by the compression it exerts upon them ; at a later date the muscular fibres become fatty." The changes induced by alcoholism in the nervous structures, both central and peripheral, are also well-marked and important. These changes are briefly described by one writer, as follows : "The characteristic changes which have been observed in the brain, medulla oblongata, etc., of confirmed drinkers, consist essentially of a peculiar atrophic modification by which the true elements of nerve tissue are partially removed ; the total mass of nervous matter wastes, serous fluid is effused into the ventricles and the arachnoid, while simultaneously there is a marked development of fibrous tissue, granular fat, and other elements which belong to a low order of vitalized products." The same changes have been more recently found extensively in the peripheral nerves in cases of alcoholic neuritis. It is these steadily progressive degenerative changes in the brain and nerves that cause the habitual drinker so frequently to suffer from vasomotor paralysis and so-called heart failure ; from neuritis, neurasthenia, anæsthesia, paralysis, serous apoplexy, and various forms of mental derangement. Even the procreative organs of both sexes are found to suffer similar degenerative changes and impairments, as has been demonstrated experimentally by Mairé and Combernal, in Paris.

In view of all the foregoing investigations and established facts I ask whether there is any rational basis for the claim that alcohol is either a stimulant, tonic, or conservator of tissue ? Can an agent that directly diminishes nerve sensibility and muscular contraction, in direct ratio to the quantity given, ever act as a true stimulant or tonic ? Can an agent that by its affinity for the hemoglobin and serum of the blood diminishes the internal distribution of oxygen and markedly retards the metabolic or both nutritive and disintegrative changes, possibly conserve or protect any natural tissue ? Instead of conserving, is not its effect necessarily degenera-

tive, as we see everywhere following the persistent use of alcohol? These are questions of momentous importance to the human race. The duty and responsibility of giving them correct answers belong to the members of the medical profession. In view of all the strictly scientific investigations thus far, I do not hesitate to answer that alcohol when taken into the human system acts directly as an anæsthetic and retarder of all natural metabolism, nutritive, disintegrative, and secretory; and when persistently used causes tissue degenerations that impair health and shorten life.

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M. FAVILLE of Paris has estimated the number of persons using morphia in that city at forty thousand. Now another authority, who claims to be supported by the best of evidence, asserts that there are over one hundred thousand persons taking morphia in Paris to excess, daily.

CHRONIC alcoholism may be attended with symptoms resembling those of general paralysis, but the former are not progressive if the alcohol be withheld, while the latter, once manifested, continue to a fatal issue. The lesions of chronic alcoholism also most closely resemble those of general paralysis, but in the one condition careful examination shows that the morbid changes fundamentally involve the intima of the vessels, while in the other it is especially the adventitia that suffers.

THE success of the *gold cure* in Copenhagen has been advertised far and near, as phenomenal and wonderful. The *Medical News* of that city reports a different view of the results. Of fifteen cases treated, twelve relapsed. Of the remaining 3 one has relapsed and taken the treatment twice and is now five months abstinent. The other two claimed to be cured. All claimed to have great repugnance to spirits after two or three weeks, but this did not last long. The journal is somewhat bitter in its denunciations of this so-called remedy for inebriety.

THE PSYCHOTHERAPIC TREATMENT OF MORPHINISM.\*

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BY DR. EDGAR BERILLON OF PARIS,  
*Editor "Revue de l'Hypnotisme."*

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The question of morphinism is justly seriously occupying the minds of physicians and psychologists.

This new form of intoxication has, during the past few years, made such rapid progress that many authors do not hesitate to signal it as a veritable social danger. It seems to us, however, that the gravity of the evil lies not so much in its rapid extension to all classes as its frequent development among the intellectual class. If one should make a list of all the great minds, savants, physicians, litterateurs, and artists who have become addicted to this most tyrannical of all drugs, one would be surprised at its length; nor would the astonishment be less from a knowledge of the names of well-known men whose brilliant careers have been brusquely arrested and their moral and intellectual value entirely ruined by this evil.

It is necessary to recognize that it is, above all, among the intellectual classes that pain, both physical and mental, is the most dreaded; this explains the facility with which many persons have recourse to morphine to relieve them of sufferings judged by them intolerable. Nearly all the morphinists that we have had occasion to observe had first accepted with gratitude the assistance of this marvelous anæsthetic. None of them suspected the rapidity with which the "besoin morphinique" establishes itself, and the disease was formed, in the majority of cases, so insidiously that they did not realize or distinguish the difference between

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\* Translated from the French by Dr. Herbert Adams, Berlin, late Assistant Physician "Brooklyn Home for Habitués"; member "Société d'Hypnologie et de Psychologie de Paris."

the sufferings due to abstinence and those for which they had first taken the drug.

This confusion often constitute the first difficulty that one meets when it comes to inaugurating the treatment. The patient rarely fails to invoke the following argument: "Who can promise me that, when I have abandoned the morphine, I shall not again have my former sufferings?" This difficulty is not the only one. Under the influence of his intoxication, the morphinist soon presents psychic troubles the most varied. Of all the functions, that of sleep is the most profoundly affected. If morphine favors sleep in the beginning, it very soon, on the contrary, engenders the most rebellious nocturnal insomnia. The patient, not able to sleep at night, frequently becomes a noctambul, while often, during the greater part of the day, he may rest as an inert mass, incapable of thinking, moving, or acting. He has not force of will to rise from bed, and, fortune permitting, he soon forms the habit of passing here the greater part of the day. According as he is, or is not, under the influence of his injections, he passes from one extreme to another of profound anæsthesia or hyperæsthesia in which the entire nervous system participates. If at certain moments he is indifferent to everything, deprived of his initiative, a prey to horrible dreams, at others, when under the influence of a recent injection, he is brilliant, animated, and capable of making a certain figure in the world, or of applying himself to his ordinary occupations. It seems to him as if he were infused by his injection as with an elixir of life. But the duration of the period of animation tends more and more to shorten itself. Very soon the fictitious excitation created by the injection passes away, and sensations the most normal are painfully felt again. As soon as the crisis of abstinence develops itself, the sufferings assume such an acute type that the patient will neglect nothing to prevent their return. It is then that we may observe with great distinctness the moral and psychic side of the malady, and observe the apparition of the singular phenomena of

auto-suggestion. Demoralized by the fear of suffering, the morphinist exaggerates unconsciously the painful effects of the suppression of the morphine. He is a prey to a veritable *hyperæsthesia auto-suggested*. Under these conditions it is not at all surprising that he should subordinate all his actions to his desire to avoid the pains, the mere thought of which determine in him a profound moral depression.

Morphinism is then primarily an intoxication; secondarily it becomes a veritable disease "de l'esprit," the effects of which manifest themselves, above all, by an alteration of the principal faculty, the *will* — that is to say, that all therapeutics not based on a thorough observation of the mental condition of the patient will be doomed to failure.

That which essentially characterizes the psychic state of the morphinist is the paralysis, the anæsthesia of the *will*. If the most of his intellectual faculties have remained intact; if his imagination has survived, and even in certain cases is exalted, his initiative, on the contrary, is abolished. Nothing strikes the observer more than the want of decision, the irresolution which the patient manifests, and, above all, when it relates to his taking steps to inaugurate the treatment of his habit.

One of the illusions to which we cling the strongest is that of our free *will*. The morphinist is not deprived of this. The illusion which he caresses the longest is that he will be able to give up his morphine when he wishes to. To justify his continuation he furnishes himself with the most specious arguments, to such a degree that he felicitates himself on the services which it renders him, when he has need to act or work, not wishing to admit to himself the exaggerated price he pays for them. In short, the morphinist is, above all, a victim to paralysis of the will. Let us add to this that he is rarely free from the two neuroses which exercise the most depressing action on the moral energy — hysteria and neurasthenia — not to speak of the nicotinism and alcoholism so frequently observed in these patients, and

one will be sensible of the inherent difficulties in all attempts at the treatment of morphinism.

However, notwithstanding their extraordinary irresolution, it frequently happens that, justly alarmed by the grave trouble to the nutrition, struck by the failure of their intellectual faculties, one of these patients decides to demand of medicine to cure him of a disease which she has nearly always caused. He then receives the advice to isolate himself, for a short while, in a sanitarium.

Advice, in itself, is good, but it has little chance of being listened to and followed. Very few morphinists, in fact, will make such a confession of their impuissance. The majority of them devoting themselves to diverse labors, most often to scientific, literary, or artistic, which they are able to continue, thanks to the increasing doses of their habitual stimulant, do not wish to resign themselves to abandon their social situation nor the direction of their affairs. They dread the darts of public malignity, disposed to consider as an alien any person entering a sanitarium. In presence of the obstinate refusal of patients to submit to isolation, a certain number of physicians decided to try the employment of psychotherapy—that is to say, of suggestion during the hypnotic state, to arrive at a cure of morphinism.

In this respect, the observations by MM. Burkhard, Wetterstrand,\* Auguste Vaisin, Fonel, Blocq, Zambaco, Marselli, and Garodichze are the most conclusive, and the results obtained by them are of the nature to carry conviction. Having had, ourselves, occasion to apply suggestion in the treatment of morphinism, we believe the moment has come to point out the role that psychotherapy is destined to play. This role will be more extended from the fact that morphinists generally show themselves very amenable to suggestion

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\* Dr. Wetterstrand reports 22 cases treated by suggestion alone. In 19 cases the treatment was followed by complete success. Dr. Wetterstrand considers that this mode of treatment is going to cause complete revolution in the treatment of morphinomania. With several of his patients he had recourse to prolonged sleep during several weeks; with others the cure was effected much more rapidly.



when they have once determined to attempt a cure. The physician (and this is one point we judge useful to insist upon) should not commence the treatment until he is assured that he has acquired the absolute confidence of the patient. Much time and patience is often necessary to acquire the necessary influence on the patient to direct the treatment with authority. The facts show that a cure, although difficult, is not impossible to obtain. This is why we publish the resumé of some of our observations, which seem to us to contain certain teachings useful to retain.

CASE I. — The first patient that we had occasion to treat, Mme. C., aged fifty-five, came in 1882 to demand the aid of hypnotic suggestion against the intolerable pains which she suffered in the left ovarian region. Some years before she had sustained a rather severe operation in this region, and it was during convalescence that she commenced, on the advice of her physician, the use of morphine. She walked with the trunk flexed at an angle of 45, and could not straighten herself except under the influence of injections of morphine, and even then there was considerable deformity of the spinal column and difficulty in walking. The general condition of the patient was extremely poor.

She did not come to ask for treatment of her disease ; she was occupied only with the abdominal pains. We exhausted all our arguments, without success, to induce her to diminish the morphine, attributing to the phenomena of abstinence the periodic return of the pains. We then encountered the petition that we have since heard from a majority of our patients — “Cure me first of my pains ; then we will see about the other.” I complied with her request, and after a few séances she was profoundly affected. Incidentally, in suggesting to her to not feel again the pain, I also added in the suggestion that the morphine would certainly considerably shorten her life. This idea deposited in her mind soon took deep root, and some days afterwards she came spontaneously to ask my aid in the cure of her habit. She gave us the reason of her determination to cure herself —

that she wished to live as long as she possibly could, for she knew her death would cause great joy to some of her heirs, "and if morphine is going to shorten my life I am going to quit it."

The treatment was commenced without any definite method. I confined myself to suggesting to her to guard the determination to cure herself promptly, to become very avaricious of the injections, and to continue the suppression in spite of whatever sufferings might follow.

The patient was animated with such a desire to be cured that she suppressed the injections much more rapidly than I had thought of doing. In less than fifteen days, without the aid of any medicine whatever, by the sole power of will, seconded and stimulated by daily suggestions, she triumphed over the most cruel sufferings. It was possible by suggestion to greatly reduce the intensity of her sufferings, and in particular the profuse perspirations by which she was troubled for several months after the entire suppression.

The cure has been maintained for five years. She has told me that the argument which had a decisive action on her cure was the fear, suggested by me, of shortening her life.

CASE II.—Mlle. B., thirty years of age, was an intelligent lady, having decided, as "religieuse," on hospital service; having been expelled from the order on account of her drug-taking, she was sent to us by Dr. Gonel. She came to consult us on the 4th of February, 1890. Some years previously she had been attacked by intermittent facial neuralgia, for which she had been given hypodermics of morphia for two years (beginning with two per day and finishing with eight per day). During the year of 1887 she had multiple abscesses, for which she entered the "Beaujon Hospital." She was here treated by Drs. Milliard and Schwarz, who decided to suppress brusquely the morphine. She fell into a delirium which lasted some twenty days. She was in a state of great excitement, chanting day and night. When the delirium passed away she awoke completely well, and the

cure lasted for two years. The neuralgias returning eight months ago, she again began taking morphine, and commenced with four injections daily.

The day she came to consult us her color was yellowish and cachetic. She suffered from gastric pains, her digestion was poor and painful, and she alternated with constipation and diarrhœa. For some time she had had terrible nightmares. The catamenia had been suppressed for some months. When the hour for her injection arrived, if she endeavored to retard it, she was seized with sudden vomiting, shiverings, and diarrhœa. She had become melancholic and lived constantly preoccupied in thinking of the future. She took fifteen injections daily of five milligrammes each, making about eight centigrammes for the twenty-four hours.

The treatment was commenced the 6th of February, 1890. It was decided that the patient should come and receive the suggestions daily and she should suppress one injection each day. She slept soundly from the first séance. The twentieth day, conforming to a suggestion made, she laid on my bureau her syringes and the remainder of the morphine. All the malaises with which she was troubled, such as diarrhœa, vomiting, and profuse sweats, disappeared under the influence of suggestion. The catamenia returned. Two months afterwards the patient looked like another person.

The success of this cure was due in a great measure to the assistance of an infirmière, Mrs. Rousseau, who assisted greatly by frequently massaging the patient and also sustaining her by her counsels, watching her carefully, etc. Eighteen months afterwards the cure continued.

CASE III. — Mme. B., aged thirty-three, mother of four children, commenced taking morphine in 1884 on account of nephritic colic. Afterwards she took injections for the slightest neuralgias and more especially after the removal of a uterine polypus by Dr. Gonel, who advised the patient to consult us. She came the 3d of July, 1890. Two years previously, having attempted to substitute cocaine for the

morphine, she became quite seriously affected mentally, and especially by hallucinations. She entered the asylum at Charenton. Dr. Ritti suppressed radically the morphine. Having entered the 23d of February, she left at the end of April, cured and in good general health. She weighed ninety-nine pounds on entering and one hundred and twenty-three on leaving the asylum. She remembers this treatment with terror, and wonders that she was not made permanently insane by it. The cure was of short duration. In September of the same year, being "enciente," her physician expressed a fear of the return of her polyypus. On account of her despair at this intelligence she again commenced taking morphine, beginning with five injections daily. When she came to consult us, she was taking forty centigrammes daily. She made several injections without removing the needle, fearing the numerous punctures, as she had had, and had still, a certain number of abscesses. These, indeed, are what induced her to attempt a cure.

The patient passed her nights in reading; her books denoted a cultivated mind; she had read the works of all the well-known authors. She did not sleep before four or five o'clock in the morning, and rose very late. She took no breakfast, and often slept again in the afternoon. Her temper had become irritable and she was very unsociable.

The treatment commenced on the 3d of July and was continued without interruption during one month. An extraordinary thing was that the patient came each day without a single exception for a consultation. It is but just, however, to add that she paid for the first month's treatment in advance; that had certainly a considerable influence on her perseverance. From the 6th of July, three days after the commencement of the treatment, she took only 20 centigrammes. The 16th of July she took only three centigrammes.

At each séance she was plunged into profound sleep, with amnesia on awakening. She received the suggestion and made the injections only with extreme repugnance. In

spite of the malaises which she experienced, vomiting, diarrhoea, and profound sweats, she held fast.

The 24th of July she laid on my bureau her collection of syringes, conforming to a suggestion that I had made. She continued coming to demand my aid during some weeks on account of the malaise which she felt from time to time. She recovered her normal habits of sleep, her appetite, and she has an excellent general appearance.

CASE IV. — The 1st of March, 1892, Pauline L., aged 26, came to my clinic complaining of rather serious nervous and mental troubles, hallucinations, nightmares, ideas of suicide, etc. She attributed these symptoms to the use of morphine. She entered the Charité in 1888 on account of some nervous trouble, and was there treated with morphine. She took at the time of quitting the hospital one grain of morphine per day, and continued taking that amount. A druggist, "a la conscience large," according to the expression of the patient, sold her as much as she wished at sixty cents a grain. She worked day and night to procure it, preferring to go without food rather than abstain from morphine. The appearance of several abscesses induced her to try to diminish her dose, which she did, alone, to 50 centigrammes.

When she came to consult me, she took 50 centigrammes daily, divided into eight injections. She had arrived at an extreme degree of enervation, the genital sense was entirely abolished, and the menstruation was almost entirely suppressed.

Being very hypnotizable, the treatment was easy. A very curious thing was that she did not wish and could not be hypnotized except by certain persons. The suggestion was made that she diminish one injection each day. At the end of four days, bilious vomiting having occurred, she increased a little. At the end of fifteen days she was taking only two injections daily.

To finish, I suggested to her that on arriving home she should throw away her solution, and that after vainly trying to make an injection she should throw her syringe on the floor and stamp it under foot.

These suggestions were punctually carried out. For four days she remained in bed, having vomitings, diarrhœa, and cold sweats, and demanding morphine from those around her. But her sister, having been warned, saw that none was given her. The fifth day the malaise had disappeared, and the patient felicitated herself upon having escaped from the habit. Since the first of April, 1892, she has not taken any morphine. She has, moreover, received energetic suggestion to resist all cravings which may occur. During the two following months she had very disagreeable sensations and fear of dying, and at certain moments a truly lamentable state of mind; but she hastened to come to demand the aid of suggestion, and all her troubles vanished as if by enchantment.

I have been able to assure myself, beyond the peradventure of a doubt, that the patient is nearly well and takes no morphine.

CASE V.—Mme. O., aged 26, in the course of a phlebitis complicated with a painful œdema extending to the thorax, commenced the use of morphine, which alone relieved her pains. The disease was rapidly formed, although she claims never to have experienced any pleasant sensations from the morphine beyond the mere calming of her pains. At the end of some weeks her physician allowed her to make the injections herself. She now takes eight centigrammes daily.

The treatment was commenced the 24th of May, 1892. From the first séances a manifest somnolence was obtained. She received the suggestion to repress, of herself, one injection. The same evening she did so, and, nevertheless, passed a better night.

The next day she received the suggestion to suppress radically the injections of the next morning and to rise at eight o'clock without feeling the usual malaise. The suggestion was punctually followed and the patient passed a very agreeable morning, having risen at 8 o'clock. Very intelligently the patient seconded the treatment with enthusiasm and manifested the desire to cure herself very rapidly.

At the third séance she slept profoundly, and received the suggestion to dine "en ville" in the evening without any previous injections, and to bring me the next day her solution, syringes, etc. At the appointed hour on the following day she brought me her syringes and two bottles of morphine pellets, sold her by an unscrupulous druggist.

The effects of this sudden suppression promptly manifested themselves; during one month she was quite agitated and had spells of shivering and cold sweats. The day after her suppression she had a profuse diarrhœa; she vomited her dinner of the evening before, and arrived at my office worn-out, discouraged, and walking with difficulty. I put her profoundly to sleep. By suggestion, I dispelled her malaise and restored her courage; she left me quite gay, reanimated and determined to resist all temptations to take morphine. For some days she received the same suggestions. The cure has been maintained for six months, and every indication points that it will be continued. During four months the patient came from time to time to demand the aid of suggestion.

This case is remarkable on account of the rapidity with which the suppression was effected. The rigorous adhesion to our usual method would have made the suppression more slowly, but we yielded to the pressing solicitations of the patient to finish with it at once. We must recognize that she showed a very uncommon force of will, and was, moreover, endowed with remarkable intelligence and a very active mind. In this case, we had recourse to some physiological stimulants (*digitalis*, *ext. coca*) to compensate the brusque suppression, conforming ourselves, as we have always done under similar circumstances, to the precepts so justly formulated by Dr. Jennings.

In three other cases the treatment by suggestion was employed as an adjuvant to the treatment directed by our eminent confrère, Dr. Jennings, the competence of whom, in all matters relating to these questions, is so well known. He has also recognized how much the phenomena of auto-suggestion dominate the situation, and he proposes in a com-

ing work to treat more fully of this, giving the results obtained. That which we should remember concerning the influence of suggestion in the treatment is, that it plays the principal rôle, first of all, in deciding the patient to begin treatment, then to awaken and stimulate his will-power and to give him a sufficient sum of energy, so that he will not be discouraged by the first uncomfortable feeling that he may experience.

We quickly come to the conclusion that the first few séances should be devoted to revivifying the failing will-power. The essential part of the treatment is, above all, to determine the patient to *will* to arrive at a complete cure, to exalt his desire to be free from his tyrannical drug, to make it odious to him, and to make him give a proof of this by taking the initiative in his treatment—in one word, to make of this the most active agent in the cure.

From our personal observation we believe ourselves able to deduce the following conclusions :

1st. If the distinction that writers have tried to establish between simple morphinism and morphinomania presents a certain interest from a clinical and medico-legal point of view, it offers only a secondary interest from a therapeutical standpoint.

2d. In both cases psychotherapy, that is to say, the employment of hypnotic suggestion, in the majority of instances, effects a complete cure without recourse to isolating patients in a special establishment.

3d. In the cases where isolation is judged necessary, psychotherapy facilitates the treatment by diminishing very appreciably the pains and various troubles due to the abstinence.

4th. The difficulty in the demorphinization of a patient does not at all correspond with the mental troubles which he may present, nor with his poor physical condition at the moment of the commencement of the treatment. The difficulty results above all from the default of energy of the patient and his irresolution to cure himself.

5th. The duration of treatment is about one month.



The morphine should be gradually suppressed. When the patient decreases to two or three centigrammes per day, the suppression should be radically made. At this time the suggestive séance should be repeated more often to combat the malaise and sustain the energy of the patient.

6th. The period of convalescence is less long when the suppression has been more slow. During some months after the total suppression, the malaises which frequently trouble the patient are easily dissipated by suggestion.

7th. The cures obtained by the employment and with the aid of suggestion are much more sure than those obtained by a forced suppression. They have for a base the awakening of the patient's will, and the putting into play of this will is the surest means of preventing a relapse; moreover, it is possible by suggestion to inspire in certain persons a positive disgust for morphine.

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#### ANTIPYRINOMANIA.

Under this name Dr. Cappelletti (*Revue générale de clinique et de thérapeutique*, May 17th) writes of a mental affection caused by addiction to the use of antipyrine. An hysterical woman, twenty-three years old, had used the drug to excess for two years, to allay headache, taking every day as much as two drachms. She had become affected with loss of appetite, sleeplessness, tinnitus aurium, and muscular weakness. She entered a lunatic asylum of her own accord, to enable herself to abstain from antipyrine. The dose of the drug was reduced, but this produced such a state of prostration and such grave functional disturbances, even when the patient was unaware of the reduction, that potassium bromide and caffeine were resorted to. The patient was finally cured of these ill effects and of her craving for antipyrine. The author recommends the gradual reduction of the dose in such cases.—*N. Y. Medical Journal.*

THE IMPAIRMENT OF MORAL FEELING AND  
WILL PRODUCED BY THE CHEMICAL AC-  
TION OF MORPHINE IN THOSE ADDICTED  
TO ITS USE.

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Opium and its alkaloid, morphia, is a poison to the nervous system when taken habitually. It impairs and destroys moral feeling and will.

Its action suspends and permanently enfeebles volition and conscience. Whether this is due to its agency upon cerebral structure — that is, whether it is imbibed by the nervous tissues and creates by such imbibition changes incompatible with pain, for instance, or whether by its action on the brain the will directs the attention of its influence to structural or moral suffering, as the case may be — is a very difficult problem for psychologists. It would seem that the suspension and enfeeblement of the moral faculties produced by opium, while the intellectual faculties remain comparatively unimpaired, should depend rather upon a relation between opium and sensibility and consciousness than upon the relation which it has to cerebral substance. There is great degradation of moral feeling and impotence of will in those who have become the slaves to morphine addiction. Taken at first generally to relieve pain, it is simply impossible for those who have inherited a neuropathic constitution and who belong to the neurotic circle of society to stop its use after they have taken it for a few weeks to relieve pain. Hence the great care that should be exercised by the profession in its use and the great necessity of withdrawing it just as soon as possible and substituting some other anodyne. I will take

pleasure in sending a prescription to any reputable physician who addresses me at my sanitarium for an anodyne which I have found beneficial in a practice of twenty years in the field of nervous diseases, to give those who, by reason of their neuropathic constitution, ought never to take opium or its alkaloid, morphia, except as a last resort. Pain in the pelvic viscera in women is generally relieved by a hypodermatic injection of  $1\frac{1}{2}$  of a grain of atropia, while the pains of dysmenorrhœa are relieved by  $\frac{1}{2}$  to 1 drachm dose of fluid extract viburnum prunifolium.

The galvanic current of electricity is also very useful in relieving pains which otherwise would have to be relieved by opiates. The finest moral sensibilities are antagonized entirely, and those not so fine much blunted in the opium habituate. All family claims and interests are sacrificed by the habituate. Many are untruthful and untrustworthy, and with the worst class of these unfortunates there is not a deception they will not practice to get their favorite drug. There is a physical deterioration of nerve element, for the opium enters the blood and acts there injuriously upon the elements of the exquisitely delicate structures. In this way the finest, latest organized, least stable parts which subserve moral feeling and the will are injured.

Most morphine habituates do not take morphia for any pleasurable sensation that they derive from it, but rather to relieve the terrible pain and distress which comes on as the result of abstinence. Many are morphine habituates before they know it. A patient of mine from Pennsylvania told me that she never dreamed she was under the thralldom of the drug until, her hypodermic needle being broken, she could not take the accustomed dose which she had taken under medical advice for weeks to relieve the pain of a synovitis of the wrist joint, and then the psycho-somatic suffering was very great until her physician arrived and administered a hypodermic, when all her disagreeable and painful sensations vanished. Her physician for the first time realized that his patient, who was a very neurotic person, had

acquired the habit, and after several ineffectual attempts to break it up sent her to me. She had taken it but six weeks, but, endowed with a strong neuropathic constitution, the habit had been easily formed, and abstinence from it produced languor, lassitude, loathing of food, aching of the limbs, and indefinable wretchedness, with threatened collapse when her physician attempted to take it entirely away. She suffered from complete exhaustion and prostration of mind and body. The control over her muscles was impaired. Systematic treatment by the reductionary plan, with the bromides, followed by warm baths, electricity, and a tonic consisting of tinctures ferri and strychnia and a careful diet based on physiological food values restored this patient to perfect health in a few weeks, and we sent her home with no craving at all for morphia.

We have treated many cases of morphia habit where the physician could not make his diagnosis, the clergyman write his sermon, the man on exchange buy and sell stocks, or the society woman entertain until the usual hypodermic of morphia had been taken, when the mental processes became clear and the muscular system restrung, the eye became bright, and an artificial and temporary health was imparted, to be replaced by pallor, pain, and distress as soon as the effect of the drug had died out, necessitating another dose. In all our cases, with two exceptions only since 1876, these patients earnestly desired a cure and gladly coöperated with us in our endeavors for their cure, which have been almost uniformly successful. There is very little suffering attending the treatment and cure of an opium habituate and the psychosomatic suffering following withdrawal can be very successfully combated by warm baths, the judicious use of electricity and other agents. The morphine habitue takes the drug hypodermically for the instant sense of relief he or she experiences and for the rapid and ineffable solace obtained. Such persons soon get to that point where the will is paralyzed and the personal consciousness is benumbed. They have not enough energy to throw off this torpor, to break from their

habit and take hold again of their duties. There are morbid fears and dreads, and vertigo and insomnia are common disturbances. There is anæsthesia. The reflex actions are weakened. There is constipation, and abstinence brings on diarrhœa. The pulse may be intermittent, the heart's action is weakened, and there is dyspnœa with hoarseness, especially when the patient is trying to abstain. The eyes lose their brightness, the patient becomes prematurely old, the face in extreme cases becomes an expressionless mask, and the skin takes on an earthy tint. There is a progressive cachexia which generally ends in death if the patient is not cured. All serious work is simply impossible to a morphine habituate deprived of his stimulus, and if abstinence is kept up a violent frenzy is developed, and even a delirium tremens and collapse. The diagnosis is made from the strange expression of the physiognomy, the wan complexion, the sunken eyes, the vacant looks, and the general appearance of dullness and listlessness. There is a marked lowering of the physical and moral tone. There are also some cases who retain an appearance of health, who enjoy an excellent appetite, and who physically and mentally defy detection until they voluntarily acknowledge their addiction to the drug.

It is an invariable rule, however, that in opium habituates work is not possible except under the influence of morphia. The morphine habituate always increases his dose to get the relief, repose, and comfort he wants, and this steady increase of poison injected means of course, as I have said, a progressive cachexia, both moral and physical.

In the treatment of this disease abrupt suppression I regard as absurd and barbarous as well as dangerous. Gradual suppression and reduction is the only sensible treatment, I think, and even this is not possible generally in the patient's own home, for he will surely cheat his physician and obtain morphine in excess of that prescribed. The nerve tone has to be improved, sedatives are indicated, the insomnia has to be controlled, and the whole physical and mental tone brought up to the normal standard. The patient must be kept quiet

and secluded from society, or he cannot be cured. We have had gratifying results from treatment of these cases. Our plan of treatment consists of gradual reduction, using the alkaline bromides at first, followed by iron, strychnine, and electricity, hot baths and mental quietude, and an atmosphere of tranquillity. The strictest surveillance is practiced, and no patient for the first two weeks allowed off the grounds without a nurse.

We use all the means which science furnishes to cure this disease, and from many years' experience consider it a very curable affection.

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A statistical table published in the *New York Voice* shows that in this country there has been an enormous increase in the consumption of fermented liquors, with no diminution in the amount of distilled spirits. The production of fermented liquors, which in 1872 amounted to 6.409 gallons per head of the population, had risen in 1892 to 15.166 gallons per capita; the distilled spirits being 1.665 gallons per capita in 1872, and 1.833 in 1892. "A careful study of these facts gives little encouragement to those who are claiming that the use of fermented liquors are driving out the distilled liquors. Assuming that the consumption of these liquors is practically equivalent to their production, it is evident that for twenty-four years the per capita consumption of distilled liquors has remained fairly constant, with a marked upward tendency in the last three years, while for the same period the consumption of fermented liquors has increased threefold. A comparison between the years 1863 and 1892 shows an increase in the per capita production of distilled spirits of 385 per cent., and in the production of fermented liquors, of 828 per cent."

*Morphia* should not be given to inebriates until hypodermatically when the urine is of low specific gravity and contains albumen.

## Abstracts and Reviews.

EVIDENCE ON THE CARE AND TREATMENT OF INEBRIATES. Taken by the Department Committee appointed by the Home Office of the British Government in May, 1892.

Mr. Mathews, Secretary of State, declared that great difference of opinion having arisen as to what kind and degree of punishment for offenses committed by habitual drunkards would be most effectual, both as a deterrent and with a view to the reformation and cure of such offenders, it appears to me much advantage would result from an inquiry being made into the subject.

Following this, a committee of the following persons was appointed: J. L. Wharton, M.P., Chairman; Sir W. G. Hunter, E. L. Pemberton, C. S. Murdock, Dr. David Nicolson.

This committee held ten different meetings, extending from May 27, '92, to Feb 24, '93, and examined twenty-four witnesses concerning the Habitual Drunkards Act and the best method of dealing with inebriates.

The following is a synopsis of some of the very interesting facts which were brought out by this inquiry:

The first witness, Dr. Hoffman, inspector of Retreats under the Inebriates Acts, said that there were nine inebriate asylums licensed under the act in Great Britain. Most of them received only the middle and upper classes, persons able to pay. Some of them are exclusively for females, others for males, and two received both sexes. All these places were small, and in 1890 had 109 different persons under treatment. Some of these were relapsed cases, who had been at other asylums, but the most of them were new cases. Of eight hundred cases treated in these asylums, only 35 are known to be readmissions.

The defects of the law prevents more cases from coming to these places. Patients object to going before two magistrates and signing away their liberty, and owners of asylums fear to invest property where a license must be procured every 13 months to continue in the business. Some patients work for a part of their expenses, and if labor could be provided for all, great improvement would follow. He urges that power be given all managers to receive and hold patients without publicity; also to restrict them in close confinement whenever necessary. A case was given of a patient who escaped several times from an asylum, drunk to frenzy, returned and was destructive, alleging his object to have the managers expel him, which they were obliged to do. In this case their only course was to have him arrested and sent to jail for assault. The asylums were not able to deal properly with the criminal inebriates. From twelve to thirty months seems to be the minimum and maximum time for the successful treatment of these cases. Persons punished by fines and short imprisonments are made worse, and the object of the law is defeated.

Sir John Bridge, chief magistrate at Bow Street, believes inebriety should always be considered a crime, and that if existing laws were carried out fully the evil could be restrained. He finally acknowledged that an asylum for inebriates where the term of confinement would be for long periods would be better than the present prisons. He comes in contact with inebriates who commit crime, and thinks they cannot be reached except by severe measures and prompt confinement, and liberty under police inspection for a long time.

The police magistrate of Westminster, Mr. DeRutzen, thinks the large number of arrests for drunkenness who are discharged when they become sober, should receive more attention, and not be treated so lightly. They become hardened by this treatment. Long treatment, abstinence, and work will do much to bring on a cure. A case of a woman who was convicted 257 times for drunkenness, might



have been saved if she had been sent to some retreat for a year or two. A case of a woman who had been arrested 60 times was mentioned, that was finally sent to a retreat, and proved to be a most exemplary case after six months' residence. As a magistrate his services were sought in advice by relatives of inebriates, and if retreats could be opened with legal powers to detain such persons, many cases could be saved.

Mr. James Munro, late Minister to Victoria, Australia, gave an interesting account of asylums in that country. In 1870 a committee in Melbourne subscribed money and opened an inebriate asylum. In 1872 an act was passed giving power to retain inebriates. Persons could go before a magistrate and consent to be sent to an asylum for 3, 6, 9, or 12 months, and could be held legally according to commitment. The government appropriated money to aid the asylum. Dr. McCarty managed it, with only moderate success, up to 1890, when, by a consolidation act, it was taken by the government, and is now managed the same as a lunatic asylum. In 1889 the government established another asylum, so that two asylums for inebriates are under the state care. There are no private asylums of any kind in Australia. Both of these asylums charge all patients for board and care, and persons are detained from 6 to 12 months, on their own commitment. Criminal inebriates are sent to prison as in other parts of the world. The inmates of these asylums are from all classes, and suffer from excess in drink. These places have suffered from bad management, and the public interest has not grown or the work been as favorable as it should have been.

One of these asylums is located at Northcote, the other Beaconsfield. A third so-called asylum was opened by a missionary. Each inmate gives a certain amount of labor in return for his care and treatment. He thinks all retreats should have employment as a part of their treatment. So far not enough cases have been under treatment to form any very reliable statistics or conclusions.

Dr. Usher, formerly government medical officer of

Queensland, and author of a recent book on inebriety, testified that an inebriate should be treated the same as a lunatic. His liberty should be signed away the same way. No hesitation of the liberty of the patient should prevent similar dealing with the alcoholic. His treatment as to length of time should turn on his condition. If hereditary it should vary from one who has acquired inebriety. He believes diet and dietaries should be a part of the treatment, and meats should not be used only in exceptional cases. Separate classes are necessary for paying and non-paying classes. The state should sustain asylums for criminal and pauper classes. The great want is power to compel restraint and long residence in an asylum. Many retreats are not doing good work because of bad management and frequent changes. He thinks the system of voluntary detention in America the best at present. Cases were mentioned of inebriates who hired rooms by the year in retreats and occupied them when they felt the need of restraint and medical care, coming and going under the advice of the physician. A certain class of inebriates should be regarded as insane and receive positive medical care. The specifics are fraudulent, in that they do not contain what they claim, and are based on conditions which do not exist.

The superintendent of the Grove Retreat for Women, Mrs. Hughes, has had many years' experience with inebriate women. They are from the middle and lower classes, and come from the police court frequently. Twelve months is a minimum time; most cases should be under care longer to fully recover. They should have some employment to do well. Greater power of restraint should be granted, and classification of criminal and pauper inmates. Magistrates should have power, on the certificate of the physician, to commit cases for long periods, to be changed by parole where the patient could bear it. Diet is an essential part of treatment, and many cases can be cured by occupation and nourishing diet. The law should be changed to permit cases to be arrested without warrant where they had run away, and

the time of commitment should be lengthened with every escape. A large number of these poor inebriates could be restored to sobriety and made useful citizens by long restraint in retreats, but the law must be changed.

Mr. Philips, the physician to this retreat, mentioned a difficulty coming from friends who, after a time, insisted on the discharge of patients, against the judgment of the officers. Such people judged solely from appearances, and were suspicious of some motive in retaining the case after a seeming recovery.

Prof. Clifford Allbutt, Lunacy Commissioner, believes that retreats are a great success, considering the difficulties of admission, length of detention, payment, discipline, management, and restraint. When these are improved this fact will be recognized. The treatment of inebriates would vary widely with the class of cases, some of which are by conduct a source of public danger, others merely an offense. Some have inherited the tendency to drink and are diseased, others have fallen into this by environment. They all require a different machinery in treatment. They should be confined the same as lunatics are in different parts of an asylum or retreat. The question of inheritance, mental soundness, or defects can be determined generally without any doubt. The time of treatment should be not less than twelve months, and longer in most cases. The sentence should be for a definite time with power to renew it as the circumstances dictated, and by the proper authorities. In the case of criminal inebriates careful inquiry into the case should be made before any disposition or sentence is passed; then the case could come under full hospital and disciplinary care. He would send such cases to the lunatic asylums, and have them in a part of the building by themselves. The treatment would be the same as lunatics, only modified according to circumstances. Someone would be responsible for their care and control, and a practical machinery would soon be fitted to their necessities. They would be under inspection of competent men, and no abuses of power or authority would be

likely to follow. Inebriety is diminishing, and will in the aggregate grow less and less, and a large number of the victims can be best treated under the lunacy commissioners in separate parts of existing asylums. For the paying class retreats could be provided that would combine special means and measures for the permanent cure of over half of all the inmates. I think the curability of this class is very high, and will increase in the future, but only from long periods of detention. From seventy to eighty per cent. can be restored, and with fair surroundings and care very few of this number will relapse. These retreats need skilled managers, who can do more than barred doors to build up the brain and break down this thirst for spirits. The law should give all retreats full power of control, and keep them under constant inspection and regulation to some central authority. He would do away with voluntary signing by the patient, and only require the signature of a responsible person with two physicians for his commitment.

Dr. Branthwaite, Superintendent Dalrymple Home, from his experience of ten years feels assured that at least thirty-five per cent. of all cases under treatment are cured. No case is permitted to go out of the grounds under three months, and if they are refractory they are placed under the constant care of an attendant. The law is very cumbersome in aiding to arrest escaped patients, and should be changed. The methods of admission are bad; persons should be committed without their signature, and sent out on some plan of ticket-of-leave. Employment would be beneficial to nearly all cases. We are crippled by the legal difficulties in getting in and getting out of asylums. Dipsomaniacs should be sent to insane asylums, and some means provided to restrain the criminal inebriates, as a class, by themselves. If these obstacles were removed all retreats would be crowded, and the demand would far exceed all the possible accommodations that would be provided for years to come.

Mrs. Smith, the Superintendent of the St. Veronica's Retreat for Women, has on an average forty cases of all classes

under care. They work for their treatment as far as possible; many of them are cured, some relapse and return; twelve months is a minimum time to expect permanent results, especially for women in middle life. Has had a case of tea inebriety, where the mother and grandmother were addicted to the same trouble. This case was in a state of stupor as long as she could get tea. She showed the same symptoms as alcoholics, and was a difficult, troublesome case. Good food is a part of the treatment; exercise and labor are required of each one. The patients of the better class show a tendency to get down to a level with those of a lower social grade. They sleep in separate rooms and dormitories. The act is an obstacle for the free admission and detention of cases.

Dr. Street, of the Tower House Retreat, a mixed asylum where both male and female inebriates were admitted, believed both sexes could be treated at one place with success. The women are more difficult to cure because more degenerate, but are less refractory. The least time of treatment should be six months. The power should be given to retain people for years under certain restrictions. Certain cases can only live free from spirits under restrictions and care of others. The law is a great obstacle and must be changed before we can do much practical work. These cases are curable far beyond any present conception, but the law must be changed.

Dr. Gray, manager of the Old Park Hall Retreat, takes servants who are inebriates, both men and women, and makes them work for their treatment; he finds them valuable. His asylum takes both sexes, but expects to open a separate asylum for women at a distance, and thus separate the sexes. He thinks an industrial home would be very practical if power was given to make each inmate work. Cases are received for a small sum and so many hours' service a day; this has worked well. If these persons employed and under care and treatment should do refractory acts, they can be taken before the courts and fined and imprisoned, at the op-

tion of the magistrate. Many of these cases have lost all moral considerations, and are childish and irresponsible. In his experience many of them recover, but from the application of long periods of detention and confinement, from six months to three or four years.

Col. McHardy, prison commissioner for Scotland, said: Drunkenness has reached enormous proportions in Scotland. In 150,000 commitments, 105,000 were for drunkenness and petty crimes associated with it. From 1872 to 1875 the commitments in Glasgow rose from 10,000 to 18,000. In 1891-92, 342 persons had been sentenced for drunkenness over 50 times, and 939 had served sentences for this offense over twenty times. This shows the uselessness of short terms of imprisonment. He advocated the boarding-out system for pauper inebriates, believing that each case should be sentenced for a term of years and then sent out in the country to board with responsible families, who would receive a small sum in payment together with the services of the patient in some work. These cases would be under the care of the farmer or tradesman where they lived, and also under an inspector who would keep an oversight and correct all abuses. If the case proved incorrigible he would be placed in prison and confinement. All persons who gave these cases spirits or aided them to escape would be open to a legal action. He thinks this system of boarding out must be adopted for the inebriate the same as the chronic insane; that retreats can only reach a certain class, and the prisons, with some modifications, for another class, but the large class of chronic inebriates must be put out under commitment, away from towns and cities, in the care of families. The large number of cases who never come under the police notice but who are obstacles and perils to homes, should all be taken out under such a commitment, and many could be cured. They are practically lunatics, and should be treated as such. In Scotland 2,000 lunatics are now boarded out, many of whom are chronic inebriates, and so far the system is a success. There are no retreats for inebriates in Scotland organized under the act.

Dr. Norman Kerr, from a large experience and study was confident that at least one-third of all cases under treatment from six to twelve months and more were cured. Whenever the disease of inebriety was recognized rational means were used, and the cure was a reality in most cases. Pauper cases should all come under full legal restraint and have occupation as a part of the treatment. He believed women did not differ from the men in respect to degeneration and difficulty of treatment. He would have all retreats open to inspection by the government, and each case committed for a certain definite time and under full legal power to arrest in case of escape, and to force them to obey such rules as were found valuable and necessary. He gave an interesting history of laws in different states and countries of the world for arrest and commitment of inebriates to asylums; also of the rapid change in public sentiment in Great Britain concerning the need of asylums and special physical remedies for the restraint and care of inebriates. Criminal inebriates should be treated separately, and the act should be changed so as to include under the head of inebriates all persons who used narcotics of any kind to excess. Inebriety should be recognized as a nerve disease, coming and going like storms; then the methods of treatment will be clear and rational to all.

The superintendent of Colman Hall for inebriates, Dr. H. R. Ker, thought many inebriates run parallel grooves with insanity. He believed they were very curative if taken in the early stages, but the legal restraint must be clear, positive, and practical. Little could be done at present until the act was changed, the few cases under treatment only showed what could be done with better facilities. The cures of the present cases, from 30 to 35 per cent., was very hopeful, and showed what might be expected in the future.

Sir Andrew Clark, president of the Royal College of Physicians, thinks private asylums cannot be successful because duty and personal interests will always clash. The state should have full power over each retreat, and give ample laws of control and hold them to a line of duty. It is

his experience that a drunkard in a family means ruin to that family unless relief comes from some source. The larger number of drunkards are in families that never bring them into publicity except to the physician. No evil is greater and of more importance, and the state by legal acts must foster and encourage asylums where compulsive treatment can be carried on for periods of from twelve months to many years, and even a lifetime in many cases. Separate asylums should be provided for criminal cases; the rich and poor should be together, and sharp restraint with occupation should go together. Short sentences by the courts are injurious; long sentences under state control in state asylums are the best hope for these cases.

Mr. Manning, governor of Her Majesty's Prison at Pentville, believes short sentences of inebriates a very unfortunate means of cure. He illustrates this by a case where after twenty sentences for inebriety following each other rapidly, the man came for six months and was fully restored after this. He relapsed long after and died, but had the sentences extended to years this case might have recovered. He thinks the prison unfit, and that retreats and intermediate places should be established and conducted on both a compulsory and voluntary plan. Employment of some form in the open air is of great value, and surroundings of cheery character to raise up the moral and elevate the entire man is essential.

Rev. Mr. Morrison, chaplain of the prison at Wandsworth, believes that drunkenness should never be punished as such by the state, that it should not be considered as a crime or offense. Men who commit crime when intoxicated should be punished for the crime and not for drunkenness. The habitual drunkard is always degenerate in statue, in brains, and in general health. He should be treated in separate retreats by distinct means and methods. He should be considered a modified lunatic and come under the same general laws. The laws should reach out and apprehend his condition, and give authority to hold him months and years



under control in special surroundings and places, and where industry should be a part of every day life.

Judge Hannay, of the metropolitan police court, thinks the poor diet given in prisons to short term prisoners, especially inebriates, is an active cause for their relapse as soon as released. A part of each prison should be put apart for these cases, and the treatment be reformatory rather than penal. This, with work, would cure many such cases. Long time of detention is essential in all cases.

T. L. Murray Brown, barrister-at-law, secretary of committee of discharged prisoners, etc., etc., deplors the failure of the present methods of short sentences. Half a century hence it will be difficult to persuade our grandchildren that such a state of things existed as the present treatment of inebriates in the year 1892. He believes in private asylums under government inspection for the paying classes, and the public asylums for the poor classes. The period of treatment should be from one to three years, with release on parole. They should be reformatories and have legal power under the control of medical men, and be classified.

Chief Constable Dewar of Dundee says short terms of imprisonment are recuperative and not deterrent. Inebriety should be considered the same as an infectious disease, and the treatment should be compulsory isolation. It is a disease which is sure to follow down in families from one generation to the next. His experience would indicate that they can be made self-supporting in part while undergoing treatment, but it must be in Homes especially organized for this, both by the state and private enterprise.

Rev. Canon Acheson, who had been prison chaplain for years, mentioned a case of a man who, with his son and two daughters, had been sentenced repeatedly for inebriety. All of them were in prison and in the workhouse together; they had all served over twenty sentences each for the same offense. The hereditary nature of inebriety had been established, and all prison experience gave marked evidence of this. All such cases must have compulsory treatment in re-

treats of months and years. He had noticed many cases that were cured; some would only lead lives of abstinence in asylums, and should be provided for as long as they lived.

Sir Richard Quain believes that in the future dipsomania, with its premonitory symptoms, will be studied and provided for. Such cases will be sent to retreats and controlled during the paroxysm, then liberated. Other cases of habitual drunkards should have long periods of detention, and all managers of retreats should have ample power of restraint. Recovery is certain in many cases, and even those most incurable have been known to get well in asylums and retreats. Our present methods are very faulty and must be changed; the act must be modified greatly.

Captain Staffard, commissioner of prisons, objected to having criminal inebriates confined in prison. They should be in asylums for that purpose, where the discipline and diet and system of commitment and discharge should be arranged to meet such cases. Short sentences are a great evil and demanded a change.

This comprises only a small part of the testimony, which occupies over a hundred closely printed pages, and gives our readers a fair idea of the intense interest on this subject in Great Britain.

This committee made a report in which they reviewed the evidence at some length, and closed recommending the following:

The Secretary of State have full power to make rules regulating the forms of admission of all applicants to retreats. That retreats be encouraged by aid from public rates to provide accommodations for the treatment of the poor, and also to give them work and more perfect control over each case, and that the maximum time of detention be extended to two years. That the law be changed permitting friends of cases to make application for their admission to any justice, and that the property be holden for all bills contracted during his detention in an asylum. The Home Secretary to regulate all rules of admission and discharge of patients, also

manner of arrest when the person escapes, and the question of discharge on ticket-of-leave, the enforcement of discipline, and other rules. Relating to criminal inebriates, more explicit authority be given to the police to arrest and hold persons drunk and disorderly on the street. Magistrates should have larger powers to hold and confine such cases. Reformatories should be aided by public funds to provide means and measures for the control and occupation of these cases under proper discipline. When these places cannot be had accommodations should be provided in prisons and lunatic asylums and poorhouses until they could be utilized for this purpose. That magistrates have power to commit to such reformatories for lengthened periods all habitual drunkards who come within the action of the law, who are guilty of neglect, ill-treatment of wives and families, or who have been convicted of drunkenness one or more times within a year.

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#### AMERICAN INEBRIATE ASYLUMS.

Dr. Crothers read an elaborate paper on this subject before the neurological section of the American Medical Association, at Milwaukee, Wis., June, 1893. The following is the closing part of the paper :

“The most careful authorities of this country and Europe agree in the statement that fully one-third of all cases who come under treatment for periods of three months or more are permanently restored.

“Other institutions, where inebriety is treated as a vice or by empirical methods, claim eighty and ninety per cent. of recoveries.

“It is needless to add that all such statements are not supported by published statistics.

“In view of the chronic character of these cases, and the imperfect means of treatment, the results so far are encouraging, and indicate great possibilities in the future from a better knowledge and control of these cases.

“Such is an outline view of the history and present condition of asylums in this country. The rampant empiricism which is, so prominent to-day is indirectly rousing up a new interest in all asylums for inebriates.

“The increasing crowds of relapsed cases, whose faith in the gold cure specifics have been misplaced, are rapidly filling up all asylums, and come in a measure prepared to accept physical treatment, and to appreciate the needs of means and remedies. There are ideals of the coming means and appliances essential for the successful treatment of inebriety, towards which a few institutions are struggling. Each year's experience brings larger and clearer conceptions, and each institution is becoming more adapted for scientific work in this field.

“An outline of the scientific treatment of inebriety in asylums in America will describe some part of the treatment common to each, but not yet attainable in its entirety, because of the numerous obstacles and want of support from public opinion and other conditions.

“The situation of an asylum in the suburbs of a city or in the country near large centers, with ample grounds for retirement and quiet living, is essential. A proper building, equipped with baths and all the appliances for comfort, with means of amusement, joined with ample legal power to hold the patient a year or more, are equally essential.

“They should be called hospitals, not only in full recognition of their physical disabilities, but as places where every condition of life can be regulated and every surrounding can be made to aid recovery and restraint. Literally, a quarantine hospital, where isolation and removal of all the exciting causes, combined with appropriate treatment, to build up and restore the deranged functional activities of the organism, can be obtained.

“The time of treatment should be from six months to two years, and be governed by the condition of the patient, and extend to a legal control on parole for a long time after leaving the asylum.

“In Connecticut the law gives control over all committed cases for three years, whether on parole or otherwise, in the limits of the State.

“The hospital should provide exact military restraint, with duties and responsibilities, rewards, and punishments, suited to the condition and capacity of the case; also work, amusement, and occupation, both mental with physical, as medicinal agents. Every condition of life should come under exact military control. Baths, exercise, sleep, food, and medicines, all to be regulated and applied uniformly. Each one should be treated as suffering from profound disease of the brain and nervous system, requiring long rest and building up. The general treatment should begin with an examination and enquiry of the facts concerning his past life and present condition. These examinations should be repeated every few weeks, because of the rapid changes and errors which are impossible to guard against in the first and other examinations. The use of spirits should generally be abandoned very early in the treatment, and the return of the drink paroxysm anticipated by the use of drugs, baths, exercises, and special control.

“Many of the paroxysmal drinkers are practically epileptics and require similar treatment. They are suffering from grave disturbances of the physical centers, and physical remedies are required in addition to other means.

“Other cases are delusional maniacs and paranoics, out of harmony with every condition of natural healthy living, and unable to correct and adjust themselves to such conditions. In others, nerve exhaustion is at the bottom of the drink impulse; inherited tendencies, reflex irritations, and many complex conditions which can only be discovered and treated in hospitals. When these are treated the causes are removed and the alcoholic soil is exhausted and dies away.

“States of poisoning from stupor to full delirium are made the subject of special treatment, according to the experience and theories of the physician. These acute symptoms, followed by chronic conditions, require equally special remedies and means.

“These are some of the general ideals in treatment to which every scientific asylum is moving. All asylums suffer for want of ample legal authority over their cases for sufficient time to secure permanent results. Public opinion regards asylums as of only temporary, and, in most cases, of doubtful value. But the theories of their work are openly termed “fads,” and supposed to be founded on some mercenary or selfish purpose. The pulpit, press, and ultra reformers pass by on the other side, like the Levite. Public patronage is withheld, and most all asylums depend entirely on the income of patients for support. Hence, they are more or less crippled in every way. Many asylums suffer from poor location, bad buildings, and surroundings, inability to classify their inmates, and apply special treatment to each one. In many places baths and systematic exercise cannot be secured. The nutritive, hygienic, and physical treatment cannot be carried out on the ideals of the managers; hence, many asylums are using the means within their power, in anticipation and looking forward for larger and more perfect facilities.

“The treatment of inebriety not only includes everything found valuable in hospitals for the insane, in reformatories of the most advanced type, and in the modern sanitarian and homes for neurasthenics. The essentials for treatments in each of these classes are required for the inebriate. The asylum managed on the scientific plan of providing for the requirements of each case must have the power of control, and special buildings given to the hospitals for the insane; the discipline and management of the modern reformatory and the appliances of the best sanitariums and private homes; then it can approximate to a measure of success in the treatment that at present is only in outline. American asylums are leading the world in these directions of practical work, and while no one has combined only in the crudest way these appliances, many asylums are approaching it yearly. Asylums all over the world are at the beginning and infancy of their existence. A great deal of

preparatory work must be done before they can reach the first stage of scientific work. The moral remedies by appeals to the will power and morals of the case must pass away. The delusion and palsy of the higher brain centers must be recognized, and dissolutions beginning in the ethical centers extending down to all the lower faculties must be studied. The great fog banks of metaphysical theories of free will, moral depravity, vice, and wickedness must disappear from all conceptions of inebriety, and its practical management in asylums. Asylums and managers who act on the theory that the inebriate is half-wicked and half-sick are crippled. Asylums and managers who attempt by drugs or moral appeals to restore and cure the victim are still far back in the stage of credulity. The specific vaunter, who professes to break up the symptom for drink, as if it was the disease itself, is an empiric, either ignorant or by design. Asylums and managers who teach dogmatically the nature of inebriety and its only true remedies are not very far along in their scientific work. Asylums who claim large percentages of cures from certain means and remedies are not worthy of confidence.

“Inebriety is found, when carefully studied, to be the most complex neurosis of modern research, dependent on heredity and many physical causes, also physical condition and environment, that are not clear to the most minute study. Asylums for treatment so far, by isolating the patient, places him in the best condition for study of conditions and applying means for relief.

“The more thorough this study, the wider the range of causes appear, together with the means and methods of relief. The most advanced asylum of to-day follows a general prospective plan of treatment and has no specifics or no special theories that are not open to change and readjustment, besides a few general facts, which stand out like mountain peaks in a new land, all the intervening space is unexplored. No one can speak dogmatically as to where inebriety begins, and what the exact causes may be. No one can explain the

varied phenomena of drink storms, of the action of spirits on the physical brain, of the power of heredity, of the brain condition which demands relief by the craving for neurotics, of the sudden cessation of this drink impulse, under unusual circumstances, of its equally sudden outburst from causes unknown. Even in asylums the same uncertainty exists. Cases that seem restored, relapse, and others that are considered incurable become restored, showing that our present knowledge is very imperfect, and the known is comparatively nothing in contrast with the unknown.

“Running through all this phenomena of inebriety is an outline of a uniform movement of cause and effect; of events following each other according to some law; good examples are the periodicities of the drink impulses, and the outbreak of such impulses from the presence of certain conditions that can be foreseen and studied. Patients under care in asylums present a remarkable uniformity of symptoms and progress that is often startling to the student. Not unfrequently such cases can be anticipated and the results of treatment known far in advance. The drink symptom is dependent on some conditions of brain degenerations and changes. It will suddenly die out and disappear under the most adverse conditions and surroundings. Examples are numerous of persons who become temperate, sign pledges, and stop all use of spirits under the most unfavorable circumstances. Every temperance and revival meeting furnish illustrations of persons who are restored permanently, although the same means have been used many times before with no results.

“Persons are known to stop drinking from the slightest supposed reasons, and in all these cases the last means used are credited with being the active cause.

“The true explanation in all these cases is that some change or evolution of brain function has occurred and the drink symptom has died out.

“It is not the last prayer, pledge, or solicitation of others, or the last drug or remedy of special means used that has



caused this change. Other and more obscure causes are at work, and the time comes when their action is apparent in the cessation of the drink impulse. Physicians in charge of asylums recognize this fact, and realize that their best efforts are in building up the brain and nervous system, and placing the organism in the best possible condition for both organic and functional change.

“Remedies directed to the drink symptom are never curative ; a dose of mercury acting on the liver is a more rational method than bromide to check the drink impulse.

“Asylum study of these cases show that inebriety is often a symptom or phase of a neurosis which may break out and change to some other form. General paralysis, melancholy, and many forms of insanity, together with tuberculosis, and various neurotic affections follow frequently on the subsidence of the drink craze.

“The statement that the gold cure specifics are followed by an increased number of insane among those who have used the treatment must be a literal fact. The proof of such a statement is found in the experience of every asylum, and the general principles of neurotic diseases. The number of such persons cannot be easily determined, but the more powerful the narcotic used to stop the drink symptom, the more certain insanity and profound degenerations of the brain centers will follow.

“All asylums for inebriates suffer from the large number of incurable inmates, persons who, after an uncertain course of treatment, go away, relapse and condemn the asylum for their failure. Much of the current opinion concerning asylums is formed by the irresponsible statements of incurables. Such persons seem to take pleasure in denouncing asylums in every place, and boasting of the intrigues of its inmates. On the other hand, persons who have received substantial benefit conceal all reference to their treatment and residence in an asylum.

“The result is that all institutions are judged by the unthinking public from the statements of those who have failed to receive any benefit from its work.

“Unthinking physicians who suppose that the control of the drink craze is the central object of treatment often lend their influence to unfavorable criticism of asylum work. This, joined with bitter condemnations of moralists, complicates and increases the difficulties of every practical asylum trying to understand scientifically this new field of medicine.

“American asylums have many advantages over all foreign institutions, in freedom from caste and prestige; also in ability to follow independent lines of work and rise above the prejudices and opposition of those who dread change and advance. Some general conclusions may be stated, as follows :

“1. The asylum care and treatment of inebriates began first in this country, and has grown and extended to all civilized nations of the world.

“2. American asylums have developed the disease theory and the practical character of physical treatment in institutions beyond that of any others in this field.

“3. Asylums in this country represent nearly all stages of development and early growth, from infancy and childhood, with its feeble conceptions and infantile efforts, to the boastful assumption and over confidence of youth, on to the dawning truth of early manhood, when reason and judgment begin to reign.

“4. A few of these asylums discern some great outline truths which may be stated with confidence as ideals towards which there is a rapid movement.

“5. Inebriate hospitals must take the place of jails and station-houses. Such places are dangerous in their mental and physical surroundings by intensifying the degeneration and removing the patient beyond hope of recovery. They are in many cases literal training-stations for mustering armies of chronic maniacs that never desert or leave the ranks until crushed out forever.

“6. Inebriate hospitals should receive the incurable inebriates and make them self-supporting, and build them up physically and mentally. They would relieve the taxpayer and relieve society of untold burdens of sorrow and misery.

"7. Inebriate hospitals should receive the recent cases and place them in the highest conditions of enforced health and vigor, and thus return a large number to health and sobriety again.

"8. Inebriate hospitals can be self-supporting when once established. They should be managed on scientific business principles, like military training schools.

"9. Inebriate hospitals should be built from money raised by taxes on the sale of spirits, on the principle that every business should be obliged to provide for the accidents which grow out of it.

"10. These are the realities which every inebriate hospital is approaching and which all experience points out as practical and literal in the near future.

"11. The inebriate hospitals of to-day are only in the infancy of their work, contending with great opposition and prejudice, misunderstood, condemned, and working against innumerable obstacles.

"12. Lastly, there is an intense personality in inebriate hospitals to each one of us. They may bring salvation and restoration to some one near and dear. They may be fountains of healing whose influence shall cross and influence our pathway in many ways.

"13. Inebriate hospitals and their work are the great new lands which only a few settlers have reached. They are calling to us to come up and occupy, and thus help the race on in the great march from the lower to the higher."

A LAW has been presented to the Legislature of Michigan to punish inebriates who are arrested by fine, give bond to go to an inebriate asylum, and be treated at the expense of the county if he has not money to pay for it. This is said to be urged by some of the specific cure-all asylums.

## HOT WATER IN 'ACUTE ALCOHOLISM.

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The following cases were treated during the winter of 1889 and 1890 in the Cook County Hospital :

CASE I. — Male, aged 40. Fracture of tibia during a debauch. Two days after admission a typical delirium tremens appeared. Thirty grains of potassium bromide and fifteen of chloral hydrate were given every hour for twenty-four hours without inducing sleep. This treatment was then discontinued, and a cup of hot water flavored with peppermint essence was given every hour. He became less noisy, at night slept some, next day was quiet, and thirty-six hours after beginning the treatment with hot water he had recovered. Five days later the delirium recurred. A cupful of hot water was ordered to be given every half hour, and in twenty-four hours he recovered permanently.

CASE II. — This patient was admitted to the hospital suffering from several contusions resulting from a fall received during a drunken debauch. From the patient himself there was obtained a history of excessive indulgence in alcoholic beverages, and of previous attacks of delirium tremens. The premonitory symptoms of delirium tremens, extreme restlessness and nervous excitement, were marked. He was given a cupful of hot water every hour. No delirium developed, and his convalescence was uneventful.

CASE III. — Male, aged 49. The second day after admission this patient developed a violent delirium. A cupful of hot water was ordered for him every quarter-hour. He resisted his attendants, and received but little during the first day. The second day the attendants were ordered to use a hard rubber syringe, and put the water in his mouth. This was successful. The third day his delirium was mild only, and treatment was ordered every half-hour.

Exposure to a draught from an open window was followed by a pneumonia which ran a light course for a week, during which a mild delirium persisted. With the subsidence of the fever the remaining delirium vanished.

CASE IV. — Male, aged 20. La grippe, complicated with pneumonia. Six days after admission, and one day before the pneumonia cleared up, characteristic delirium tremens appeared. Hot water was given every hour the first day, under which he greatly improved, and every two hours for the next two days, when his delirium disappeared.

CASE V. — Male, aged 37. This case was admitted at 5 P. M., and during the first night developed a violent delirium tremens. He was ordered to be given a cupful of hot water every fifteen minutes during the first day and every hour during the second. Thirty hours after admission he had a refreshing sleep, and six hours later had recovered. For a week after he was permitted to rise his mind wandered slightly at times, but no distinct relapse occurred.

CASE VI. — Male, aged 33. Nervousness, with hallucinations, appeared the first night after admission. A cupful of hot water was given every hour. The second day there was occasional delirium, which on the following day became violent. The treatment was ordered given every half-hour, and on the fourth day he recovered permanently.

CASE VII. — Male, aged 22. Upon the appearance of delirium tremens, this patient was given thirty grains of potassium bromide every hour for five doses. Four hours after this was discontinued he fell asleep, and slept for five hours, awaking into a very violent delirium. He was then given a cupful of hot water every half-hour. The first day of treatment he had lucid intervals, in which he would give sensible replies to questions. The second day his delirium was violent. The third day he permanently recovered.

CASE VIII. — Male, aged 24. Traumatic hemothorax. Because of his debilitated condition, this patient was placed upon strychnia and digitalis, with a half-ounce of whisky every three hours. The third day delirium tremens ap-

peared. His medicine was discontinued, and a cupful of hot water was ordered every hour. The third day after treatment began he had lucid intervals, and on the fourth day he recovered.

Of this series all were males, and all gave a history of alcoholic habits; one was complicated with contusions, one with fracture, two with pneumonia, one with la grippe, and one with traumatic hemothorax. As to treatment other than the water, one received the bromide and chloral mixture every hour for twenty-four hours, and one bromide alone hourly for five hours, without perceptible sedative effect; and another was given whisky for three days, without the prophylactic effect which some writers claim for it. All were alike confined in bed, some by restraint, and all were given a cupful of hot milk every two hours for nourishment.

Except in the case complicated by pneumonia and refusing treatment, the duration of the delirium averaged between two and three days after treatment began. Improvement dated in all cases from the commencement of the treatment. No marked crisis occurred, but, instead, a gradual diminution of the symptoms. There was less delirium, less excitement, slight periods of quiet, a little sleep at times, then lucid intervals alternating with mild delirium, finally recovery.

Authors agree that the ingestion of alcohol produces gastritis, decreases intra-arterial pressure, lowers temperature, increases heart action, induces nervousness, retards the excretion of urea, and irritates the kidneys.

The ingestion of hot water in the disease under consideration applies a hot fomentation to an inflamed surface, washes a catarrhal mucous membrane, increases blood-pressure, thus slowing heart action, tends to restore normal temperature, quiets nervousness, aids the excretion of urea, and soothes the kidneys.

Alcohol in the laboratory is the great dehydrant. There is evidence pointing to a similar action in the body. Since alcohol is plainly the etiological factor in this disease, its

elimination is the important work in the treatment. This occurs chiefly through the kidneys, in part through the skin and lungs. Water, in addition to its being the substance for which alcohol has the greatest affinity, is an excellent diuretic. Hot water is one of our best sudorifics.

It would appear that we might anticipate, *a priori*, such results in most series from this treatment of delirium tremens as occurred in the cases herein reported.

### ALCOHOLIC DELUSIONS.

The following narrative of delusions preceding an attack of delirium tremens is of interest as a study.

The narrator is a lawyer of ability who has been a steady drinker for years. He went to see a football game and dined with some old college friends who had come to town to see the game. He went to his rooms and was not seen at his office for three weeks. The following is his account of some part of his experience:

“You know I have rooms near Madison Square,” he said, “and it is my custom in the morning to go over to Delmonico’s or the St. James for breakfast, and then to walk over to the Twenty-third Street station of the Third Avenue elevated and go down to Hanover Square to my office. The morning after the football game I breakfasted at the St. James and started to walk across Madison Square. I have always enjoyed this walk, especially in the bright, sunshiny mornings in November and December. The people one meets there, the nurses and baby carriages, the tramps and the dogs, never failed to interest me. I made the acquaintance of the tramp dogs, and when I had time I would sometimes take them over some bones and bread to eat.

“This morning, as I was walking through the square by the fountain, I saw a bug come out from the grass and sit down on the edge of the walk. He seemed to be an especially intelligent bug, and to be personally acquainted with me. I do not know the kind of bug he was, as I am not up

on these things, but he had a body of the same shade as the Yale blue, and his legs were striped with orange and black. These colors naturally interested me, as I was still thinking of the football game. I had seen insects and birds and other animals around the square before, but it was the first time I had ever seen a bug of that color. The bug was evidently waiting for me, for when he caught my eye he nodded and waved his legs as if apologizing for being unable to shake hands on account of the difference in our height. Naturally I stopped and looked at him. He beckoned to me and started up the walk toward Fifth Avenue. I followed a few steps behind. He was such a friendly bug, and he seemed to take so much interest in me, that I wanted to see where he was going to take me.

“He went up the west side of the avenue, stopped from time to time to smile at me and beckon me to follow him. He walked about as fast as I did, and kept five or six steps in front of me. I was afraid some one would step on him, but he kept out of the way of passers-by. Up at the reservoir at Fortieth Street he stopped a while by the iron fence and rested. It was a pretty good tramp for him, but he was determined, and in a few minutes he beckoned to me and started on again up the avenue. We got up to the park about 11 o'clock. My interest in the bug had been growing all the time, and I wondered more and more what his object was. He walked through the park to a bench over by the arsenal, where he signaled me to sit down. The bug sat down on the edge of the walk opposite. We sat there for some time; it must have been several hours. Along in the afternoon I began to think that I had had no lunch. I didn't want to leave the bug, for I thought he was tired and was sitting there to rest himself.

“At last I asked him what he was up to and why he had brought me up there. He tried his best to answer, and from the way he moved his legs and looked at me I knew that he understood what I was saying. I sat there and talked to the bug for an hour. He didn't make any reply, but he seemed



to be an appreciative listener. About the time I had made up my mind to leave the bug and get my dinner a park policeman came up and asked me what I was doing. He said that he had been watching me for some time and that he heard me talking, but couldn't see any one to whom I had been talking.

"Oh, I have not been talking to any one," said I, "except the bug that brought me up here."

"What bug?" asked the policeman. I explained to him about the bug and pointed out the creature sitting on the grass by the edge of the walk. The policeman asked me if I minded going to the arsenal and explaining it all to the sergeant. I told him that it seemed to me rather an unnecessary proceeding, but if the sergeant was interested in such things I should be glad to go. I spoke to the bug and he followed me. He went into the arsenal and climbed upon the desk beside the sergeant, who asked me my name and address. He then asked me if I would step into the back room for a while until he had examined the bug. I fell asleep there. I must have slept very soundly, for yesterday morning I woke up in Bellevue Hospital, and they told me I had been there a little over two weeks."

In the case of a broker the following history has been sent for publication. He was a wine drinker at meals, occasionally using spirits in the intervals. He never suffered from delirium tremens, but at times saw elephants.

The first time these elephants (or rather elephant, for only one elephant appeared the first time) visited him was one night when he had not been drinking very much, but when he was greatly worried and physically run down. He was lying in his bed, hoping that sleep would come, and thinking how desolate and lonely the blackness of the night was, when he saw a line of telegraph poles approaching him. The poles were the regular distance apart, but instead of having wooden cross bars there were no cross bars and only one glass insulator on the top of each pole. The telegraph line began miles away and approached him gradually until it

extended over his bed, with the wire the regular distance above his head. Then he saw an elephant six or seven miles away slowly walking along the wire. He was balancing himself with his trunk, using it somewhat as a professional rope walker does his balancing pole. But the elephant was evidently not an expert, and he swayed from side to side as if in danger of falling off at any moment. He would occasionally stop on the top of a pole and sit down to rest on the glass insulator.

This was alarming. The line of wire ran directly over the bed, and if the elephant should happen to fall off it would smash the bed and kill the occupant. The expression on the elephant's countenance showed that he was afraid this would happen. It took from 3 o'clock till daylight for the elephant to walk over the telegraph line. He stopped over the bed some time, swaying to and fro. The stopping was intentional, and he looked down to make the acquaintance of the man in the bed.

This visitation resulted in a reasonable amount of abstinence for several weeks, but after a while the elephant appeared again. This time he capered along the telegraph line as if he were rather glad to be back in a familiar place and pleased to meet his old acquaintance. The elephant walked with a firmer tread and danced around a little. Over part of the line he ran, and jumped up and down to show how strong the wire was and how firm the poles were set. The man in the bed watched this performance and figured out that there were at least twenty-five miles of telegraph line and only a few feet of it were over his bed. The chances of the elephant falling on him were not one in a thousand.

In a few weeks the elephant reappeared with several other elephants. They faced about in a row on the section of line over the bed and were introduced one by one. They were a polite lot of elephants, for they all bowed and waved their trunks in a friendly way. The man was a good deal alarmed lest one of the elephants lose his balance or a section or the wire break with so many elephants on it. The intro-

ductions were gone through safely and the elephants marched off about morning.

Since that time the elephants have been frequent visitors. The telegraph poles have added branches to themselves and hundreds of wires. Some nights thousands of elephants appear and caper along the wires for miles. They appreciate the spirit in which they are received. The nights have come to seem lonely without them, and the man sometimes lies awake until they appear. Then, knowing that his old friends are near at hand, he goes peacefully to sleep, assured that no harm will befall him in such company.

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#### LIFE INSURANCE AND INEBRIETY.

Mr. Stanton, actuary of the U. S. Life Insurance Company, makes the following remarks in the *New York Medical Examiner* on the customs and practices of companies relating to drinking men and inebriates:

I have submitted to the officers of all the American and Canadian life insurance companies inquiries as to their usual actions in the cases of men of certain confessed or known habits or drinking, and men of a large number of occupations generally regarded as more or less hazardous. As a result of this inquiry, the usual course of action of twenty-four American and three Canadian life insurance companies has been ascertained. As to applicants who confess to no daily habit, but that they have occasionally drunk too much or gone on "sprees," the companies, almost without exception, put themselves on record that such cases should be unqualifiedly rejected.

In cases where the applicants have formerly been more or less intemperate, but show a record of temperance for five or more years, the verdict seems to be that they should be either accepted for the plan applied for, after diligent individual inquiry, or else to be given short term endowments.

In the cases of applicants of formerly intemperate record, but who have shown evidence of temperance for only one or

two years past, nearly every company casts a verdict of rejection, or postpones them for a further period of two or three years, during which time it is endeavored to hold them under some degree of observation.

Where the applicant admits, or is convicted, of former intemperate habits, but has been an *absolute abstainer* for five years or more, it seems usual to accept him, or else restrict to an endowment policy. If the period of total abstinence has not lasted for more than a year or so, subsequent to former intemperate habits, he is emphatically declined by all companies.

There is a very large class of *occasional* drinkers, and men who are willing to admit that they take some three or four drinks a day, but who claim never to have drunk to excess. One-half the companies heard from decline such cases, especially if the liquor drunk be ardent spirits. The action of the other companies seems to be to make diligent personal inquiries, and base their decision thereupon.

A particularly strong suspicion always attaches to hotel men, saloon keepers, brewers, and distillers, and all directly allied to those interests, because of the strong temptation to intemperance they undoubtedly are subjected to. I find that applicants who keep hotels, but claim to be strictly temperate and *never* to "tend bar," are generally accepted. Those that make the same claim to temperance, but admit *occasionally* tending bar, are just as generally declined. Collectors for breweries and distilleries or liquor houses, or clerks or laborers in or about them, are universally declined, unless they are advanced in life, and are able to show a good record of many years of correct habits, or are total abstainers.

In nearly all the above-named cases the age of the applicant seems to carry a great deal of weight; and any degree of intemperance that has occurred in middle life seems to weigh with the companies more heavily than cases of an equal degree of intemperance in much younger men. Doubtless this ruling is justified, owing to the reformatory influence of marriage.

A very careful consideration of all these facts will tend strongly to reprobate the careless use of stimulants. No man who takes a few glasses too much once in a while can tell how strongly it may operate against his chances of obtaining a much needed insurance upon his life, perhaps for many years to come; compelling him very likely to leave unprotected those years of his life that most need the protection of life insurance.

It cannot be claimed with any show of justice whatever, that the companies are too arbitrary in these matters, or that they draw the line of rejection too rigidly, because the previously quoted statistics of mortality do, beyond any question, prove that any excessive use of ardent spirits, malt liquors or other stimulants, to the extent of even becoming an *occasional* habit, makes the risk a bad risk for life insurance, and if accepted would entail the necessity of a certainly increased mortality.

It is the practice of life companies generally to discriminate severely against those who use tobacco to a hurtful extent and to unqualifiedly reject those who have acquired a habit of using narcotics.

RECOLLECTIONS OF DR. JOHN BROWN,  
AUTHOR OF "RAB AND HIS FRIENDS," ETC.  
By DR. ALEXANDER PEDDIE, M.D., F.R.C.P., Edinburgh.  
G. P. Putnam's Sons, New York city, Publishers.

Our readers will be pleased to hear that Dr. Peddie has presented a most charming volume of personal reminiscences of Dr. Brown, who was probably one of the most attractive physicians of his generation. Every reader of "Rab and his Friends" will have an intense interest to know something of the personality of the author; and when they realize that he was a physician in general practice, living an active, busy life in the city of Edinburgh, the desire increases to know more of him. Dr. Peddie was his intimate friend, and from recollection and correspondence and other papers, has been

able to give a very graphic word-picture of Dr. Brown's medical, intellectual, and social life. As a narrative it has all the charms of a romance, only the hero was a real ideal man in many ways, who, notwithstanding all the sorrow and suffering he was surrounded with as a physician, lived in a separate world of sunshine that was felt by all he came in contact with. Dr. Brown had a very high order of brain power and conception of the higher relations of life. His literary work gave evidence of a marvelous insight into human nature, and a charm of expression that would have placed him among the great literary men of the world. Dr. Peddie brings out this fact, and also shows that he could have been great in almost any department of study and work. We owe Dr. Peddie a great debt of gratitude for this picture of one who dispensed so much brightness and sunshine as a physician, and raised the ideal medical life in the community, and left the world much better for having lived.

This little work should be read by every physician who has an ideal before him, and wishes to know something of the inner life and thought of the leaders of the past.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS, WITH ESPECIAL REFERENCE TO THE CLINICAL APPLICATION OF DRUGS. By JOHN V. SHOEMAKER, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc. Second edition. Revised. In two royal octavo volumes. Volume I, 353 pages, devoted to Pharmacy, General Pharmacology, and Therapeutics and Remedial Agents not Properly Classed with

Drugs. Volume II, 680 pages, An Independent Volume upon Drugs. Volume I, in cloth, \$2.50 net; sheep, \$3.25 net. Volume II, in cloth, \$3.50 net; sheep, \$4.50 net. Philadelphia: The F. A. Davis Company, Publishers, 1914 and 1916 Cherry Street.

These two volumes may be said to be the most complete up to date on this subject. The additions and practical references to all the latest facts, with formulæ, comprise a library of itself that is indispensable to every physician. The strong feature of this work is the brief statements of all the essential facts known, giving the reader an excellent idea of the literature, and also suggesting new fields of study not yet occupied. The author, Dr. Shoemaker, is an excellent teacher, and clearly comprehends the wants of the physician who has not time to make exhaustive readings and studies of drugs. Some of the chapters on general principles are classical, as giving all the leading facts in a brief way.

We feel certain no library can be complete without these volumes, and urge our readers to procure them at once.

**DRUNKENNESS.** By GEORGE R. WILSON, M. B. C. M., Assistant Physician, Royal Asylum, Morningside, Edinburgh. London: Swan, Sonnenschein & Co., Publishers, 1893. Scribners, of New York, American Publishers.

Ten years ago a work of this character would have destroyed the reputation for sound learning of almost any medical man. It would have been considered as unsound and opposed to all medical and moral conceptions of inebriety. To-day it will be accepted as an admirable study of the obscure physical and psychical disorders of the alcoholic problem.

The author has made the common mistake of writing the subject down to the reader, rather than bringing the reader up to his broad level of scientific truth. The profession needs most of all to be taught the real facts concerning inebriety, and not the laity. The latter will never learn any facts in this field that are not supported by the general pro-

fession. This mistake of the author gives a fragmentary, broken character to many topics, and leads to explanations and attempts to harmonize existing beliefs of vice and moral weakness that appear very awkward in a work of an expert physician. It is evident that the author could give to the profession a grand work on this topic if he should confine himself to strictly scientific lines. Turning to the many excellent presentations of different phases of inebriety, a summary of the contents will give the reader a fair idea of the work.

The first chapter on physiology gives a fair view of the principles of neurology, describing the selective action of alcohol on the nervous system, on the circulation, and the narcosis which follows, affecting the nervous processes from above downwards by direct and indirect means. The abolition of inhibition, and all the varied defects of sense-perceptions and speech-functions, together with personal equation and narcosis, and all the varied functional changes, are discussed clearly.

In the second chapter, on pathology, alcoholic dissolution is described in a graphic way; and the changes from the highest to the lower levels, with the halts and movements at the middle and intermediate stages. Drunkenness, insanity, and the various divisions are mentioned, all showing the neurosis of inebriety.

In the third chapter the etiology is presented in a very satisfactory way. The predisposing conditions, and the neuropathic diathesis, defective nutrition, altered relations of the nervous system, mental disturbances due to nervous lesions, states of perverted inhibition due to alcoholic excess, are the most suggestive topics of the work.

The last chapter, on therapeutics, lacks clearness, and while suggestive is not very satisfactory. The legislative treatment is a fair resumé of the many existing theories and schemes for the legal treatment of inebriety.

Together this will be found a most helpful and thoughtful study, and we commend it to all our readers. The author has opened up many very suggestive fields of study, and



described graphically conditions that were very obscure before. We have given free extracts in this number, from which the reader will get some idea of the real value of the work.

THE TWENTY-NINTH ANNUAL REPORT OF THE BOARD OF MANAGERS OF THE WASHINGTONIAN HOME OF CHICAGO. For the year ending January, 1893.

This institution reports 1616 cases under treatment during the past year. Two hundred and fifty-seven had delirium tremens, and only sixteen used opium. One was a chloroform inebriate. The months of July, August, September, and October were noted for the largest number of admissions, and twenty-four were considered as insane when admitted. The average time of treatment is over twenty days, and each inmate receives a course of ten lectures on the fundamental facts of physiology and laws of health. A large number of cures are reported.

The Martha Washington Home for women, in a separate building, admitted during the year 110 inmates. The average time of treatment was thirty-five days. Both institutions are prosperous financially.

These institutions publish a reform paper called the *Washingtonian*, which seems to be very popular. A new superintendent, the Rev. Mr. Morrow, has been in charge for the past year, and this report shows many wholesome changes and new conceptions, and also new life in the work.

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DR. WOOD says : "When a mother uses opium the child in the womb has the opium habit at the time of birth." It has been frequently noted that when children are born in women who are opium eaters the child seems at first well ; then in the course of a few hours goes into collapse and dies. Now, I believe that the collapse in these cases develops because the child has not had the usual stimulus of opium, and should the child be given opium immediately after birth it would live.

*The Science Weekly* is a rare grouping of facts that are of intense interest to every medical man in the country.

*The Popular Science Monthly* continues to be one of the most instructive and valuable magazines that comes to the table of thinking men in this country.

*The Homoletic Review* of New York city is a rare magazine of higher theological writings and criticism. These papers are always very stimulating to the medical reader, and the facts presented are often of much practical interest.

*The Voice* has grown to be the great prohibition organ of America. We take pleasure in saying the statistical facts which it publishes are accurate and reliable. This is an exception to the rule for similar publications. Funk & Wagnalls of New York city are the publishers.

*Report of the trustees of the Massachusetts Hospital for Dipsomaniacs and Inebriates, March, 1893.* This institution was opened in February for patients, and this report is confined to a description of the building and its cost, and the laws of the State relating to it. The report says that this is the first effort in the State and country to make provision for the legal detention of dipsomaniacs and inebriates in a properly organized asylum. That dipsomania is a curable disease, and all authorities agree that compulsory detention is an essential in treatment. Occupation is to be made a part of the treatment. Accommodations have been provided for over one hundred cases, and the arrangements seem to be excellent for this purpose. The superintendent, Dr. Hutchinson, has one of the most important places for original work and observation in this country. With a new pioneer asylum, doing work that is largely unknown, he has a rare opportunity to make a name that will be associated with the great leaders of psychiatry in the coming century. This asylum will be watched with the keenest interest, for on its success hangs the fate of a number of similar institutions in embryo.

## Editorial.

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### DISEASES OF THE KIDNEYS IN INEBRIETY.

Dr. Wood, in a recent clinical lecture, gives a very clear explanation of the physiology and pathology of many confusing cases that come under asylum treatment—cases of inebriety coming under treatment in an asylum, being a history from the family physician of what is termed incipient Bright's disease. When examined, albumen and casts are found in the urine. The removal of spirits and the improved health of the person is always followed by the disappearance of albumen and casts. If the person is a gourmand and eats excessively at times, albumen will appear again, but, as a rule, be of but short duration. Some of these cases come with a history of Bright's disease in advanced stages, and unexpectedly recover. Cases who apply for life insurance are rejected for this reason, and later, when abstaining from spirits and living a hygienic life, are accepted as good risks. These cases are not clear, and are always attributed to the irritation of alcohol in the system.

Dr. Wood relates three cases in which there seemed to be evidence of chronic disease that changed from treatment. He says: "In Mr. R. the urine contained casts and albumen and oxalate of lime, but when given nitro-muriate acid and Turkish baths, all these symptoms disappeared."

In Mrs. C. and Mrs. S. the urine became loaded with albumen, casts, and uric acid, but disappeared under treatment. The abundance of casts and albumen was followed by excess of uric acid. He believed that the oxalates and lithates were simply irritant poisons, which, acting on the kidneys, already predisposed by original constitution or long irritation to take on degenerative lesions, produced what may be called acute exacerbations of a chronic form of Bright's disease.

A case was mentioned where a man working exposed to the fumes of asmuretted gas had albumen of the urine, which disappeared when he changed his work.

The first fact made prominent in Dr. Wood's lecture was that arsenic, alcohol, lead, and various poisons, when taken into the system, are capable of producing not only renal symptoms which we recognize as those of acute Bright's disease, but a condition of renal irritation which resembles chronic diseases of the kidneys, and cannot be distinguished from fully-formed disease.

The second fact is that poisons formed in the body are capable of acting on the kidneys precisely in the same manner as do poisons which come from without ; and that lithic acid, oxalic acid, and probably ptomaines and other organic substances originating in the human system may produce not only albumen, but also tube casts.

I believe that the history of cases of contracted kidneys, whose nature we only recognize when the mischief has become chronic, would be found to be the result of a debauch, perhaps, as the outcome of an oxaluria, or as the product of lithuria, or the work of a poison from without the body. As a result, there has been a series of renal irritations and paroxysms of sub-acute albuminuria, each one passing away, leaving behind a minute scar on the structure of the kidney, these scars accumulating until the whole structure has been destroyed.

A person having pulmonic catarrh gives out the signal note of danger in a frequent cough, which is an alarm bell that rouses greater care and caution. In the catarrh of the kidneys no sound gives any indications of the danger. When the organ is wrecked, then we wonder that it was not discovered before.

The impression that worry will cause Bright's disease is true in the derangement of digestion, the impaired primary and secondary assimilations leading to the development of organic poisons, which must be eliminated through the kidneys. Paroxysms of hysteria and emotional and nerve-

storms can so alter the nutritive activity of the kidneys as to lead to the same trouble. The great lesson this should teach — that of persistent treatment of persons who have a predisposition to diseases the result of which is to produce poisons that are irritating to the kidneys, heavy eating of nitrogenous food, and the use of any substances that provoke albumen — are to be studied and guarded against. In the treatment the stimulation of the skin as an excreting gland is a great essential. Powerful sudorific measures, increasing the activity of the sweat glands, makes it an excretory organ, and thus relieves the kidneys. The Turkish bath often is the best means for this purpose. Persons who over-eat must stop, or make up for this by excessive exercise. Excessive exercise must be continued, or the man is worse off. Excessive care of the body, with exercise, Turkish baths, and diet, will relieve catarrh of the kidneys in most cases.

These views are fully sustained by clinical experience with inebriates. The gravest symptoms of organic lesions of kidneys, liver, and heart are often relieved, and sometimes permanently, by baths, diet, and daily exercise. The use of alcohol always is followed by derangements of digestion and poisonous formations, which depend on the kidneys for elimination. The Turkish bath seems to give the most pronounced benefit for this condition.

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#### PRIVATE ASYLUMS HAVE CONSTITUTIONAL RIGHTS.

The supervisors of San Mateo County, California, passed laws requiring all private asylums to be constructed of brick, stone, or iron, and be fire-proof, and be surrounded by a wall at least eighteen inches thick and twelve feet high, and not nearer than four hundred yards from any dwelling or school-house ; also that no asylum shall treat both sexes in the same place.

Dr. Whitwell failed to comply with these laws, and was imprisoned. The issue was : Had the county or any other

authority the right to legislate for asylums in this way? The court of last resort finally decided that these laws were oppressive, and could not be sustained. The business of conducting a private asylum was a humane one, and had for its object the care and restoration of persons whom the State could not reach or provide for; hence no laws that were oppressive or obstructive could be sustained. Local authorities could require of such asylums certain general sanitary measures which the management might not adopt, but they could not go beyond this and prescribe the kind of building and its location, or make any rules that would obstruct and impair the usefulness of such institutions. It is presumed that the managers of such asylums will, for their own personal reasons, adopt all needed means and measures for the safety and efficiency of treatment; also all means for protecting its inmates both in and out of asylums. This is the first decision on this point, and will be welcomed by many small asylums, who have been annoyed by local obstructive legislation.

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WE have given elsewhere a brief report of the committee on treatment of habitual drunkards. The English law is, no doubt, very faulty, and will be changed in the coming session of Parliament; beyond this, the report shows a great advance in public sentiment concerning the treatment of inebriates. The old "bugbear of vice and sin" appeared in this committee report, as usual, but in a minor role in the background, defended by weak players in a feeble way. This report is a great object-lesson to medical reformers and humanitarians of this country, pointing out facts and methods of reaching them that must be followed before any positive advances can be made. It is a sad reflection on American psychiatry that the literature of inebriety is so largely opinions and theories. In England two authoritative committees have made a careful examination of a large number of experts, and reached certain conclusions as facts, which has become a basis and foundation for a solid litera-

ture. Here the *JOURNAL OF INEBRIETY* has been gathering and grouping these facts for the same purpose, which now only lacks authoritative condensation and study. We have repeatedly urged burning enthusiasts and reformers to concentrate their efforts on a national commission to take authoritative evidence on the drink problem, and prepare the way for more practical work in this field. Already the mass of facts are voluminous, and recognized in part by a few leaders, but to the masses they are still a sealed book. This can be brought out most clearly by a national committee, similar to the one whose report we have outlined.

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THE temperance congress at Chicago in June spent seven days of three sessions a day discussing the moral and political side of the drink problem exclusively. Two of the papers by Drs. Ford and Davis were scientific, and were read by proxy, and attracted little attention. The meeting of the Medical Temperance Association attracted less than a dozen people, and was practically ignored by the officers of the congress. The interest which this subject attracted, and the large number of papers read and discussed on the moral side, showed a restless activity and movement of much psychological significance for the future. The temperance congress was a great, enthusiastic gathering of men and women, groping blindly in the dark for truth and some solution of the drink evil. That they should overlook the real facts, in the agitation and excitement of the present, is to be expected. The still small voice of science is rarely ever heard in the roar and noise of revolution. By and by all this conflict of theory urged by parties and societies will die away, and the real truth will be recognized and acted upon. This congress did a great work, but in a different way, and along narrower lines, than any of its supporters realized. The truths concerning inebriety are slowly and surely emerging from the great sea of error and superstition. Crude, mistaken efforts by earnest men and women cannot be harshly condemned,

although sadly deplored as wasted energies; yet behind all this there is a great upward movement, a widening and clearing away of error unrecognized.

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ONE of the fundamental facts in many diseases is the failure of digestion and elimination of waste products. Overwork and insufficient rest may be active causes, with exhaustion which comes from imperfect nutrition followed by formation of toxic products in the body. These compounds are taken up by the blood and act most quickly on the nerve centers, causing depression and exhaustion. These poisons are also cumulative and are in process of constant change, forming ptomaines and other compounds whose action on the body is largely unknown.

Inebriety very commonly dates from conditions of bad nutrition, bad digestion, and consequently defective nourishment, and of necessity the formation of dangerous products that are not eliminated.

After inebriety is established, or even in persons who are called moderate drinkers, the use of alcohol favors and increases the growth of defective products and their defective elimination. A perfectly healthy man who begins the use of spirits deranges the natural process of digestion and nutrition, and also encourages the formation of poisonous substances taxing the system to eliminate them.

The longer spirits are taken the more injury is done, the more poisons are accumulated, and the more difficult the process of throwing them off from the body becomes. These facts are within the observation of every one, and fully explain the phenomena of many cases of inebriety. The state of poisoning from these compounds formed in the body is concealed and covered up by alcohol. Hence it is sought after as a remedy and means of relief. In reality it increases the danger by adding new ptomaines and paralyzing the centers for the recognition of the injury. The treatment by elimination based on this condition confirms these facts.



Withdraw all spirits, and direct all remedies to the elimination of waste products of the body, and the result is very startling. No treatment approaches nearer to a specific than Turkish baths and mineral waters, with proper diet and exercise. The hot air bath with its excessive perspiration and rubbing is a most powerful eliminator, increasing the activity of the skin and diverging of the blood to the surface, thus relieving all congested conditions. The vaso-motor paralysis, always a condition of inebriety, is antagonized and broken up by this means. The effect of the hot air bath is very positive in breaking stages of delirium from alcohol. We have found it more of a sedative to the nervous system than drugs. The morbid impulses to drink and the insomnia and restlessness are always lessened and in many cases broken up temporarily. If the baths are continued as often as every day or two the progress of the case is very rapid. Experience seems to indicate that no remedial measure is so positive and valuable in the early stages of all forms of inebriety.

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A TEACHER of medicine, who is no doubt a capable man, has felt called upon to condemn in severe language all efforts to establish the fact of disease in inebriety. Having cleared away this error of science to his satisfaction, he proceeds to caution his hearers concerning the use of chloroform. To make it more clear, he relates a recent case of delirium tremens in his care, where, after using various preparations of valerian, he resorted to morphia to procure sleep. He began with a fourth of a grain every hour, then increased it to one-half a grain, until finally eight grains of morphia were given with no effect. Then, following some great authority, he gave chloroform by inhalation, which speedily brought on sleep. Two hours after the patient died suddenly in deep coma.

This unfortunate occurrence conveyed a lesson to him not to be forgotten of the danger of chloroform, and of the exceedingly small quantity that would result fatally. The

morphia and its action was lost sight of in the minute study of the chloroform. Finally he gravely calls upon his readers for similar experiences and counsel.

DR. ALBERT DAY, so well known to all our readers, has resigned his position as superintendent of the Washingtonian Home, Boston, Mass., and opened a private asylum at Melrose Highlands, in the suburbs of Boston. Dr. Day is the oldest active specialist in America. For thirty five years he has been superintendent of Washingtonian Home, and has treated more inebriates than any one living. The management of the old asylum made a grave mistake in accepting Dr. Day's resignation, and we express the sincere good wishes of his many friends that his new asylum may be more pleasing and satisfactory in every way. Dr. Day, in his new asylum, will only receive a limited number of cases, but will be able to give to each special personal treatment not possible in a large place. We most heartily commend this place to all our readers as supplying a want that has been recognized for some time. Address, Dr. Day, Melrose Highlands, Mass.

THE sudden death of Dr. T. L. Wright of Bellefontaine, Ohio, June 23, 1893, removes from our ranks one of the great pioneer workers of this closing century. Born in 1825, he was for over forty years an active practitioner, medical teacher, and journalist in Ohio. Finally he retired from a busy practice, suffering from organic heart disease, and devoted his time to an enthusiastic study of inebriety. For many years his writings have attracted a great deal of attention, both in this country and Europe, particularly on the physiological and psychological action of alcohol on the brain and nervous system. Almost every number of this JOURNAL for years has contained articles from his pen. These papers have appeared in many of the leading journals of Europe, and been copied and commented upon with unusual

interest. In this transition stage of the study of inebriety, Dr. Wright's papers and book published in 1885 have been a great power, moulding and directing scientific study and inquiry. Dr. Wright was clearly a student of the highest type, continually discovering and verifying new truths, and offering suggestions that roused renewed interest to follow up the many new phases of this subject. The value of his life work will appear more and more clearly in the coming years. We shall give our readers a full biographical sketch of Dr. Wright in the next issue of the JOURNAL.

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ACCORDING to Dr. Kerr, one-fourth of the 260,000 children who die in this country before they are five years old, die because of the intemperance of one or both parents, and Dr. Edis says that "the deaths of 130,000 before they were one year old were due to the ignorance of mothers in giving wrong food, and to the pernicious delusion of nursing mothers that they require to be kept up by alcoholic liquors." A further proportion are unable to survive the first serious illness of early man—or woman—hood. Such children not only inherit tendencies, but are born into a moral environment calculated to foster in the child those very tendencies. If both parents are intemperate, alas for the children!

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THE children of inebriates furnish a large proportion of the infant mortality which is a disgrace to our civilization. Such children begin with an *unstable* nervous system, which may express itself as the drink-crave itself; and in addition, all the nervous ailments, *e.g.*, idiocy, infantile convulsions, epilepsy, neuralgia, hypochondria, hysteria, paralysis, insanity, or it may express itself in other ways. But even then, they suffer, though innocent. The parents' intemperance is represented in them, and will be for generations to come, by ailments which are called by respectable names: gout,

dyspepsia, nerves, and legion! But it is but seldom that the children of the intemperate thus break down the influence of the sad environment in which they have grown up. The evil that men do lives after them. The children of such persons are almost sure to be saddled with diseases and tendencies directly resulting from their parents' habits.

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THE meeting of the American Medical Temperance Association, at Milwaukee, was especially notable for the address of Dr. Davis, on the clinical aspects of the alcoholic question. Dr. Kellogg made a very interesting report on statistics, and Dr. Quimby's remarks were of much interest. Arrangements were made for the publication of a journal which would be especially devoted to the interests of the association. The name is to be *The Medical Temperance Quarterly*, and Dr. J. H. Kellogg of Battle Creek, Mich., is to be editor. The Modern Medicine Publishing Company will issue the journal. We take pleasure in welcoming this journal, confident that it will fill an important place in the literature, and aid many persons to study this subject from its popular side, and with far more accuracy than is usually found in ordinary temperance journals. This journal is simply an organ of this association, the central purpose of which will be to present the facts which come from a medical study of alcohol and its effects on the organism.

## Clinical Notes and Comments.

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### DIPSOMANIA THE PRODUCT OF CONSTITUTIONAL CONDITIONS.

Attribute the use of intoxicants to habit, or to the social customs, or to dipsomania, they are alike destructive. Whether it is mental aberration occasioning physiological consequences, or a physical disease producing psychological abnormality is immaterial. Alcoholism embraces all diseases, mental and physical. It is the bane of the individual and the curse of the state. Keeley is only one of hundreds, who, from time to time, have claimed to discover a specific for drunkenness. Only a few years ago the physician-in-chief at the head of an inebriate asylum remarked: "In twenty-five years' experience I have had but two patients who have been entirely restored from drunkenness and remained total abstainers any considerable number of years." This doctor was asked the names of the restored patients, and began by stating, "Professor Blank of Blank College," and his friend interrupted the answer by exclaiming, "Stop! do not tell me the other name, for to my certain knowledge that professor goes annually to the North Woods for a long spree." The more experience one has the less faith in the ultimate results of the gold cure. If, on general principles, there are no specifics known to *materia medica*, certainly the gold cure has not proved an exception. Hundreds of drunkards who have experimented with bi-chloride of gold have disappointed their friends and are still in the valley of despair.

While the obvious deliverance of this nation from the thralldom of excess is in stopping drunkard-making there is yet an important field of study, both from a scientific and practical standpoint, looking to the mitigation of the evil as it now exists.

Through extensive reading, several years ago, I became convinced that gluttony and drunkenness are twin evils, while gluttony itself may be considered a disease. Excessive use of stimulants is almost invariably accompanied by excessive use of flesh-meats. Induce any drunkard to abstain from meat and live upon grains and fruits, and during such abstinence he will refrain from alcoholic beverages. True, if he has no purpose to reform, he may seek alcoholic stimulants through "pure cussedness," but the fevered desire for drink will depart with his abandonment of flesh meats. I have induced a gutter drunkard to try this experiment, and as long as I could persuade him to live on the food which I provided, and refrain from the use of flesh, he was free to admit that his appetite for rum had gone.

This article makes no plea for vegetarian diet. Whether wise or otherwise, this paper does not discuss. The laws of heredity have at least given the inhabitants of North America constitutional conditions which may demand flesh meats, and the lesson this paper attempts is moderation in the use of stimulating foods as a preventive of those conditions which crave stimulating drinks.

There is probably too little attention given to the chemistry of foods. In failing to build up a normal constitution our higher civilization leaves us weak, and that weakness seeks support in alcoholic stimulants.

The Roman soldier was the best physical specimen the world has ever known, and in many of his most fatiguing military campaigns he lived upon wheat in the kernel. He ground his wheat as the American thoroughbred grinds his oats, but, unlike the American colt or the Roman soldier, the American boy has defective powers of mastication; his teeth are bad, his nerves are weak, his muscle flabby, his constitution deficient, his system unnutrified. The chemistry of his mother's kitchen has been neglected, and he has lived upon starch, and tried to make bones of sugar and blood of condiments.

Wheat possesses all the chemical properties essential to

the best physical existence, but when the miller's art subtracts the bone making material, in producing superfine flour, nature is robbed.

It is the constitutional conditions which ultimate in the drink-scourge which dooms approximately ten thousand Americans to death. Nothing less than the legal inhibition of beverage intoxicants can immediately arrest the ravages of dipsomania.

H. CLAY BASCOM.

*Troy, May 29, 1893.*

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#### INEBRIETY AMONG WOMEN.

Dr. Lawson Tait makes the following remarks in the *British Medical Journal*:

“My practice lies exclusively among diseases of women, and I am consulted about a large number of drunken women, especially, of course, among the middle and upper classes, and I have long since come to a conclusion, consistently supported by an ever-increasing experience, that women are not sots for the fun of the thing, as men are, but that an intelligent and educated woman never becomes a drunkard but from some deep-rooted and often carefully-concealed cause. It may be physical suffering or mental distress, but there always is a reason for it. Scores of my cases of suffering from chronic inflammatory diseases of the appendages have come to me habitual drunkards or opium eaters, or both; and they have been cured of their bad habits by the same proceedings as have cured their physical sufferings. I have no less than three such lying-in convalescents at the present moment. I always break their habits suddenly and at once, greatly to their distress, but much to their welfare. The climacteric sufferings are a fertile source of drunkenness in women, but when there is no more permanent cause for the vice than this the habit is nearly always given up when the troubles are over. I am, therefore, in a position to confirm absolutely your indication as to the influence of these special

causes in the production of drunkenness in women, but I would greatly emphasize the extent of that influence. I would urge that the physical condition of every habitually drunken woman should be carefully determined.

#### DIAGNOSIS OF INEBRIETY FROM APOPLEXY.

Dr. Mills, in a recent clinical lecture on the case of a man picked up in the street unconscious, remarked as follows :

“This man has no external evidences of fracture ; but sometimes without fracture, or with concealed fracture, a sudden fall or blow on the head will produce an extradural or a sub-dural hemorrhage. Such patients are usually unconscious at first, and often regain or partially regain their senses, and again lapse into unconsciousness. One dilated pupil, convulsions, and some hemi-paresis, are among the prominent symptoms of such a lesion. The signs and symptoms present do not point clearly to this lesion.

“Other diagnoses to be considered are those of drunkenness, opium poisoning, epilepsy, uremia, and embolism or cerebral hemorrhage, perhaps still others ; but these are the most important.

“Profound alcoholic intoxication can be excluded, as this patient is evidently absolutely unconscious, and suffering from profound paralysis, more marked on one side than on the other. In dead drunkenness, while consciousness may appear to be lost, the condition is rather one of extreme stupor or stupidity, and the patient by strong excitants can usually be made to respond in some way, although he may immediately sink again into his stuporous state. The smell of liquor on the breath may help, but this cannot be relied on, as a patient insensible from any cause may have been drinking. Both sides of the body are equally affected in extreme alcoholic intoxication.

“Several facts will easily exclude opium poisoning, such



as the sudden onset, the absence of pin-point pupils which will not dilate, and the peculiarities of the state of insensibility. As the man was seen at the time of and immediately after his attack, and for other reasons, the post-paroxysmal sopor of epilepsy can be dismissed."

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*The Brooklyn Home for Habitues*, Dr. J. B. Mattison, director, has been removed to 188 Prospect Place, near Prospect Park.

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THE New York Pharmaceutical Association has placed on the market *Kumysgen*, a form of milk that is of much value in all affections of the stomach and debility of the general system. These new foods should be tried in all cases.

L. B. Grandy, M.D., Demonstrator of Anatomy and Microscopy, Southern Medical College, Atlanta, Ga., says: "Antikamnia has given me the most happy results in the headaches and other disagreeable head symptoms that have accompanied the late catarrhal troubles prevailing in this section. In my practice it is now *the remedy* for headache and neuralgia, some cases yielding to it which had heretofore resisted everything else except morphine. I usually begin with ten-grain dose, and then give five grains every fifteen minutes until relief is obtained.

*Horsford Acid Phosphate* is manufactured by the thousand gallons at a time, and its sales have reached enormous proportions. This is the best testimony of its value, especially as it is used by physicians, and is called a regular legitimate medicine.

The Morris Fire and Burglary Proof Safes are necessities for every asylum and office. These are among the best on the market.

There are few of the newer remedies that have met with more approval from the profession than has Pichi (*Fabiana imbricata*). It has proved one of the most valuable of remedies in general vesicle and genito-urinary troubles.

Pichi is diuretic; favors the expulsion of calculi and gravel, and relieves the irritation caused thereby; modifies favorably purulent discharges; and acts as a general stimulant of the excretory functions. We make of this preparation the fluid extract, the solid extract, the powdered extract, and filled soluble elastic capsules. The habitat of this drug is South America. It is diuretic, tonic, terebinthinate. It calms irritability, and quickly modifies the urinary secretions in gravel and uric diathesis. Therapeutic reports of its application, and full information concerning our line of Pichi preparations, will be furnished on request to Parke, Davis & Co., who were the first to introduce the virtues of Pichi to the American profession.

*Fellows' Hypophosphites* is of a class of remedies that are of exceptional value in complex nerve disorders, particularly those which spring from the poisoning from alcohol and opium. This particular remedy cannot be dispensed with in these cases. Its effects are marked and positive.

*Spaldings' Gymnasiums* for private homes and asylums are very practical and simple in every respect. Send to A. G. Spalding & Bros., New York city, for a circular.

The *Bromo Potash* of Warner & Co. has become one of the great popular remedies of the day for headache and sleeplessness and general debility. It should be tried on all occasions.

"The Granules," prepared by Dr. Abbott of Ravenswood of Chicago, Ill., are the most popular form of drugs now on the market.

*Liquid Peptonoids* with coca are found from experience to have a special value in defective nutrition, and are useful as reconstructives.

The preparation of *Sulfonal*, by Schieffelin & Co., of New York city, is one of the best narcotics that can be used in all cases of opium and alcohol addiction. It is safe and reliable and its effects are prompt and lasting. No modern narcotic has proved of so much value, and it will come into very general use.

*Dr. Shepard's Sanitarium* is a most attractive place for invalids during the summer months. On Brooklyn Heights, in full view of the New York bay, with every comfort of the city combined with a quiet elegant home, makes it one of the most attractive places.

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This Journal will not be responsible for the opinions of contributors, unless indorsed by the Association.

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MEDICAL TREATMENT OF INEBRIETY.

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By T. D. CROTHERS, M.D.,

*Superintendent Walnut Lodge Hospital, Hartford, Conn.*

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The medical treatment of inebriety appears first in pictorial representations found in the ancient tombs of Egypt. Here can be seen the states of stupor, nausea, vomiting, administration of drugs, showering by water, massage, flagellation, and attempts to counteract the narcotism by external stimulation, also inunctions of the body, convalescence, and restoration, all faithfully outlined on these old tombs, whose origin is lost in antiquity.

Fragmentary records of early Greek physicians contain references to the treatment of excessive wine drinkers.

The great philosopher and physician, Hippocrates, clearly recognized the disease of inebriety, and left some very sensible rules of treatment.

From time to time, for the past twenty centuries, the question of the disease of inebriety and its treatment has come into prominence at intervals, then died away. Finally, at the close of the last century and the beginning of this,

Dr. Rush of this country and several eminent European physicians affirmed the fact of disease, and laid down lines of treatment. But it was not until 1864 that the scientific treatment of inebriety became a practical reality, in the asylum at Binghamton, N. Y. From this time the rational study and treatment of inebriety begins.

Unlike other great medical topics, public sentiment has gone on in advance of scientific knowledge of this subject in its demands for means of treatment that shall control and cure the victim. In the meantime, all rational study and treatment of inebriety has been obstructed by false theories and delusive misconceptions, that cling tenaciously as fog-banks along the shore.

Notwithstanding all the evidence, based on facts and experience, against the present methods of treatment, they still continue.

Temperance revivalists still boast of the number of pledged and converted as cured. As an evolution from this comes the empiric, with his secret specifics, boasting to have first affirmed the theory of disease, and claiming equally astonishing results with unknown drugs.

While the question of disease and treatment is passing through the period of renaissance, there are landmarks and clearly defined facts to guide all future studies.

Some of these outline facts grouped may help to clear away the errors that cloud the present conception of this subject.

The disease of inebriety, like other diseases of the brain and nervous system, follows a uniform movement, controlled by laws of dissolution, and conditions and causes that can be determined.

In the question of treatment, the first fact is, What is the present condition, the organic and functional derangements of the brain and nervous system, also nutrition and digestion?

Second: What are the special effects of alcohol on the nerves and brain?

Third: Is the use of spirits a symptom of other brain states? or is it an active factor in the causation?

Fourth: What neuroses and conditions of heredity are the active and latest factors in the history of the case?

From a study of these questions the lines of rational treatment will appear. Take a common case as an illustration. You are called to a case of gastritis. The man has drunk spirits for a long time and taken but little food; both digestion and nutrition are seriously impaired. Alcohol has affected the sensory and motor nerves, it has made the brain unstable, and lessened power of control, with evident hyperæmia. If the treatment is based on these symptoms alone but little can be expected. If we go back and find that the use of spirits began after some severe strain or state of exhaustion, or following as an entailment of some disease or traumatism, either physical or psychical, or originated in contagious surroundings and faulty conditions of living, new lines of treatment are indicated. If further inquiry show a neurotic inheritance, direct as from alcoholic ancestors, or indirect as from insane consumptive epileptic, or any other neurosis, new indications appear.

The treatment of a case which checks the brain and nerve irritation by narcotics, and by the withdrawal of spirits and the use of eliminatives relieves the functional disturbances, is only partial. If at this period the pledge or conversion fills the mind by auto-suggestion with confidence that cure has taken place, or if the system is kept saturated with narcotics until the dominant idea of cure prevails or the mind is buoyed up on the delusive hope of final and permanent cure, the results are accidental and uncertain. Should final restoration follow the use of these means, the real causes of cure are unknown and belong to the realm of psycho-therapeutics. Cases which recover after the use of these psychical remedies are those in which the drink craze or symptom dies out or becomes exhausted, through the operation of inherent forces, and not by the last means or remedies used.

The medical treatment of inebriety must depend on the causes and conditions of the case. Without this knowledge all remedies are empirical. From such a clinical knowledge the physician may point out the lines from which a return to health may be expected. He can foresee the oncoming insanity of which the drink impulse is a clear symptom ; or the paresis with this stage of exaltation and spirit excess ; the acute delirium, the melancholia, the masked epilepsy in the dipsomaniac, and many other conditions that can be anticipated and studied. Many of these cases, in which to a superficial observer only the drink symptom is prominent, are found to have a uniform line of progress and termination. Take a hundred cases of inebriety and from a careful study of heredity, present condition, and the action of alcohol, etc., etc., a prognosis can be made that will be verified in over ninety per cent. of all cases. The first question to be determined in a given case is the physical condition of the patient. As a rule all inebriates suffer from degrees of paralysis, both vaso-motor, sensory, and functional. Sub-acute inflammations and reflex irritations are common. The heart's action is variable, and the organ is enlarged. The liver is also enlarged and frequently the seat of low grade of inflammation. The stomach also suffers from both organic and functional derangements. Neurites is very common and of all degrees, usually called alcoholic rheumatism and neuralgias. These are only the most general and prominent symptoms and call for general eliminative treatment. There is present in all these cases defective elimination of waste matter, also chemical changes of both cell and tissue, due in part to the direct action of alcohol and its indirect action on the nervous mechanism. As a result ptomaine poisonings, new soils for the growth of bacteria, also new centers of congestion and irritations occur. The bath corrects these indications by stimulating the cutaneous surface. Hot air baths or hot water baths, with rubbing once or twice a day, are the first essentials in treatment. Following this should be given what is termed internal

lavage, or washing based on the same principle. This is best secured by saline and mercurial cathartics, with copious draughts of warm or acid waters. The patient should be placed in conditions where a certain amount of control over his habits and conduct can be obtained. Either at home, under the charge of a trusted nurse, or in an institution where all the surroundings can be guarded.

All spirits should be removed at once, and a careful watch of the case be maintained to ascertain any organic or other diseases which may be marked by the use of spirits. Epilepsy, tuberculosis, paresis, hysteria, and other affections often come into great prominence when spirits are abandoned. The remedies most valuable following the removal of spirits and baths are the cinchonia bark infusions, nuxvomica preparations, together with the bromides, codiac, sulfonal, and other narcotics for the control of the nervous irritations. Strychnia is inferior to nuxvomica in my practice. Choral is unsafe and uncertain in many cases. All narcotics should be given in large doses for a short time and changed frequently and discontinued. Beef tea, hot milk, hot acid drinks, are often very effectual as narcotics, allaying nervous irritation. Rest and frequent massage with the baths, mild tonics, salines, and good foods are often all the means essential for restoration. In many cases the drink craze disappears from the use of these means alone. In a certain number of cases the origin of the drink symptoms is associated with syphilis and bad living, or the advent of syphilis has been followed by excessive use of spirits. In these cases mercury, arsenic, and the iodides should enter very prominently into the treatment. In a certain number of cases unusual states of stupor and delirium follow each other with explosive violence, unusual to ordinary alcoholic intoxication. A suspicion of specific poison followed by mercurial treatment gives the strongest confirmatory evidence in the good results from such means.

When inebriety is traceable to head injuries, from blows, heat, shocks, sudden emotional strains, etc., etc., sub-acute

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inflammation and degenerative cell and functional changes present, are noted in the impulsive exhaustive drink symptoms. Both the prognosis and treatment should anticipate grave brain troubles.

Direct heredity, noted by inebriate ancestors, demands in the treatment total change of life and long periods of brain and nerve rest. Where the heredity is indirect, coming from allied states of brain degeneration, such as insane, idiotic, criminal, pauper, epileptic, and other profound brain diseases, the medication should be directed to lessen and favor return to states of health. In some of these cases the action of spirits varies widely. The insanity of the drink symptoms and the organic degeneration is so pronounced as to suggest various causes. These are the cases which become drug-takers of all kinds, and the cure or subsidence of one drug addiction is followed by another. These are the cases which appear in every community as shining examples of cure by "gold specifics," by prayer and pledge, and who very often secretly use opium or other narcotic drugs.

The hysterical confidence in permanent cure by unknown measures in a brief time is always open to grave suspicion of hysterical credulity or duplicity.

In neurotic cases where alcohol is quickly followed by intoxication, especially in young persons, a grave prognosis is present. The treatment should be a radical change of life and also include all the constitutional remedies found valuable, such as baths, tonics, foods, and mineral drugs.

In cases where cell and brain exhaustion from imperfect rest and food are present, the treatment must be nutrient and hygienic, rather than by drugs. Dyspepsia and the various disturbances of the stomach and liver, which are relieved by spirits concealed in bitters, are always grave troubles. Faulty or no mental control and unstable brain equilibrium, with its irregularities and exhaustion in inebriety requires long persistent treatment. Many of these neurotic cases are benefited by mental treatment. There is a realm of psycho-therapeutics in which the medical man

can foster dominant ideas and direct the activities of the brain along hygienic lines of living. Hypnotism has been tried in this way with indifferent success, so far. New surroundings, with change of thought and impulse, have been very patent in some cases. A primary condition in all these cases is exhaustion of the central brain structure. In most cases full restoration never occurs. The drink craze dies out, but the weakness and lowered vitality remains. In periodic cases the explosive character of the brain energy accumulating and discharging at intervals suggests a line of treatment which will afford an outlet for this abnormality. In some cases restraint by drugs at the period of discharge is valuable; in others baths, exercise, cathartics seem to divert the energies and relieve the paroxysm. In one case a prolonged hot air bath, with severe massage, avails; in another, a long tramp in the country, with dog and gun, and severe exercise; in another, cessation of all work and rest in bed, assisted with bromides; another case abstains from food at this period, and in other cases eats to excess for two or three days, and thus avoids the paroxysm.

Various measures to control the drink paroxysm in these cases will depend on a study of the case. The premonitory symptoms are often very clear, and means of prevention can be provided. Where the case is in an asylum the application of means are more positive, but when the case is not under control greater skill is required. Many of these periodic cases drink only on holidays, or days of general rejoicing. If they can be carried over these periods they remain sober until similar occasions recur again. For many years I treated a case who never drank except during the holidays. A week before the approach of this season he was given mineral waters, nux-vomica, bromides at night, severe exercise and hot baths, with sharp rubbing, every day. This was continued for two or three weeks, then discontinued, and the drink craze was averted. In one case a man never drank except when on the seacoast; change of residence to the mountains was followed by perfect abstinence. States

of contagion are very patent causes in some cases, and when recognized can be remedied. A form of hypnotic influence prevails, in which men drink to excess in certain surroundings and in certain company, and abstain where conditions are removed. Asylum care and study reveal many very curious facts along this line. Often pronounced cures follow from a careful study and recognition of these symptoms. The tendency to epilepsy, suicide, dementia, and other grave diseases should always be considered in such cases, and both local and constitutional remedies be persistently applied.

The continuous drinker, either in moderation or excess, has always the strong possibility of paresis, dementia, and cerebral hemorrhage before him. The continuous action of spirits is that of a paralyzant, disturbing and breaking up all the chemical and vital processes, either slowly or rapidly. The condition to be treated, after the removal of the active or apparent causes, is that of brain anæmia and profound central exhaustion, and degeneration of all the vital processes.

Institutional cure and treatment of these cases are obviously the most important and practical. In the near future, when the disease of these cases is recognized, their early treatment at home by the family physician may be practical. His knowledge of the family history and surroundings will enable him to apply preventive means and measures that are impracticable later on.

Public sentiment permits these cases to grow up in every community under the impression that all excess of spirits is simply moral weakness, within control of the victim. Thus, the period of curability is passed, and only when the disease and insanity of the victim is unmistakable are rational means applied. In an experience of seventeen years in asylums for these cases, I have rarely seen recent cases of inebriety coming for treatment. As a rule, all persons admitted to asylums are those who have exhausted every other means for relief, and who have used spirits until both the brain and organism are obviously diseased. To expect cure or permanent restoration in a few weeks from any form of treat-

ment in such cases is impossible, or even to expect cure from long medical care in any very large number of cases cannot be reasonably expected. Yet, the most reliable statistics show that fully thirty per cent. are restored from institutional medical care extending over ten or twelve months. I am sustained by the best authorities in asserting that the inebriate is more curable than the insane, but the treatment must be based on his actual condition and extend over a long period of time, and be founded on general principles of rest and organic restoration.

The restraint and care of an asylum is of more value for its control of the surroundings, and the facility for the application of exact methods of treatment, than for its removal and restraint from alcohol. Rest and building up of brain and nerve tissue takes away the demand for alcohol more positively than locks and barred doors.

The central object of all treatment is to remove the causes which demand spirits for relief. To silence this craze for alcohol is not curative any more than the narcotism of opium removes the cause of pain.

While the use of alcohol will create general organic degeneration, the demand for its use is always symptomatic of grave central irritations and lesions.

Locks and bars, pledges, chemical restraint by drugs, appeals to diseased higher brain sections, appeals to the credulity and disordered senses and emotions by "gold cures," or specifics, are all empirical. Yet, excepting imprisonment in jail, all these measures claim to be curative, and refer to examples whose conditions can be explained by other and more rational causes. The drink symptom is in many cases self limited and will change and disappear as a natural dissolution process, sometimes merging into organic disease of the stomach, heart, liver, kidneys, nerves, and brain. Cerebral hemorrhages, organic diseases of the lungs, kidneys, and nerves are very common entailments following the excessive use of spirits. The examples of cure by specifics or moral means are as a rule diseased, and the

change of the drink symptom is followed by other concealed or pronounced organic lesions. The breaking up of the drink craze by narcotics and other powerful drugs will of necessity increase the degeneration, and directly predispose to insanity.

Another central object of all treatment is to restore the organism so that the narcotic of alcohol or other drugs will not be demanded. This is a brief outline of some of the more prominent facts in the treatment of inebriety. It will be evident that we have scarcely touched the subject. Only in the most general way have the real facts and principles of treatment been recognized. The noise and confusion of empirics and specific vaunters are only foam bubbles on the surface, whose only significance is the agitation and movement that presages the oncoming truth. No question of practical medicine appeals more strongly to physicians in every community for solution. What shall we do with the inebriates is answered to-day by quacks, pietists, politicians, and reformed inebriates. The mystery, credulity, and dogmatism of their answers is "confusion worse confounded."

From scientific studies by medical men the correct answer must come. They are the real teachers of the nature and treatment of inebriety, and yet to-day nearly half a million politicians, empirics, reformers, clergy, temperance men, and reformed inebriates are talking, writing, and teaching what inebriety is and how to cure it, and not a single score of physicians in this country have given the subject any study. What a startling reflection this is on medical science and medical men. Some of the facts which may be considered as starting points in the study and treatment may be outlined as follows :

The treatment of inebriety extends far back to antiquity. Public sentiment is to-day far in advance of any real knowledge of the nature and treatment of inebriety; hence, the armies of specific vaunters and temperance revivalists who claim such remarkable results. The disease of inebriety, like all other diseases, follows a uniform line of events, from

certain special causes and conditions. Its treatment must begin from a knowledge of the present condition of the case and the effects of alcohol on the system; how far the use of alcohol is the symptom of other diseases and what heredity and neurosis enter into the case. A study of these and other conditions point out the lines of rational treatment.

The prognosis and treatment depends altogether on a clear apprehension of the case. The first thing is to place the patient in the most favorable conditions for cure, where all his surroundings can be helpful, and the best means applied to build up and restore his brain and nervous system. This may be done in an institution or at home under the care of a nurse.

The withdrawal of spirits and the use of baths and massage daily, with brain rest, are essential. Remedies such as the bitter tonics, mineral salts, and acids, nux-vomica, and often the bromides and the iodides are valuable. The use of nutrients, with rest and baths, fulfill most all the demands of each case. Reconstruction of cell and tissue is the object to be sought.

Specific poisons, such as syphilis or injuries to the head, starvation, and other conditions require special lines of medication. Heredity and all its allied neuroses are constitutional states of degeneration, to be treated on general principles; change of living and surroundings, with appropriate medication to build up the entire organism, must be applied in all cases.

Restraint, protection, liberty, and the application of means to meet all the demands and abnormalities must be applied.

The public treatment of the pauper inebriates must be in military hospitals, especially organized for this class. The treatment for those able to pay can be more completely carried out in special hospitals, which will combine all the best appliances of science to meet the wants of each one.

The entire subject must be studied from a higher level, and along the line of accurately observed facts.

THE ÆTIOLOGY AND THERAPEUTICS OF  
ALCOHOLIC INEBRIETY.\*

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Mr. President and members of the Kings County Medical Association :

The "alcohol habit," "drink craze," "thirst for alcoholic liquors," oinomania, dipsomania, comprehended under the general title Inebriety, and for which the latter is a synonym, is oftentimes, if not always, the symptom or outward and prominent manifestation of diseased conditions, which antedate the alcoholic craving, and are its predisposing and exciting causes not only, but complications, which retard and sometimes even prevent a cure.

In the popular, and too often in the professional mind, alcohol is regarded as the cause and the root of the whole evil of inebriety. We desire to assert that inebriety is frequently dependent upon causes with which alcohol has nothing to do. There is a neurotic craving, it may be congenital, it may be developed as the result of disease or accident. This craving demands the various forms of narcotic stimulants, those that first excite, then produce narcosis, more or less complete. Alcohol fulfills this condition, is easily accessible, reasonably inexpensive, and is the one drug that meets a morbid craving that seems to be almost universal. But what about the origin of this craving, this abnormal desire for alcohol or other drugs.

We do not fail to recognize the deteriorating effects of alcohol manifested principally, at least, more pronouncedly upon the nervous system as seen in the various forms of

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insanity, and the various neuroses, neuritis, epilepsy, alcoholic paralysis. We also note the degenerative effects of alcohol on lung, liver, kidney, or other organs and tissues of the body ; or as a special poison in the same sense that lead, arsenic, and tobacco produce their effects.

But beyond and back of the direct, deleterious effects of alcohol, functional or organic, upon the nervous system, or its alterative effect on tissue, or its direct poisonous effects, as far as alcohol may be regarded as a factor in the production of inebriety, we believe that we may practically exclude it from consideration as a prime factor, certainly the most important factor in the ætiology of inebriety.

We believe that the great majority of inebriates become so from necessity, not from choice, that there is a "vis a tergo" of heredity, environment, and disease, that produces physical degeneracy and pushes them over and plunges them into inebriety.

With some of the various predisposing and exciting causes of inebriety we are reasonably familiar ; these by their direct or reflex influence upon the cerebro-spinal axis, produce or lead to habits of involuntary drunkenness or inebriety. The patient with fever craves and may drink water freely, excessively, and injuriously. The diabetic is an aqua-maniac in a certain sense, but in neither case do we recognize the aqua-mania or water craving as the disease, but rather as proceeding from certain abnormal conditions which we readily recognize. So the liquor thirst is the result of morbid conditions that produce an abnormal desire, which alcohol seems, temporarily at least, to satisfy.

Whether there are any definite lesions of the nervous system which produce dipsomania as other well-defined lesions of the nervous system have produced definite well-known symptoms, we are not prepared to say, but classify dipsomania with erotomania, kleptomania, pyromania, or other forms of periodical and impulsive insanity, which are marked by nerve storms or crises, which, like tidal waves, come suddenly, overwhelm the individual and plunge him into characteristic forms of dissipation, violence, or crime.

The excessive use of alcohol, while it is oftentimes the cause of various diseases of the nervous system, and also a frequent cause of insanity, is also the precursor or initiatory symptom of certain diseases of the nervous system and also of insanity.

The parietic will crave and use alcohol in the earlier stages of his malady. The victim of nervous syphilis is addicted to it, more especially in the later stages when the nervous system becomes involved; about one in six of the several thousand inebriates that have passed under our observation at the Fort Hamilton institution, were so affected.

I have reason to believe that many did not use alcohol in excess until the nervous symptoms of syphilis were developed. Any depressing, exhausting, or painful disease may produce the alcoholic craving, alcohol being sought for its stimulating properties. The neurasthenic craves alcohol, and it temporarily relieves the "nerve exhaustion," so common amongst the great army of neurotics.

Alcohol, moreover, is second only to opium, ether, or chloroform as an anæsthetic, indeed, has been used as a substitute for the latter. Hence, persons find, experimentally, that alcohol relieves pain, and its use is carried to a harmful extent, its deleterious effects follow and inebriety is established. Indeed, there is an analogy here between the opium and the alcohol habit. While the former almost invariably has its starting point as a pain-relieving agent, the latter has also, not infrequently, the relieving of pain as its beginning.

It is possible that a healthy individual with good personal and family history may use alcohol sociably or as a matter of custom, until the habit becomes firmly established.

The alcohol breaks down the constitution, invades and degenerates the nervous system, and thus develops inebriety, because the alcoholic degenerations, or even functional disturbances of the nervous system, are the very conditions under which inebriety is established. We say this is possible, but we assert again, that behind the large majority of inebriates will be found a defective family or personal his-

tory, not only complicating but causing the inebriety, retarding, oftentimes preventing a cure.

It can be thus seen that inebriety is but a symptom, a flag of distress hung out by the nervous system. As some one has aptly said, "neuralgia is the cry of a diseased nerve," so the "drink craze" is the cry of the neurasthenic for a stimulant, of the pain-tortured nerve for an anæsthetic, of the victim of insomnia for a hypnotic.

It is but reasonable to infer, then, that the therapeutics of inebriety must be as varied as the causes that underlie and call it forth. Not any patient that applies for relief to the physician needs a more careful examination than does the inebriate. You may rest assured that there is some underlying cause, probably several, that must be removed if we would restore the inebriate to his former habits of sobriety. If he is found suffering from the later manifestations of syphilis, he will need special treatment for this condition, especially if the nervous system is involved; a painful stricture of the urethra may require division.

Chronic malarial poisoning, with its complicating disorder of stomach, liver, and spleen, will demand special treatment. In a case on record the irritation of a tapeworm produced a tendency to the excessive use of alcohol, which tendency passed away when the worm was expelled.

In a word, the large majority of inebriates are diseased persons, and that primarily and antecedent to their inebriety, which is appended to and aggravates their diseased condition.

Special diseases, therefore, require special treatment, irrespective of the inebriety, if we would cure the inebriate. In this connection we may ask, Are there any drugs that we can substitute for alcohol that will take its place and satisfy the inebriate, as a substitute for alcohol?

Opium and the salts of morphia will do so in a marked degree, although cocaine, chloral, and the bromides have been so used. The use of opium or morphia is not uncommon among inebriates who desire to "leave off alcohol." The inebriate, as a rule, is a congenital neurotic. From

birth almost, he reaches out for some drug that will gratify or meet his neurotic craving. He will "ring the changes" on all drugs that affect the nervous system; he will try all things (drugs) and hold fast to that which is bad. The alcohol and the opium habit to the inebriate are convertible habits, and the inebriate, like a pendulum, will swing from alcohol to opium; not infrequently the two habits are combined, as in the form of tinct. opii., constituting a mixed habit, in which the effects of both alcohol and opium have to be considered. Occasionally a case is presented in which morphia is used hypodermically, and the alcohol used in the usual manner. In cases where opium addiction is associated with the habitual use of alcohol, the opium habit is of paramount importance, and the alcohol assumes a secondary place.

The fact that opium can substitute alcohol is the keynote to many vaunted secret cures, in the so-called "narcotic treatment" for alcohol. It simply substitutes one habit for another, and as long as the victim is taking the so-called remedy he is reasonably comfortable. But I admit if the "narcotic treatment" was carefully practiced, in judicious hands it might, in conjunction with such other remedial measures as would best eradicate the primal causes of the inebriety, prove useful, if not curative, in cases of inebriety.

Are there any drugs that are specifically beneficial for the treatment of inebriety as such? We would state that drugs that act directly as a stimulant to the nervous system, are of value. Strychnia is a type of this class of drugs, and one of the best of its class.

Luton of Rheims, Belgium, was the first to point out its value in alcoholism. Then the Russians used it largely, and it was known as the "Russian treatment," and, finally, the Americans adopted its use in such cases.

Strychnia has proved serviceable as both abortive and curative in acute alcoholic delirium, as well as useful in the more chronic forms of alcoholism. It seems to be tolerated in such cases; in cases of alcoholic poisoning under normal conditions, we have no record of the value of strychnia as an

antidote; interesting experiments might be made on the lower animals with the view of determining this point. Strychnia is an excellent cardiac tonic, and one of the best respiratory stimulants, and might be used in general medicine in cases in which alcohol is oftentimes prescribed.

Oxide of zinc, during the past twenty years, has been used with advantage in cases of chronic alcoholic intoxication. This drug was largely brought to the notice of the profession by Dr. W. Marcet of London, who had an extensive hospital and dispensary practice, especially in diseases of the nervous system; and as he found zinc of value in various chronic disorders of the nervous system, he used it also in cases of chronic alcoholism. His observations published in a small work entitled, "Chronic Alcoholic Intoxication," are an extremely valuable addition to the literature of alcoholism.

Quinine has been used more particularly in the later or convalescent period of the treatment of alcoholism.

The so-called "Red Cinchona Cure," for a time interested the public. Rational medicine does not recognize any special drug or specific remedy as a universal cure for inebriety, nor does clinical experience form any basis for such a claim. From the very nature of the case, such a remedy would be impossible. The ætiology of inebriety is dependent on such a variety of causes and its environments and complications so numerous, that any one remedy could not fulfill all, or even meet the more important of these conditions. However valuable drugs may be to meet certain indications in the various conditions incident to inebriety, we believe that so far as the curative treatment of inebriety is concerned, drugs must assume a secondary place, valuable as they may be in their respective spheres.

In the treatment of the alcohol habit we place first: *Restraint, and seclusion in a special asylum for a definite period, and total abstinence during this period.*

In a few words, concisely expressed, this statement includes the plan now adopted by the leading asylums of this country and of Europe for the recovery of the inebriate. It

involves restraint (legal, if need be), seclusion, a special institution, in which all the latest and best methods of dealing with the inebriate are procurable, a sufficient period in which to apply these measures, and we need hardly add, a long period of total abstinence from all alcoholic liquors. We need hardly add that diet, rest, recreation, hygienic surroundings, and the exhibition of appropriate drugs are all included in the above plan.

The causes of degeneration being removed, the factors of regeneration being brought into action, new formation of nerve, muscle, and tissue must supplant degenerated tissue, if haply organic disease has not resulted in irreparable injury.

We have hinted at an hysterical element in the history of inebriety. The inebriate, whatever may be his condition, is largely influenced by his surroundings ; hence, as almost in no other disease, must we recognize the value of psychotherapeutical agencies hitherto, if not altogether, used by the charlatan, but recently recognized and practiced by leading neurologists, as of value in their specialty.

In the light of such an hysterical element in the clinical history of inebriety, we can readily account for the apparent success of the so-called temperance movements that sweep over communities periodically and effect many apparent cures, or rather, in the language of the day, reformations. Such an element will also explain why, after such a tidal wave of excitement, relapses take place oftentimes in large numbers, and the period of excitement is followed by a period of reaction.

The occurrence of relapses is readily accounted for by the fact that the stimulus of the period of excitement buoys up the inebriate for the time being, during which strong mental emotion is a powerful factor. He is keyed up, as it were, for the time, and sustained by a moral stimulus. When this is withdrawn, reaction, followed by corresponding depression, sets in, and the old method of stimulation, is again imperatively demanded and yielded to.

Why some inebriates go through such a period of excitement and do not relapse, and why others do, can be accounted

for by the fact that the former are in a reasonable degree of physical health, and are not burdened, dragged down, and handicapped, either by disease that is non-alcoholic, or that is the result of alcoholic degeneration. The inebriates so affected are not influenced, or if at all, only temporarily, by the so-called "temperance revivals" that appear and disappear with almost stated regularity, in large and small communities, and we must add, do good, but only in the channel indicated.

It is also, operating through this hysterical feature of inebriety, that charlatanism may effect a temporary, possibly a permanent, success in a certain class of cases.

A physician observed to me that he had visited many asylums for the cure of the inebriate, and that when the medical superintendents were men of strong will power and personal magnetism, as he expressed it, more cures were effected than when the reverse was true.

When the inebriety is due largely to neurasthenia, or in cases where the hysterical element largely preponderates, we believe psycho-therapeutical agencies, or even those that appeal to purely mental conditions, will be of service, but they will not cure a cirrlosed liver, lung, or kidney, or remove the physical causes upon which the inebriety may depend. In addition to those measures that appeal to the higher moral nature, there ought also to be combined such as meet certain intelligent wants. To this end all reasonable amusements, entertainments, and especially such occupations as will interest the person and keep him busy, should be encouraged, if not made compulsory.

The therapeutics of inebriety is a new field as yet not fairly occupied, but we believe that the only true road to successful treatment will be along the lines we have indicated. That is, a knowledge of the underlying causes and the use of such therapeutic agencies as will best remove these.

"Tolle Causam," the legend emblazoned on the standard of rational medicine, the watch-word of every true physician and surgeon, should guide the specialist and direct his methods in his endeavors to cure the inebriate.

## THE SUCCESSFUL MANAGEMENT OF INEBRIETY WITHOUT SECRECY IN THERAPEUTICS.\*

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By C. H. HUGHES, M.D., ST. LOUIS.

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Dr. Benjamin Rush, in his "Diseases of the Mind," published in 1812, recommends "The establishment of a hospital in every city and town in the United States for the exclusive reception of hard drinkers," and says "they are as much objects of public humanity and charity as mad people; and religious, moral, and physical remedies . . . should be employed . . . for the complete and radical cure of their disease."

Since the immortal Rush rested from his labors, vast progress has been made and vaster still is making in the management of the drink habit and in the treatment of the drink disease. Facts which but a few years ago advanced observers, like Morel, Magnan, and the few neurologists of their time first took note of, touching the hereditary transmission of neuropathic instability and dipsomaniacal tendencies through ancestral alcoholic excesses and *vice versa*, have not only passed into the possession of the profession generally as practical knowledge, but have become largely the mental possessions of the people. The profession, the people, and even the unfortunate victim of the drink habit himself, have come to the understanding that habitual resistless inebriety is a disease and chiefly of the brain and nerves, and, under this impression, resulting from medical research and teaching, the drunkard and the dipsomaniac now seek and the profession now give medical relief to the sufferer, or the friends of the inebriate procure this relief for him.

The general professional consent and popular recognition

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of the fact that inebriety is a disease are the results of the impressive and persistent efforts of the British and American associations and other medical societies having in view the cure of inebriety.

In the general recognition of the fact of the disease basis and remedial possibilities respecting this baneful, morbid vice of man's nervous system, we are hopeful of such an inestimable physical and moral fruition as must ultimately result in marked national re-invigoration, and in the postponement, at least, of national degeneracy impending through this, as one of the causes of racial decline.

We know now how to successfully scaffold and prop and steady the tottering nervous structure of an inebriate neuropath, and sustain it in fairly normal function pending its effectual reconstruction, and we know how to permanently rebuild this damaged nervous system, through the advances neurology has made during the life of the present generation of physicians, though, alas, we cannot always remove the baneful neuropathic entailments of chronic alcoholism upon the immediately succeeding generations of the drunkard, while we may do much to ameliorate, modify, and ward off the baneful neurotic sequelæ.

The unchecked degeneration of whole families through generations of neuropathic descent, such as Morel and others have presented, as the frightful admonitions of scientific research against the fatal neural and psycho-neural degeneracy of alcoholic excess, are not possible under the skillful management of modern medical art as now practiced, especially in the neurological department of medical work.

It may profit us at this juncture to recur again (as mentally we often do to similar personal observation) to one of Morel's typical tables illustrative of the course of alcoholic neuropathic degeneration unassisted by our art, and I take this table from our classical and observant *confrère* across the ocean, Dr. Henry Maudsley, because the interesting researches of Morel into the formation of degenerate or morbid

varieties of the human race have served to furnish to the philosophical mind of this distinguished neurophysiologist, as it has to you and me, a philosophical view of the chain of events by which alcoholism as a cause of individual degeneracy continues its morbid action through generations and finally issues, when unchecked by the arts of our profession, in extinction of the family.

First generation — Immorality, alcoholic excess, brutal degradation.

Second generation — Hereditary drunkenness, maniacal attacks, general paralysis.

Third generation — Sobriety, hypochondria, Lypemania, systematic mania, homicidal tendencies.

Fourth generation — Feeble intelligence, stupidity, first attack of mania at sixteen, transition to complete idiocy, and probable extinction of family.

How many painfully impressive pictures like this have we not seen in our several spheres of observation and practice, and how many impending family calamities like this are now avertable through the resources of medicine and philanthropy which our present advanced neurology offers the neuropathically unstable? It is a source of professional congratulation that the medical profession, and especially our department of professional endeavor, has brought relief to the inebriate, and mitigation, with the hope of ultimate extinction of its entailed neuropathic evils to the human family, if only we are permitted to treat this disease as its pathology demands, and an enlightened public sentiment promises this as the consummation of our professional labors and hopes in behalf of man's highest and best interests for the closing of the nineteenth century.

The profession and the public believe that inebriety is a disease. They now believe it can be successfully treated and that it ought to be treated, not only for the good of the inebriate, but for the welfare of his descendants. They have now the knowledge that precedes wise action.

Drunkenness is unpopular ; inebriety is on the decline ;

dipsomania is dangerous to the drunkard's descendants, as well as detrimental to himself.

Medicine has given to the world the substantial basis of a new reformation. It has sounded the alarm; it offers the remedy, and, on this score, we think humanity is on the road to safety.

This is one of the jewels we place in the crown of nineteenth century progress. We give it freely to the cause we crown without copyright, letters patent, or secret process.

With the diffusion of knowledge among the people and their advisers, the general profession, and especially the family doctor, that alcoholism and dipsomania are grave diseases, with graver physical and psychical sequelæ, hope has dawned for the drunkard, and the prospect of the final obliteration of inebriety and its terrible evils to the individual, the family, and the state, brightens. Henceforth, the unfortunate victim of alcohol is to be cured and then reformed through the seeking of medical relief, and such as are not confirmed in baneful habits of intemperance will turn in time from the social tempter and avoid the neuropathic thralldom of this devil's chain of evil tyranny.

Many men who fall into the drink habit are unaware of the terrible neuropathic heritage of unsteady nervous organism bequeathed through bibulosity and other nerve-depressing influences operating on their ancestors. They know but little of the organic evils and entailments of alcohol. They know chiefly physical, moral, and social discomforts and inconveniences of getting drunk, which are as nothing compared with the damage to their brains, nervous systems, blood-vessels, and vital organs.

Not understanding the tyranny of their unstable nervous systems they censure themselves as fools for each repetition of a bout of drinking and resolve and re-resolve not to do it again, then go on and die the same, in the majority of instances, unless aided by medical art to overcome the otherwise resistless tyranny of a viciously endowed organism,

which impels to the fate they dread without the power to draw away from, yet thinking each time they drink it will be the last.

The trouble in the past about this blended vice and disease has been in the failure to seek, by suitable change of environment and proper medical treatment, that renovation and rebuilding of the damaged organism which makes resistance to alcoholic enslavement a possibility in the organism of the average habitual or periodic inebriate. That profession which has rescued mankind from so many portentous evils after other resources have failed is ready to succor him now from the thralldom of damaged organism and psychical weakness and neuropathic instability.

We need not now go deeply into the pathology of chronic alcoholism, but, cursorily glancing at the subject, we have only to recall the findings of Virchow, Richardson, Horsley, Percy, and Binz, of water decreased and fibrine changes in the blood, sometimes quite fluid, at others, coagulated, pure alcohol in the tissues, fatty globules in the circulation, fibrinous clots and excrescences in the vessels, vascular dilations, anæmia, deficient hæmoglobin, of old and excessive alcoholics.

Nor need we dwell upon other destructive and degenerative changes, which, like the annihilated phagocytes of alcoholized persons, to which their well-known lack of resistance to general morbid influence is due, are secondary to the poison. We have to treat these conditions as sequelæ. This fact and the other prominent fact that alcohol abstracts fluid from the tissues of an organism whose very nerve cell is bathed in lymph, whose cerebro-spinal axis, as Obersteiner tells us, lies in a sea of lymph, an organism to which water is the *sine qua non* of life, give us the chart and compass of our course; and the polar star is the care and cure of the damaged brain, the brain and associate spinal and ganglionic system from whence originate the illusions, the hallucinations, delusions, anæsthesias, paræsthesias, hyperæsthesias, and hyperalgæcias

or the peculiar polyæsthesias of these cases. All of these sensory troubles, together with the well-known motor symptoms, the motor paresis, muscular tremor, twitchings, and inco-ordination, the *paresis* of the cortical areas of the brain, where the volitions center and whence they proceed, impaired and vitiated, in the drunkard. To these and other symptoms which go to make up what Bevin Lewis designates as the motor anomalies of an alcoholic etiology and all the psychical symptomatology, which this writer and Huss and Magnan and Maudsley, Usher, Wilson, and many others describe, gives us adequate outline of the detail work necessary for the thorough and permanent cure of the inebriate. He will be largely made over and made whole. No three weeks' treatment will suffice. We may break him for the time of his habit in three weeks and yet leave him a wreck for life. Our duty is to repair him and make him anew if he will permit us to do it. We cannot ignore the protean nature of alcoholic symptomatology or forget the fact in our treatment of this disease that no poison except the virus of syphilis plays so extensive a rôle in the morbid affections and degenerations of the tissues, nervous or non-nervous, as alcohol.

When illustrated chapters in the pathological anatomy of alcoholism, especially like those in Bevin Lewis's recent text-book on "Mental Diseases," are so readily accessible, and when, besides, the cultured character of my distinguished auditors is considered, it is obviously unnecessary to dwell in detail on the pathology of alcoholism. I could not enlighten you—you could rather enlighten me on the subject.

The point of this paper is psychical assistance and neurotic support, and neurotic and organic reconstruction. We must first secure the man's safety from the thralldom of drink and repair the secondary damage later. We must first put out the fire and save what remains of the still standing structure, prop the weakened walls, and then rebuild and remove the damages.

The foundation and framework of all reconstruction of the drink-damaged dipsomaniac is in the nervous system. If we can rescue that from immediate and ancestral damage, we can save the man, but we must not leave him, after our treatment, damaged and shattered, in his brain or nerves or blood or vital organs. We must make him strong and resistive in the higher inhibitory volition and directing realms of the cerebral cortex and restore the normal functions within and presided over by the lower cerebro-spinal and ganglionic centers.

It is obvious that in attempting to effectually and permanently cure and reform the inebriate we undertake a large contract, one that cannot be fully complied with in the brief space of a few weeks. When we have broken the chain of morbid habit there yet devolves upon us the duty of after-care that the victim's health may not be permanently shattered, and that insanity and other evils may not follow.

*The first* essential to the cure of inebriety is the substitution of a less harmful support to the shattered brain, nerves, and damaged vital organs, than alcohol, and I name them in their order of preference. The morphias or opium, strychnia, the quinas and cinchonias, valerianates, cocas, the ammonium bromide, etc., etc.

*The second* and concomitant essential is water — plenty of water or its equivalent, milk. The tissues must have water, the blood must have it, the emunctories and the skin must have it.

*The third* and concomitant essential is rest. Normal nature tired prescribes it for every bodily or mental overtax. Exhausted abnormal nature always needs it and demands it often. The machinery of the human organism in all its parts — psychical or physical — must be put at rest for the best repair.

The chief essential for rest is a new and proper environment, and subsidiary to this are the chemical restraints therapeutics may place on over-acting cells; choral, sulphonal, the bromides, the vegetable narcotics, old and new, the va-

lerianates, the opiates, cephalic galvanization, and soothing music and the bath.

*The fourth essential* is the removal of the *debris* of the last and previous drunks and of the interim and organic torpidity and depressed vitality. The scavenger cells, diminished in number or absent as they are *in toto* from the blood, and the emunctories have failed in their physiologically appointed work ; the congested brain, liver, stomach, intestinal tract, mucous membranes generally, torpid liver, bowels, and skin, are to be relieved and set at their proper work again.

Here water, saline laxative water without stint, is the remedy *par excellence*. It flushes the intestinal tract and the excreting organs. Nature suggests it first of all after the rest she enforces after a prostrating spree.

I need not here dwell on the proper therapeutic blendings for this hydrotherapy to give more special direction to liver, kidney, skin, or bowels.

My preference is for an effervescent saline that clears out the alimentary tract and tranquilizes the brain and nerves at the same time (though mercurials are often not amiss), and then to properly start all the pumps of the system that may not be acting well and maintain them in moderate activity till there remains no pathological clogging of the wheels of physiological activity, but I do not approve of over-active catharsis. Moderation and not violence in this regard is my motto.

*The fifth* and concomitant essential is reconstruction of the undoubtedly damaged cerebro-spinal centers and the several affected organs of vegetative life. A drunkard is more or less damaged in many parts of his anatomy at the same time. He comes more nearly to being affected all over in spots than most patients we have to treat.

We begin reconstruction with the beginning of treatment. It begins with rest and sleep and food and change of surroundings, when Nature, without further aid, can effect it, rest, nutrition, and phosphates, the hypophosphites and the reconstructive hæmatics and other rebuilders of the blood.

Milk, beef-tea, and capsicum and other stomachics. Early in the treatment the wines of coca, the beef, wine, iron, and strychnine compounds, calisaya cordials, egg phosphates, and stimulant tonics, are temporarily admissible.

When the patient is cured of his recent attack of delirium tremens, or recuperated from his last debauch, then the hypodermic medication that is to hold him from further relapse, to re-tone his system, and break him of his taste, must be instituted, if we have not begun it sooner.

*The sixth* and final essential, to which all our previous efforts lead us, is destruction of the drink craving, and this is done on physiological principles. The drink craving is pathological perversion of physiological cell action, and lies in the realm of the cerebral cortex. This part of our subject belongs to psychiatry and psychical suggestion, effected by a therapy directed to these morbidly acting centers of the brain, accomplishes our purpose. When the drink craving comes on, having in the meantime rebuilt the shattered brain and nervous system, and restored the mental tone as much as possible, we do not absolutely inhibit the use of the accustomed drink, but train the drink victim's own inhibitions, first, by suggestion, second, by moderate indulgence properly treated.

We do not say, "You shall not, but you had better not drink. You know it is poison to you and you are its slave. You should resist. Your treatment has made you strong. You *can* resist. Whisky no longer tastes as good to you. You no longer need it. You have the power now and should assert your manhood," and with these suggestions, perhaps the victim will try the liquor, we give him *spiritus frumenti* f3ij, *cum vini antimonii* f3i, and repeat *ad libitum*, or we have previously given him apomorphia with aurum bichloride for psychical effect.

Under this or similar management of the appetite, the victim acquires a disgust for his favorite drink, he discovers his inhibition of the propensity is strengthened, and a disgust supplants the taste, which abides till he is fully restored



in nerve, tone, and power, to permanently resist and assert his manhood and maintain it against all future assaults of the foe.

As I cannot, in the brief time allowed, further detail my plan of treatment, this outline must suffice, with the promise in another communication of special prescriptions and combinations embodying the plan of treatment here outlined, and which has proven successful in desperate cases.

After your patient is cured, after the toxic effects of alcohol have gone from the blood, and the higher and lower nerve centers and the damaged tissues of the body have regained their normal nutrition, powers of assimilation, and strength of physiological action and resistance; after confidence in his strength has returned to the patient, he must be warned to never again have confidence in his power of resistance with alcohol in his blood. Let him that thinketh he standeth then take heed lest he fall again. The cure of the drink habit is not always perpetual; it is not everlasting without the aid of the patient himself. Though to some the appetite never comes back, to others it is not safe to trust it with temptation. So that the safe plan, since no inebriate fully knows the full extent of his own inherent organic instability, is to "touch not, taste not, handle not," ever after. His treatment leaves him strong enough to say "No," and "Get thee behind me, Satan," to his tempter. It does not always leave him so strong that he can take the tempter to his bosom. He cannot always try a tussle with the tempter and not be thrown.

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In a study of the mortality in France, extending over five years, the following curious fact appears: Butchers have a low death rate up to twenty-five, from that time to thirty-five years the mortality is far above the average; and this increases steadily each year. Death from inebriety, suicide, and disease of the kidneys, is most frequent. Phthisis is also common.

## INEBRIETY.\*

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It is hardly necessary to state that this subject needs more than a passing notice. The drink problem of this country is of vast proportions. One million of arrests for drunkenness in the United States during the period of one year, with all its resulting misery and expense, is a matter well worthy the attention of the public. There is probably no question to-day before the peoples of all civilized nations that is receiving so much attention as that of inebriety.

No matter how we look at the subject, whether as a source of great revenue to the state, as a political factor, as a great moral question, or as an agent for the ultimate destruction of the physical and psychical organization of man, it is rapidly attracting the best thought of the thinking men and women of the world. States are adopting stringent rules. Norway is already leading the van with its national regulations. Christianity is uttering its most fervent appeals; philanthropists, philosophers, and statesmen are racking their brains for a proper remedy; and even princes and potentates of the Eastern world are seriously considering the subject in all its aspects.

A subject so far-reaching and of such vast importance, a subject that has engaged the attention of the civilized world for ages; a problem so hard to solve, a problem so vital to our social fabric, a problem which involves the very life of the nation, a problem which has for its foundation the health, happiness, and well-being of the individual, must of necessity deeply interest the medical fraternity of this country. The very nature and make-up of the medical mind, and the phy-

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sician's duty in regard to preventive medicine and general philanthropy must naturally fit him for this work.

Already many of the best medical men in the nation have come prominently to the front in trying to evolve from their knowledge and experience a remedy for this great evil — an incubus which hangs like a pall over the human race, eclipsing all other evils combined.

In treating a social evil of this magnitude it is first necessary to understand fully its character and causation ; and I regret that the time allowed will only admit of the briefest reference, and of the more cardinal points being given.

The physician in treating his patient first tries to get a correct knowledge of his case ; in other words, he must make a correct diagnosis. So it is with the subject before us ; unless we get a clear understanding of the subject, and reach correct conclusions, we shall go along groping in the dark, and no further progress will be made toward solving the problem.

Without further comment or argument we will state that it is pretty generally conceded now by the scientific world that inebriety is a disease. By this statement we do not mean to say that every one who takes a drink, but who can control or stop it, and who does so, or that he who may even take too much under peculiarly tempting circumstances, or to drown sorrow and the like (if he has no morbid desire or taste for it), should be called *an inebriate*. So the alienist reasons when he says that every apparently suicidal act is not alone positive evidence that the person committing the act was mentally deranged. So we might reason in regard to the taking of chloroform, chloral, opium, and the like, as remedies in disease, notwithstanding the bad effects to which they too often lead. It is only where the imbibition of these articles becomes a fixed and uncontrollable habit with the will power weakened or gone, that we recognize disease.

In treating of organized life, every deviation from a normal or healthy standard must be considered in the light

of disease. This fact is recognized in the vegetable as well as the animal kingdom. No one is so familiar with this fact as the horticulturist, the agriculturist, or the breeder of fancy stock. So pauperism and the crime habit must be looked upon and treated as disease in the proper acceptation of the term; and until these facts are recognized, and the proper remedies applied in accordance with rational and proved science, we shall continue to be cursed with these unnecessary and remediable evils. Inebriety, properly so-called, is a disease; and as such is known by the same morbid phenomena, and is governed by the same pathological laws as other diseases are known and governed.

It is a psychosis; a species of insanity. It is a disease of the brain affecting the mind, in which the predominant and characteristic symptom is a weakening of the will-power and the mental faculties, hence a form of dementia. Not only this, but it is a *disease of the entire nervous and physical organization of the man*; no tissue, no cell escapes; all is involved in one common ruin. These facts are pretty generally conceded by the best men in the medical profession in this country and in Europe. As it is a disease, we must deal with it as such, even as other diseases are considered, in regard to causation, treatment, and prevention.

*Causation:* The causes of inebriety may be indirect or predisposing, and direct or exciting.

Of the indirect or predisposing causes, chiefest of all is that of heredity. We may quibble all we like over the term heredity—that a man is not born insane or an inebriate, or a genius, or a criminal, and the like—but we *do* know, that birth *does* take place with these tendencies.

By heredity we do not mean to say that the child *will* of necessity inherit the *peculiar* disease or diseases of the parents, or that the child will *surely* turn out a vagabond because the parents belong to the defective classes; for we frequently see children born of diseased parents, parents with marked physical, mental, and normal defects, who under proper environment grow up to excellent manhood, who go

through life perfect specimens of temperance, sobriety, and moral integrity, but we tremble with uncertainty when we learn the history of these cases, for we know for a *certainty* that the offspring is *always* born with these tendencies strongly marked.

Environment often "makes the man or damns the child." This re-enforces heredity, and by these two great laws health as well as disease is governed. By these processes nature makes her selections and moulds her atoms into things of physical, mental, and moral beauty and utility.

Knowing what we do of heredity and its subtle laws and processes, we must conclude that the fundamental or ultimate principle lies first in the primitive cell which dates from the time of conception. During the process of cell segmentation, proliferation, and growth which follows fecundation, this morbid element or principle is capable of transmission from cell to cell all through uterine life, and when child-life begins, the same parental reflex is carried on until the child reaches man's estate, *when he stands forth a complete composite picture of his progenitors.*

Now, when we remember that man in his physical organization is simply an aggregation of cells, and that every manifestation of this wonderful combination, whether it be physical, mental, moral, or emotional, is simply a reflex of active cell growth, we can readily conceive how an *unhealthy* cell growth may contribute to disease. As a result we get an unhealthy physical organization, a weak, vacillating, and unsteady mind, a loss of will power, the emotions excessive, and the morals low. This tendency of parent to reproduce itself, is a law governing all organic life.

Next in importance as predisposing causes may be mentioned sex, nationality, the drink habit, pauperism, ignorance, and the crime habit. In regard to sex, for obvious reasons, it is vastly greater in the male than in the female.

Nationality no doubt cuts a large figure in the production of inebriety. The drink habit, through the influence of heredity and environment is, beyond doubt, the most prolific

of all causes. Pauperism and the crime habit act in the same manner.

Next in the order of causes may be mentioned the neuroses (which more properly come under the head of predisposing causes) such as insanity, epilepsy, chorea, progressive general paralysis, hysteria, and the like.

The exciting or direct causes of inebriety are many. To summarize we might say that *environment* was the exciting cause and covered the whole subject; that all the surroundings and conditions of life of the individual together act as a cause. To particularize we might mention: Bad associations, lack of education, occupation, overwork, ill health, insufficient food and clothing, excitable temperament, disappointments, financial disasters, loss of dear friends, and *unpleasant home surroundings*. This latter condition might be considered as the most prolific of all the exciting causes of inebriety.

It commences in early youth and drives the child from the home hearth, and for want of careful nurture, parental training, and Christian influences, the boy seeks his pleasure in forbidden places, and is soon on the road to ruin. Thus we see that *heredity* and *environment* are the two great factors in the production of inebriety.

*Treatment:* After what has been said of inebriety and its cause, it will be readily understood that it is a disease, not like the ordinary ailments with which the physician is brought in contract, but rather a complicated complex affair in which the whole organism of the individual has been laboring under pathological conditions, perhaps, for years. Upon close inspection, it will be found that the executive or will power is weak, that the mind is vacillating and unsteady, that the morals are depraved and the emotions are beyond control. By further examination the bodily health will be found considerably below normal. The man is unable to stand fatigue. He is either too fleshy or considerably emaciated. The heart becomes excitable, the kidneys congested, and undergoing pathological change, the liver slowly taking on hypertrophy, atrophy, and cirrhosis, and the lungs

assuming that peculiar form of interstitial hyperæmia so common with chronic alcoholism. His power to do or to command is departed; his ability to grasp a subject, and the power of concentration and retention of thoughts is almost nil. He readily sinks into all kinds of vice and immorality; trifles look like mountains. He is easily elated and as easily depressed. His love of family is changed. His health, habits, tastes, inclinations, yea, even his *desires*, have all become morbid and depraved, and you behold the man only a semblance of what he should be. Every tissue of his body has become diseased.

Under these circumstances, may I ask, is it possible that any one remedy or medicine, or any combination of medicines, alone can be relied upon as a cure? In other words, can any morbid habit or taste, like the drink habit or the morphine habit, etc., be cured by medicine alone?

Again, it is possible that a habit in which the entire man presents a complexity of pathological phenomena can be recovered from in the short space of three or four weeks?

Does not every honest and intelligent physician turn his back indignantly upon such sophistry? To be sure, the patient might be placed upon proper treatment in that short space of time, and if continued under proper surroundings or environment may ultimately recover. Because a man suddenly ceases to get drunk is no sign that he is cured of inebriety, as evidenced by the large number, who, under temptation, so readily return to their former habits of dissipation.

Inebriety is a very complex disease, and presents a variety of morbid phenomena which require for its treatment and cure the proper application of all those rational and approved remedies and appliances which experience has taught us may be relied upon for the restoration of health. Medicine alone will not do it; confinement will not do it; and imprisonment is worse than useless, as statistics abundantly demonstrate.

*As the entire physical, mental, moral, and emotional faculties of the individual are diseased, he is a complete wreck.*

*He becomes incompetent as a citizen, and should be cared for and treated as a ward of the state.* The public has a right to demand this: first, for the welfare of the ward; second, as a public protection; and third, as a matter of economy. In regard to the welfare of the inebriate, no one can question the propriety of proper treatment. Unaided, he is unable to rise above his degradation. He has fallen so low and has become so helpless, that he sinks deeper and deeper, day by day, in the wretched temptations and debaucheries thrown around him on every side, that he finally becomes lost to all sense of shame, or obligation to the public as a citizen, or to his family as a provider and protector. He holds his miserable existence by tolerance only. He has forfeited all rights as a citizen, and ought to be treated as an incompetent. He already has an unsavory record in the police courts, has often done duty in the House of Correction, and has cost the public many an expensive law suit. Under such circumstances no one can question the right and duty of the state to take charge of this class of defectives. As a public protection, it is also the province of the state to take care of itself. The right-living public have rights that the evil-doer must respect, and no community can carry self-respect unless this prerogative is recognized and its mandates obeyed. The evil effects, humiliations, inconveniences, losses, and injuries, not to mention the vast number of murders and other major crimes that so often follow as a result of the drink habit, are too numerous and exasperating to go unrebuked much longer. In regard to economy, the mind in its wildest conceptions can form only a faint idea of the vast array of figures required to represent the loss in moneyed value to the public from the drink habit. We need only refer to the nearly one million arrests made in this country during the past year from this cause alone; and this has no reference to the fabulous collateral expense growing out of the same cause. In regard to *treatment*, the cardinal point to be kept constantly in view, and which is paramount to every other consideration, is the welfare of the unfortunate victim; the



danger to the public, and the matter of economy being considerations of minor importance, and will follow as a natural sequence. What seems to be the great need, is a just and systematic law by which these unfortunates may be judged incompetent, and placed in properly constructed institutions, built and governed by the State, and maintained by the State, and in part, possibly, by the inmates when able to pay. This want is recognized by private individuals in the form of the so-called "Keeley Cures," which are springing up all over the land.

These institutions should harmoniously combine the medical, moral, educational, industrial, correctional, and custodial qualities. They should be built with due regard to proper classification. The inmates should be committed under the indeterminate sentence, and a clause admitting patients voluntarily should be inserted in the law, but being subject to the same discipline.

Each institution should possess sufficient land, as farming and gardening should be made strong features in the treatment. With proper machinery a limited amount of manufacturing could be carried on. With the exception of a foreman or two, the institution should be carried on by the inmates, thus making it as far as possible self-supporting. The institution should be properly officered; and at the head, under the general supervision of the State board of control, should be placed a physician of known intelligence and experience, with assistants under whose immediate charge the entire workings of the establishment should be placed. In regard to specific treatment (which we have no faith in) the physician in charge should be well qualified and the treatment left to them. All the moral influences of a first-class institution should be thrown around the inmates.

The industrial and educational features of the establishment should receive marked consideration. In fact, herein lies two of the most pronounced features of the treatment, especially with the younger classes. In regard to correction I think nothing of a so-called punitive nature should be used,

simply the correction that naturally inheres to a well regulated hospital where a strictly humane and disciplinary regimen is faithfully carried out. The custodial feature of the institution will always be a pronounced one. Herein will gather a large class, without friends or kin, aged and homeless, weakened in body and mind, and beyond any hope of recovery. Like other diseases, not all can be cured, but all can be benefited. And while all may not be cured, these unfortunate creatures can be kept away from all harm to themselves and others, and the public relieved from the burden of arrests, suits-at-law growing out of personal encounters, crimes of all kinds, murders, divorces, etc., and many other bad conditions of society, the direct result of the drink habit.

There will be three classes represented, the upper, the middle, and the lower. The upper class will include all those from the higher walks of life, the educated, the wealthy, those in professional life, higher official life, etc. From this class, coming as it does from a higher social scale, we must expect the largest per cent. of recoveries. However, this does not always follow, for we occasionally observe the most degraded coming from this class. From this higher social scale will "graduate" the so-called "Keeley Cure" cases. As a class they have better organization, their surroundings are superior, they have more to live for, and they are received back into life, into the arms of friends and comfort, and as a matter of course be much more likely to remain cured than those coming from the more defective classes. The middle class will comprise that large body of workers and toilers, principally in agricultural, industrial, and mechanical pursuits, from which we may reasonably expect many recoveries, but not in such a large proportion as from the higher walks of life. They represent on an average a somewhat lower grade in the social scale of life, and as a result will yield a less number of recoveries. To this class will naturally fall the principal industrial pursuits of the institution, through which the establishment will be made at least partially self-sustaining.

To the third and last class belong all that vast horde who have been born in ignorance, poverty, wretchedness, and vice, and comprise what is commonly called the "criminal classes." They have not the *ability* or even the *desire* to rise above the low level to which they were born, and from this class we must expect but few recoveries. Custodial treatment, with the moral influences of a well-regulated institution thrown around the unfortunates, will be about all that can be done for this class.

And now what shall we say in regard to prevention. We may state that it is vastly superior to cure. As in other diseases, our first duty is in the line of prevention. The science of prophylaxis, which is rapidly coming to the front in all forms of disease, is no less important in the one under consideration. Here is an evil that surpasses all others combined, and it is preventable. It is a disease whose chief cause is hereditary. Every medical, reasonable, and legal remedy should be used to prevent its spread and propagation. It is claimed by good authority that sixty per cent. of all drunkards inherit a tendency to the disease. That is, they inherit an unstable nervous and physical organization which predisposes to inebriety. I think the above is a low estimate. In my somewhat extended experience in caring for this unfortunate class of humanity, I have seen but few inebriates who did not inherit some mental, moral, or physical obliquity, if careful pains were taken to look up the ancestry. I believe seventy-five per cent. is nearer the figure. Now, if this large per cent. of drunkenness comes from inheritance as a predisposing cause, and if we were sure that this diseased state of society is preventable, and that large numbers can be cured, how essential it is that every responsible and legal effort should be made to suppress the evil. The law of inheritance, as already shown, is a wonderful process. By it, in the one instance, all the virtues and beauties of a perfect parentage are reflected in the child; by the same law, in the other instance, all that is hateful, hideous, and damnable may be handed down from the parent

to the offspring to the perpetual torment of future generations.

To prevent the propagation and spread of this evil, the state should have a guiding hand. The two chief factors to be considered are isolation and the interdiction of marriage with the defective classes. These two problems are far-reaching in their nature, but not beyond the hope of accomplishment in the near future. As soon as the unfortunate is isolated and his surroundings changed, improvement begins. He is out of harm's way, and no longer in a position to hand his diseased organism down to other generations. He is provided with a good home and taught industry ; he is placed in an atmosphere of morality and taught to respect the rights of others. No sane person can question for a moment the right and duty of the state to care for its own defective classes. In regard to the interdiction of marriage, it will be a more difficult question. It might be a hard matter to determine or to draw the line and say who should be debarred ; yet this can be done through the combined action of good men, governed by a just and humane law, which should be national in character. When the national government shall see fit to create a department of health, with a cabinet officer at its head, and with proper branches throughout the different States and territories, these public health problems will all naturally fall under this department, and can be equitably adjusted as the needs of each seem to require. Already the lax and unstable character of the marriage laws of the different States is being investigated by legislators and others who have the best interest of the nation at heart, and before long we hope to see the United States enjoying a marriage code, uniform and national in character, which will forever put a stop to the present lax and almost indiscriminate mixing of the sexes. Under one grand department of health, all the sanitary measures of the country should be placed, including the vexed one of immigration, disinfection, and preventive medicine, epidemics, and defective classes of every description, and by just and humane laws, in time, eradicating for-

ever these mental, moral, and physical imperfections from the land.

The next (possibly the first) great factor to be considered in regard to the prevention of inebriety, is the presence of alcoholic beverages throughout the length and breadth of our country. To suppress or regulate the manufacture and sale of alcohol is now, and has been, taxing many of the brightest minds in Christendom. A business of such vast proportions as the liquor traffic of this country, cannot be regulated except through the wisest, most deliberate, and persistent action of the state. The manufacture and sale of alcohol cannot be stopped, but it *should* and can be limited. A business that has been allowed to grow to such vast proportions under the laws of the state, and thereby fostered in its growth, cannot now be suppressed without compensation, and to purchase the plants by taxation, the people would never submit to. But it seems to me by the very nature of their tolerance, the state, by legislative enactment, has full power to limit the *sale*, and the *demand* would regulate its manufacture. South Carolina, I believe, is now entering upon an experiment in this direction, which will be watched with much interest. Norway, it is said, has proved the success of governmental control. At present in this country, a license sufficiently high to control its sale is by many thought to be the only way out of the difficulty; and even this can only be done where the citizens are educated up to it. Again, when any incorporated industry injures its employes or the public, there is ample means of redress and compensation. With just reason the same rule may be applied in regard to individual or public damage done through the liquor traffic. This is a broad, difficult, but interesting subject, and time has allowed me only to touch upon the cardinal points. If I draw the attention of the profession a little closer to this subject, the object of this somewhat desultory paper will be accomplished.

## INFLUENCE OF INEBRIETY ON PUBLIC HEALTH.\*

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All growth, development, and civilization begins and ends in the individual. Train and develop the citizen, and both the community and nation are raised. Sanitary science is founded on this principle. Any evils which increase the number of diseased and defective persons bring additional obstacles to life and peril to all law and order. Defective and diseased persons always impede the army of advance. The laws of evolution teach the survival of the fittest; also the stern process of elimination, with its crushing out and crowding out. The unfit and defective must go to the rear; they have no right or place on the active field of conflict.

Inebriety is clearly more prominent as a cause of disease and degeneration than any other factors known at present. The various authorities who have tried to tabulate the number of defectives due directly and indirectly to inebriety have varied widely in their estimates, showing that the facts are not yet all grouped and studied. These estimates have placed inebriety as the active cause of from ten to sixty per cent. of all insanity; from thirty to eighty per cent. of all pauperism; from sixty to ninety per cent. of all criminality; and from thirty to seventy per cent. of all idiocy. These are the highest and lowest estimates made by various authorities in this country and Europe, and bring unmistakable evidence of the influence of inebriety not only over public health, but all growth and civilization.

The mortality from this source is equally startling, no

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\* Read before the American Public Health Association, at Chicago, Oct. 11, 1893.

matter what the exact figures may be. Inquiry and observation in every community will bring ample confirmation of the magnitude of inebriety in disease and degeneration. Some of the relations of inebriety to public health will illustrate the extent of its influence.

It is a remarkable fact that public sentiment concerning inebriety and the drink problem is far beyond all medical and scientific interest in this subject.

A political party with the central object of obtaining power to control and thus break up this evil received two hundred and seventy-nine thousand votes last year. A large number of organized societies, composed of thousands of earnest men and women, are working for the same purpose. A host of revival orators are penetrating into every town of the country, holding meetings, and rousing up public sentiment to antagonize the drink evils. The churches are in this field with organized societies, urging moral means and remedies for this disorder. Over eighty journals and magazines are issued regularly from the press, devoted to this one cause. Hundreds of volumes and pamphlets are coming yearly from all parts of the country, and this literature is constantly growing more voluminous and aggressive. A feeling of alarm, with increasing efforts to find some means to check and neutralize this evil, is apparent everywhere.

On the medical and scientific side of this topic a half a dozen volumes have been written, a single journal devoted to this study is issued, and less than a hundred physicians have given any attention or become prominent as students or writers in this field.

In all the great scientific questions of the times public sentiment follows timidly the lead of science. Here public opinion is leading, and is growing more agitated and earnest to find relief, while medical science has so far failed to either direct or point out the lines of march.

If we ascend above the agitation and conflict of theories, we are startled to find this great "drink army" to be the product of distinct causes and physical conditions,—to be

born, bred, grown, and developed in soils and environments that we can realize and control.

The recruiting grounds, the sources and springs from which the inebriate comes, the direction of his march, destination, and end, and the forces accelerating or retarding this movement are clearly apparent to scientific inquiry. We are still more startled to find that this army of inebriates are increased and become more incurable by the blundering theories of public opinion, which seeks by law, pledge, and prayer to halt and drive them back to sobriety and health.

Some idea may be formed of the influence of inebriety on the health of the public, from this fact. In 1891, eight hundred thousand persons were arrested, charged with intoxication and crime following. At least half a million more are known to be using spirits and drugs to excess. This practically represents a vast army of non-producers, who are centers of the most unsanitary conditions of life and living.

Also, an army that is "switched off the main line" of evolutionary growth and development, who are becoming more unfit, more degenerate, forming centers of pauperism, criminality, insanity, and progressive degeneration, not only being eliminated and crowded out, but concentrating a tide of evil that is transmitted to the next generation. A point of view a little higher up reveals this drink army as a great retrograde movement of individuals, whose brain structure is breaking down, beginning at the highest levels and following a uniform line of march, beyond the uncertainties of human will and the feebleness of personal effort.

The possibility of scientific interference, of limitation and prevention, increases with every advance of our knowledge of the causes. Already there is unmistakable evidence that inebriety can be checked and its evils removed, but only by the means of physical laws whose operations are above caprice. The same problem confronts us, as in other great remedial epidemics. Remove the causes and conditions which favor the growth and development of the disease, and place the victim in the best condition for returning health.



Over a million recognized and unrecognized inebriates are scattered over all parts of the country, each one of whom is a center of degeneration, disease, and unhealthy sanitary life and living. Each one will transmit to the next generation a legacy of disease, lessened vigor, and imperfect development, crippling the generation to follow, with defects and limitations that cannot be described.

The delusion of free will to do otherwise is the fatal error which permits this army of inebriates to continue, year after year, not only destroying themselves and families, but to build up veritable centers of physical and mental ruin. Our indifference and criminal neglect of these classes results in literal breeding-places for a perpetuation and increase of all the evils and losses which follow from inebriety.

Sanitary science teaches clearly that no one has a right to destroy himself and peril the health and comfort of others. The inebriate is always a source of danger, and to permit him to become a criminal and pauper, before any legal remedy is applied, is a fatal error. The inebriate is a criminal pauper and madman, whose conduct forfeits all right to personal liberty, and who is practically an outlaw to his own and all other interests. The only remedy is legal control and quarantining in hospitals; not as criminals, but as diseased and helpless, the same as in cases of yellow fever, small-pox, typhus, and other contagious diseases. The inebriate is a border-land maniac, and needs control, isolation, and treatment in special surroundings and in special conditions. Saloons and places for the free sale of spirits are breeding-centers of inebriety in every community. The sanitary perils which follow these places, and the physical and mental health of all its patrons are not only destroyed, but the worst sanitary conditions are encouraged and grow up about these places. The saloon has no claim for recognition as a business. It is simply a parasite thriving on the decay and degeneration of the community. It is only tolerated by the densest ignorance and selfishness of its defenders. Saloons should be literally classed with foul sewers, dangerous waters,

and the worst unsanitary death-dealing agents. Persecution as a moral evil only keeps it alive, but any study from a scientific point of view would be fatal to its perpetuity.

Unregulated marriages is another unrecognized great breeding-center for the growth of inebriety. To-day inebriates, insane, and neurotics of all stages, also criminals, are permitted to propagate and transmit their defects to the next generation. The result is a race of defectives who develop, under any or all circumstances, inebriety and all its associated degenerations. Thus, the inebriate pauper, criminal and insane, is born and bred with absolute certainty. All authorities agree that from sixty to eighty per cent. of all inebriates who come for treatment in asylums are so by inheritance. Every community furnishes illustrations of this fact. This alcoholic stream, with all its criminal paupers and insane, is permitted to flow down through every community, and the inmates of every hospital, and the victims of every police court are living witnesses of this stupid blunder.

Another recruiting-place for inebriety is the station-house and jail, and the legal treatment by fines and imprisonment. Of the eight hundred thousand persons who were arrested for inebriety, less than one-tenth of one per cent. received any benefit. They were all made worse and transformed into armies of inebriates who never desert nor leave the ranks.

Physically the short imprisonment of the inebriate simply removes him from spirits and leaves him less capable of leading a temperate life. Mentally he has lost a certain self-respect and pride of character essential to recovery. The first legal punishment of inebriates is followed by a species of fatality seen in a constant repetition of the same or allied offenses.

This fact is so apparent that these cases are called "repeaters" in the courts, and the number of sentences to the same person often extends to hundreds.

In one thousand cases confined at Blackwell's Island, New York, 935 had been sentenced for the same offense, drunkenness, from one to 28 times.

The first sentence was a regular switch point from which the victim was precipitated to a constantly descending grade, becoming more and more incapacitated for temperate living.

The system of fines is equally ruinous, because it falls most heavily on the families, making it more difficult to support themselves, thereby increasing the perils of pauperism, both to the victim and those who depend on him for support.

It may be said, and the statement is sustained by many facts, that the legal treatment by the lower courts of cases of inebriety is fully as fatal as the saloons themselves where spirits are sold.

The saloon and police court are literally the school and college for the training and graduation of classes of incurable inebriates that peril every sanitary interest in the country.

The fault is not in the courts and their administration of the law, but in the laws themselves, and in that state of public opinion which urges that all inebriates should be treated as willful criminals, and arrested and punished as such.

Thus, year after year, this terrible farce of prevention of inebriety by fines and short imprisonments goes on, and the incurability of the poor victims increases. Crime is increased, pauperism is increased, the most dangerous sanitary conditions are fostered, and the burdens of taxpayers and producers are increased.

The inebriate is always debilitated, and suffers from impaired brain and nerve force. Alcohol has broken up all healthy action of the body.

In prison both the quality and quantity of food are ill adapted to restore or build up the weakened organism.

The hygienic influences of jails and prisons are defective in every respect, and adverse to any healthy growth of body or mind.

The psychological influences also are of the worst possible character. The surroundings and the associates precipitate the victim into conditions of mental despair, from which recovery is difficult, if not impossible.

The only compensation to the inebriate is the removal of

alcohol, and in this deprivation the State most terribly unfits him and makes him more and more helpless for the future.

Thus, while false theories are one of the sources from which inebriety is produced, the blundering effort to remove it by penal punishment is an actual factor in increasing and intensifying the disorder.

The treatment of inebriety from a scientific standpoint has passed the stage of experiment and is supported by a great variety of experience and collateral evidence that cannot be disputed.

Probably the largest class of inebriates in this country are without means of support, and may be termed the indigent and pauper class.

This class, non-supporting and burdensome, should come under legal recognition and be committed to workhouse hospitals, built for this purpose, preferably in the country, upon large farms and amid the most favorable environment.

These hospitals should be training schools in which medical care, occupation, physical and mental training could be applied for years, or until the inmates had so far recovered as to be able to become good citizens.

These places would receive the classes who now are sent to jail, and that other class who are neglected until they have passed into the chronic stage and have become inmates of prisons and insane asylums.

A very large proportion of these several classes could be made self-supporting while under treatment, and in many cases be an actual source of revenue. The hospitals would naturally be divided into two classes. The first would receive the better, or less chronic cases; the second would have the incurables, and those whose recovery was deemed more or less doubtful. In one case the surroundings and discipline would be more adapted for the special inmates than in the other, but the same general restraint would be followed in each.

In both recoveries would follow. A large class would be restored to society and become producers. In the second,

cases would be housed and made to take care of themselves, which would be an immense gain to society in economy and safety.

Private enterprise should be encouraged by legislation to provide smaller hospitals for the better class and those who would be unwilling, or whom it would be undesirable to compel to enter public asylums. Here the commitments should be both forced and voluntary, and the restraint combined with the fullest and latest appliances of science for the end to be accomplished, blending seclusion and good surroundings to build up and make recovery possible.

The first step is to recognize the fact that the inebriate, whether continuous or periodic, has, to a greater or less degree, forfeited his personal liberty, become a public nuisance, and an obstacle to social progress and civilization. Second, that he is suffering from a disease which affects society and every member of the community in which he lives, and from which he cannot recover without aid from other sources, making it absolutely necessary that he should be forced into quarantine on the same principle as the small-pox or yellow fever patient. This is simply carrying out the primitive law of self-preservation. Naturally, the money to accomplish this shall come from the license revenue, on the principle that every business should provide for the accidents and injuries which follow from it. Railroad companies and other corporations are required to pay damages for the accidents which follow their business, and this is conceded to be justice. But to-day the tax on the liquor traffic is used to support courts and jails where the inebriate, by fines and imprisonment, is only made worse or more incurable. Thus, literally, the business of selling spirits is increased by the almost barbaric efforts of courts and jails, and every person so punished is made a permanent patron of that business. Against this all the teachings of science and all practical study utter loud protest.

The practical success of workhouse hospitals for inebriates is demonstrated in every self-supporting jail and state's

prison in the country where the obstacles are greater and the possibilities of accomplishing this end more remote. This can also be seen in asylums for both insane and inebriates, in the various sanatoria and hospitals through the country, where the capacity for self-support and the curability of these cases are established facts.

More than that, these hospitals would relieve society of great burdens, of loss and suffering, the diminution of the number of the inebriates indeed become a practical certainty, the extent of which we can have no conception of at present.

It is impossible, at the present time, to estimate the beneficial results that would follow a systematized plan of thus housing and treating the inebriate, but there are positive indications that its effect would be felt in all circles. One of the great fountain heads of insanity, criminality, and pauperism would be closed, and a new era would dawn in the evolution of science.

The neglect to study inebriety scientifically, and its influence on public health, has opened the door for an army of quacks who rush in with secret remedies to drive out this disorder. It is the same old story of credulity, disappointment, and loss; a repetition of the blind leading the blind and both falling into the ditch. The failure to study inebriety as a problem in sanitary and medical science is a neglect for which the severest penalties must be paid. These armies of inebriates who are uncontrolled and practically unknown, infest our communities, and are the certain promise of misery, sorrow, and loss in the future. The failure to study the conditions and causes which produce inebriety, and remove them, is to increase inebriety, criminality, and pauperism, and all their attendant evils, in the years to come. New asylums and homes will be required to-morrow; new burdens of disease, loss, sorrow, and death will follow in the next generation. Thus, the evils we recognize in part, and the burdens we are called to bear, are growing and being cultivated in our midst, and will bear fruit as surely as the oak comes from the acorn.

The public health of to-day and to-morrow depends very largely on the prevalence of inebriety. If we can control and stamp this out, one of the great fountain-heads of criminality, pauperism, and insanity will be closed. If all the efforts of church, state, moralists, and quacks could be concentrated along the side of exact science, by a study of the facts, conditions, and laws which control the origin and growth of inebriety, the means and remedies for its prevention and cure would be no mystery. To the student of this subject, the possibilities of preventing and stamping out inebriety are only limited by our want of exact knowledge. Looking over into this unknown realm of sanitary science, we see clearly the same reign of physical laws, the same cause and effect, the same circumstances and conditions which develop insanity, pauperism, idiocy, and literally switch the victim from the main track of growth, development, and evolution, to the side lines of degeneration, disease, and dissolution.

The same germ forces are at work here, following lines as fixed and eternal as those which govern the stars.

The influence of inebriety on public health is profound and far-reaching, and within the observation of every one. Its remedy must come from the teachings of accurately-observed facts, and along the line of great natural laws.

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DR. WOOD, in a recent lecture, remarked: "When I was a student in the hospitals we used to have cases of shock in abundance, and we would pour alcohol into them and wonder we got no more effect. It seemed like pouring alcohol into a rat-hole. Alcohol is probably of no value whatever in shock; indeed, I am perfectly sure that a large dose of alcohol in shock puts one nail in the coffin of the patient, and if you want your patients to come out of shock you will be very careful in giving them alcohol. Alcohol stimulates the heart, but it paralyzes rather than stimulates the blood vessels."

## Abstracts and Reviews.

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### INEBRIETY AND ITS TREATMENT.

Dr. Kynett, the able editor of the *Medical and Surgical Reporter* of Philadelphia, makes the following editorial remarks:

“We have recently seen elsewhere a distinction which would help the diagnosis and treatment of inebriety. That distinction draws a broad line between the *drink habit* and the *drink traffic*. Inebriety, as a disease, is of the former, and not of the latter, unless it be of the body politic. The treatment of inebriety, as a disease of the *individual*, is for the medical profession. The treatment of the drink traffic as a disease of the state is for statesmanship. Both are proper subjects for study and discussion and the education of public sentiment, and should be conducted on right lines. Prevention is vastly superior to cure, and our first duty is in the line of prevention, and the presence of alcoholic beverages throughout the length and breadth of our country is one of the most potent, exciting, or direct causes of inebriety, under the law of environment. Is it logical, is it scientific to suggest that a license sufficiently high to control its sale is the only way out of the difficulty? Does experience anywhere suggest just how high license needs to be to control its sale sufficiently to prevent this exciting cause of inebriety? License has been tried all the way from fifty to five thousand dollars, and inebriety and its existing cause have continued without abatement all along the line.

“Does medical science suggest parallel remedies for other diseases? Are our health authorities now treating the threatened invasion of cholera and yellow fever on this plan? Everywhere the most energetic measures within reach are employed to stamp out their first appearance. If it be wise



for statesmanship, in dealing with the liquor traffic as a disease of the body politic, or as the chief exciting cause of disease among its citizens, to continue and protect by law the presence of alcoholic beverages throughout the length and breadth of our country, why not recognize and protect the presence of the exciting causes of other diseases? If 'the right-living public have rights that the evil-doers must respect,' and to prevent the propagation and spread of this evil the state should have a guiding hand, then why should not the state employ its power in stamping out this disease as well as others? Why should the state license and 'regulate' the exciting cause, and then establish and maintain hospitals and asylums for the treatment of the disease? True, inebriety is a disease, but the *manufacture* of and *traffic* in intoxicating beverages that produce it, *is not a disease*. Inebriety is a form of insanity, but liquor-makers and vendors are not insane. The two classes,—the disease-producer and the diseased,—are as widely separated as are the physician and his patients,—the disease healer and the diseased.

"These and other queries will seem to the physician, who, accepting inebriety as a disease, knows the hopelessness of its treatment while its cause persists in vigorous existence, to demand more rational and scientific treatment.

"Let the medical profession and our statesmen and all good citizens study this subject in the light of reason and common sense, and let the several sections of our country in which the various remedies have been tried, be carefully studied as to the persistence of the exciting cause under diverse treatment, and let the lessons be applied, and we may come to that condition of public health which will give relief alike from cholera, yellow fever, diphtheria, *inebriety*, and all destructive diseases.

"Since the government has had such gratifying success in preventing thus far the invasion of cholera and yellow fever by the improved methods which medical science has suggested, why should not Congress at once yield to the reasonable demand which has been urged for almost a quarter of a

century, and appoint a commission to inquire into the causes and cure of inebriety? No thoughtful citizen can fail to see that this is a most important and promising field for such inquiry; and yet, while one branch of Congress has repeatedly passed the measure, the other has as often defeated it. Why? It surely is not because the subject is not of sufficient importance. Neither is it because the public health and morals are not involved; nor because it does not concern the material prosperity of the country. As a mere question of finance, it is of far greater magnitude than the government purchase of silver bullion, or any possible change in the tariff. Do any dissent? Then why not create the commission of inquiry? It is not because the information is not accessible. It is, in every possible relation to the subject. Inebriety is an old disease, and yet but recently recognized as a disease, and even yet there are many who do not so regard it. All sorts of remedies have been tried by scientific and quack statesmanship, and the most conflicting reports of results fill the air. Why not have a commission of able, scientific gentlemen who will search out and set in order the real facts as they relate to causes and cure? The best talent of the medical profession and the best statesmanship the country affords should be represented on such commission, and the best facilities which the government can provide should be given it; and then its labors should be consecrated by a devotion to science, philanthropy, and patriotism superior to all mercenary and party considerations. Let us have *a commission on the causes and the cure of inebriety.*"

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ALL authorities agree that alcohol in large doses is a narcotic poison, killing by suffocation through its paralyzing influence on the respiratory nerve-centers; and in smaller and continuous doses by structural changes, which it exerts on the several organs and tissues of the body. By its action on the blood cells it checks oxidation and limits the power of absorbing oxygen and eliminating carbonic gas.

## ALCOHOLISM AMONG DOCTORS.

The above subject, strange indeed for the Royal Society, was introduced at its last meeting by Dr. J. W. Barrett, who read a paper on the subject. He said that a valued friend of his stated some time ago that alcohol was the causal agent in effecting the physical and moral ruin of about 12 per cent. of the population of this colony. He thought the judgment of his friend biased, but he set to work to find out, as far as he could, what were the facts of the case, and made an investigation with respect to members of the medical profession who had graduated at the Melbourne University, as he could not get what he considered authentic data about other persons. In the University calendar for 1881-2 there were fifty-six bachelors of medicine on the list, forty-three of whom might be classed as above suspicion with regard to the excessive use of alcohol. The remaining thirteen, or 21 per cent., were decidedly injured by the excessive use of alcohol, and the great majority of them were now dead. In the University calendar for 1883-4 there were eighty-six bachelors of medicine on the list, of whom ten, or about 12 per cent., used alcohol in excess, and were much injured thereby in every respect. Some of those ten were included in the thirteen previously mentioned, several of whom had died in the interval. In the University calendar for 1885-6 there were 106 bachelors of medicine on the list, of whom twelve, or about 11 per cent., became distinct alcoholics. In all the cases affected with alcoholism, the habits of intemperance began, he believed, subsequent to their entry into student life, and in most cases they were not pronounced until leaving it. The diminution in the percentage in the more recent years might, or might not, be fallacious. It might be due, possibly, to increasing civilization in the colony, or it might be due, on the other hand, to the shortness of the time allowed for the alcohol to take effect. This is a serious indictment for a professional gentleman who is not at all known in what may be

called teetotal circles. Read before such a society as "The Royal," and by a doctor of medicine, it ought to cause many to consider over again the question of alcoholic stimulants, and be a warning against their use both by doctor and by patient.— *Australian Christian World.*

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### MODERATE DRINKER.

In a recent editorial in the *Temperance Record* occurs the following :

"What is a drunkard? We apply the name to persons who are affected by alcoholic liquor; but we arbitrarily limit the application of the name to persons in whom the effect of the liquor is made visible through a staggering walk, violent conduct, or utter helplessness. We affect to distinguish between a drinker and a drunkard, without being able to say what amount of liquor may be drunk under the respectable name of moderate drinking, and what deserves to be denounced as drunkenness. And every day's observation teaches us that the same quantity of liquor will make one person a debased drunkard, and leave his neighbor in the respectable position of a moderate drinker. But it should be borne in mind that such indications of drunkenness as a staggering walk, violent conduct, or utter helplessness are only accidents, not essentials, of the condition designated by the word 'drunk.' The essence of the condition is to be found in the physiological changes produced by the alcohol in the tissues of the body, in the blood, etc.; and it is of comparatively little importance whether the existence of the condition is made visible through any of those outward signs which, popularly speaking, give us authority to say, 'that man or woman is drunk.' The distinction popularly made between the moderate drinker and the drunkard is not only a purely arbitrary one, but it is dishonestly misleading. The drunkard is universally admitted to have imbibed what has done him harm; but the phrase

'moderate drinker' is claimed as indicating a consumption of intoxicating liquor which has done the drinker good. But physiology supports no such fiction as that. The alcoholic liquor imbibed by the moderate drinker is as harmful to him as that which is imbibed by the man who becomes drunk under its influence; and the degree of harm is not to be measured by the outward indication of drunkenness. Could we see day by day the deteriorating effects of strong drink on those who call themselves moderate drinkers, and compare them with its effects on those who drink and make themselves drunken, we would be constrained to admit that the difference was only a difference of degree."

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#### RESPONSIBILITY OF INEBRIATES.

Dr. Hollister in *North American Practitioner* makes the following very sensible remarks :

"In view of the enormous percentage of crime committed by men, for the time insane from the effects of alcohol, it becomes a very serious medico-legal question as to how far they should be held responsible for criminal acts committed while in a state of intoxication. Experience in the past has certainly demonstrated the fact that men are not deterred from inebriety by reason of the possibility of their committing crime while in this condition. We think this to be a self-evident proposition, to wit: If inebriety is capable of developing such a mental condition that men thus affected have no longer the power of self-control, that while in this state they should not be held responsible for their acts. We do not raise the question as to who is responsible for bringing them to this condition, but being in this state with whom does the responsibility of their action rest? If inebriety be a disease, as is so ably asserted by such eminent men as Carpenter and Kerr and McIlwaith in England, and by Crothers of Connecticut, and by others in this country, then as a disease it is justly a matter of legal as

well as medical concern. If inebriety be responsible for crime, then inebriety should be not only subject to medical treatment but to legal restraint as well. In dealing with the habit, the man who is its victim and slave is necessarily included. If by reason of a diseased condition of his brain, his will-power is lost, and he cannot restrain himself, then the habitual drunkard should be subject to control other than his own. He should be treated medically, and if guilty of habitual drunkenness he should be restrained.

“The question as to how far the law of England affects the habitual drunkard is now being seriously discussed in that country, and we see no reason why it should not be considered in a like serious manner in America. The good of the unfortunate victim requires that he should be wisely and judiciously controlled. The safety of his family is a plea for it; the security of life and property demands it, and from an economic standpoint the criminal records show that far more than for all things else the Commonwealth is taxed for the trial and conviction of those who were criminals only because they were insanely drunk.”

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### EFFECTS OF MORPHINE ON THE FEMALE ORGANS.

Passower (*Centralbl. f. Gynæk*, No. 2, 1893) recently read a paper before the Obstetric Society of St. Petersburg in which he related the course of two cases under his own observation. It confirmed an opinion already supported by the observation of others, that the abuse of morphine eventually leads to atrophy of the female organs. Passower's cases were of the ages of twenty-nine and thirty. One consulted him on account of the resultant amenorrhea. The drug was discontinued, and the catamenia reappeared. The patient took to morphine again, and straightway the menses ceased. Between 1887 and 1889 Passower observed the case. Sixteen pounds weight was lost, and the subcutaneous fat disap-

peared. The vulva atrophied. The measurements of the uterus during that period ran as follows: December, 1887, three and one-tenth inches; May, 1888, two and nine-tenths inches; November, 1888, two and seven-tenths inches; April, 1889, two and three-fifths inches; September, 1889, two and three-tenths inches; and July, 1890, one and nine-tenths inches. The atrophic process no doubt began in the ovaries and spread to the other parts of the genital tract. This is evident from the early appearance of amenorrhea and the later atrophy of the vulva, and also from physiological evidence. Thus the submaxillary glands atrophy in dogs subjected to doses of morphine. How much of the drug can be taken without danger of these ill effects is entirely an individual question.—*British Medical Journal*.

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#### THE TREATMENT OF INEBRIETY.

At the Twelfth Congress for Internal Medicine, recently held at Weisbaden, Smith (Supplement to *Centralbl. f. klin. Medicin*, 1893, No. 25, p. 90) pointed out that the stage at which chronic alcoholism usually comes under the observation of the physician presents two distinct features: (1) A psychic degeneration and depravity, affecting the character, with an extinction of all energy, so that it is impossible for the victim, from his own resources, to rid himself of his condition — inebriety proper; and (2) a series of organic and systemic changes engendered by, but not peculiar to, the alcoholic poison, and the symptoms of which are referable to demonstrable pathologic changes. In view of the psychic condition it is essential that the patient be placed in an institution devoted solely to the treatment of inebriety. Such an establishment should be situated in the country and isolated from all external communication. It should be under the care of a physician in whose family the use of alcohol in any form should be rigidly proscribed. There should be no actual restraint, but the most vigilant supervision should be exercised. The institution should be equipped with appara-

tus for Swedish resistance gymnastics, and opportunities should be afforded for light and useful occupation such as wood-turning. To be efficient and permanent the treatment must be continued for a period of from six to twelve months, and in cases of periodic inebriety and other severe varieties for eighteen months. Of the whole number of cases under treatment at Marbach 30 per cent. were cured; of those that remained under treatment for more than six months the proportion of recoveries was 80 per cent. The essential element of treatment is immediate and rigid abstinence. Should manifestations of delirium and collapse appear camphor should be given. After several months of treatment the character of the patient will have changed for the better. Upon dismissal his future associations should receive thoughtful consideration. Such incurable conditions as alcoholic dementia, alcoholic paranoia, and profound alcoholic mania will necessitate detention in an insane asylum, as well as such cases in which the alcoholism is but a manifestation of moral irresponsibility. Among the curable conditions in which degenerative changes in the central nervous system have taken place may be included alcoholic melancholia, pseudo-paralysis, and pseudo-tabes. Epilepsy and periodic inebriety, however, require treatment of especially long duration.

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CAFFEINIC DELIRIUM: FAISANS.—(*Soc. Med. des Hop. de Paris, May 5, 1893.*) CAFFEINE CONTRA-INDICATED IN ALCOHOLISM: DR. CZARKOWSKI.—(*Vrath, 1893.*)—Observations of the neuropathic patients suffering from pneumonia, who were treated with caffeine, has shown to Dr. Faisans that an intense cerebral excitement with delirium and hallucinations commenced immediately after the first injection of the drug, and continued as long as it was used. The affection lasted twenty-four hours after the injection had been discontinued. The patients developed suicidal tendencies, and the author suggests as a necessary precaution



a close observation of the action of caffeine, especially when it is administered to nervous or alcoholic patients.

Dr. Czarkowski considers alcoholism a counter-indication to the use of caffeine. In one case, a patient afflicted with mitral insufficiency and œdema, manifested mental agitation and exhilaration after having ingested 2 grammes [ $\frac{1}{2}$  dr.] of caffeine citrate in the course of 24 hours. When the effect of the caffeine ceased the patient became sad and did not retain any recollection of his state of agitation.

In another case (of kidney disease) there was noticed after the fifth dose of 20 centigrammes [3 grains] of the same salt, marked excitement and fright followed by loss of consciousness for several hours.

In a third patient (afflicted with typhus) a few doses of caffeine (of 60 centigrammes [9 grains]) produced a furious delirium which the patient did not remember afterwards.

Dr. C. concludes that in an alcoholic patient the use of caffeine requires much caution; that we should always commence with small doses; and that the attendants should be told to discontinue the medicament at the least sign of agitation.

W. N.

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ABNORMAL MAN, ESSAYS ON EDUCATION AND CRIME AND RELATED SUBJECTS, WITH A DIGEST OF LITERATURE AND BIBLIOGRAPHY. By DR. A. McDONALD, Specialist to Bureau of Education. Government Printing Office, Washington, D. C., 1893.

This large work has a special interest to all students of inebriety for the most complete bibliography ever published of papers on alcoholism, drunkenness, inebriety, dipsomania, intemperance, moderate drinking, etc.

Over three thousand titles of books, essays, and lectures on these topics from all languages are grouped.

Here one will find the evidence that has been disputed by "Anglomaniacs," that American contributions to this subject are in advance of all others. An equally voluminous

bibliography of books and essays on morphinism, the opium habit, chloralism, ether, hashish, and cocaine mania are given, about four hundred titles in all, the larger part of which are German and English authorities.

A similar grouping of titles of papers, reports, and books on crime, suicide, pauperism, idiocy, and other abnormalities are presented. The first seven chapters of this work are devoted to a review of the scientific literature of these topics, giving a fair summary of the latest statements and studies of this field. The author has rendered great service to the literature of abnormal man, and won the gratitude of every student of these topics. Such works as these are indispensable for every library, and are permanent additions to the literature, and mark distinct eras in the advance of knowledge in these subjects. No author should be without a copy of this work, which can be obtained through his representative.

**SLEEP AND DREAMS; A SCIENTIFIC POPULAR DISSERTATION.** From the German of DR. FRIEDRICH SCHOLZ, Director of the Bremen Insane Asylum. By H. M. JEWETT. Also, **THE ANALOGY OF INSANITY TO SLEEP AND DREAMS.** By MILO A. JEWETT, M.D., Assistant Superintendent of Danvers (Mass.) Lunatic Hospital. Bound in one volume. Cloth, 148 pp., 75 cents. New York, London, and Toronto: Funk & Wagnalls Company.

This is a book easy to read and not difficult to digest. It is written for popular use. While it makes no large demands upon the knowledge of the laity, it will not be an unwelcome contribution to the science of the mind. Sleep, its Cause and its Phenomena, Dreams, Sleeplessness and its Prevention, and the Analogy of Insanity to Sleep and Dreams, are the subjects treated. It is indeed easy to follow the author, as he tells us in the introduction:

“You need not fear that I shall conduct you along the dizzy heights of speculation or into the abyss of metaphysics. No; we will remain on the well-made road, and the ascent will not be difficult. And we will not confine our-

selves to enjoying the beautiful view, but, like the energetic collector who fills his box with useful fruits, we will bring home some things from our excursion — some good lessons which shall have the merit so highly esteemed nowadays, of being ‘practical,’ good, sensible receipts for household use!”

**MINERAL SPRINGS AND HEALTH RESORTS OF CALIFORNIA. A PRIZE ESSAY.** By WINSLOW ANDERSON, M.D., ETC. San Francisco, Cal. : Bancroft Company, Publishers.

This volume contains a description and chemical analysis of every mineral spring in California, together with an analysis of the waters of all the leading mineral springs of this country and Europe. This is supplemented by sketches and pictures of the famous springs of California, and a chapter on baths and the value of mineral waters in diseases. It will be apparent that this is a most valuable contribution not only to medicine, but to the geography of the Pacific slope. To invalids and medical travelers this brings most valuable information that is almost indispensable. The author has won a debt of gratitude from science which cannot be repaid. And with great pleasure we commend this volume.

**A CHAPTER ON CHOLERA FOR LAY READERS: HISTORY, SYMPTOMS, PREVENTION, AND TREATMENT OF THE DISEASE.** By WALTER VOUGHT, Ph.B., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York; Fellow of the New York Academy of Medicine, etc. Illustrated with Colored Plates and Wood-Engravings. In one small 12mo volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

In a hundred pages or more, are concentrated an excellent summary of the latest facts concerning the nature and treatment of cholera. Such works are of great value in giving the busy physician a clear general idea, and enabling

him to correctly diagnose and treat the sporadic cases that may appear.

A NEW ILLUSTRATED DICTIONARY OF MEDICINE, BIOLOGY, AND COLLATERAL SCIENCES.

Dr. George M. Gould, already well known as the editor of two small Medical Dictionaries, has now about ready an unabridged, exhaustive work of the same class, upon which he and a corps of able assistants have been uninterruptedly engaged for several years.

The pronunciation, etymology, definition, illustration, and logical groupings of each word are given. There has never been such a gathering of new words from the living literature of the day. It is especially rich in tabular matter, a method of presentation that focuses, as it were, a whole subject so as to be understood at a glance.

D. O. Haynes & Co., of Detroit, Mich., have compiled a very useful little work called the *Era Key of the United States Pharmacopœia*.

*Dr. J. B. Mattison*, the well-known Medical Director of the Brooklyn Home for Habitues, has recently issued five valuable monographs, that can be had by writing him at his Home in Brooklyn, N. Y.

The *Homiletic Review*, published by Funk & Wagnalls of New York city, increases in interest and value each month. Very few journals bring more suggestive thought to the scholar of religious truth than this.

We always take great pleasure in calling attention to the *Popular Science Monthly*, by D. Appleton & Co., New York city. It is literally a *monthly bulletin* of the best thought and conclusions by the best authorities and students of science. It has become as essential to have this journal as the daily paper, for every thinking man who would keep up with the times.

## Editorial.

## PSYCHIC INEBRIETY.

This name describes a class of cases where the drink impulse is preceded by elaborate preparations to intensify and conceal it. As illustrations, (*a*) an irregular inebriate will arrange his business weeks in advance, and deny that he has any intentions to drink. Then invite low company to meet him at some distant hotel, and start away on alleged important work, then suddenly disappear and be traced with difficulty. After a few days he will return and explain his absence as due to unforeseen events. He will display great cunning and tact to conceal his paroxysm. This case represents a class of persons who are known in an obscure way to drink at intervals; whose strange, unexpected disappearances are never explained clearly. The methods of concealing these events show excellent judgment and careful study, but the explanation is often weak and childish. His former clear reasoning seems followed by confused and contradictory statements. Often these cases deny stoutly all implication of drinking, and appear greatly distressed at the suspicion of their friends. The drink impulse appears to begin a long time before it breaks out, and the mind, recognizing the impossibility of resistance, is directed to prepare and conceal it. The mental acuteness and exultation manifest before the act passes away in the paroxysm, and weakness and degrees of imbecility follow.

(*c*) Illustrates another class. Persons who are known to be excessive drinkers at unknown intervals will suddenly, at the most unfortunate time, become intoxicated. These attacks are associated with a degree of reasoning and motive that is startling. Recently an important officer of a large manufacturing company was required to appear before a

board of directors and explain certain financial operations. He appeared wildly intoxicated, and made the affairs appear at the very worst; then offered to buy out all frightened stockholders, while in reality he was very poor.

Such cases often appear to become intoxicated for the purpose of creating sympathy and getting aid from the benevolent. In times of revivals these cases will appear and sign pledges, become converted, then pose as needy objects of sympathy. Whenever an opportunity occurs to secure some special advantage they will avail themselves of it and display a degree of dishonesty that is startling.

In a certain case, an inebriate clergyman, who had been deposed for attacks of drinking, went to a strange city under an assumed name. With unusual adroitness he began a temperance revival, lecturing twice a day and visiting personally business men, urging their sympathy and interest. In a few weeks a wave of popular enthusiasm followed, which he made to turn for his personal interest, and finally became a defaulter and disappeared. Later he was placed in an insane asylum, and soon after was discharged as cured. It appeared that in this case a state of morbid exaltation preceded the drink paroxysm, during which he used spirits very sparingly. At this time his mind was in a state of mental erethism, and every effort was concentrated to make money, which was put away and covered up. He was a dangerous swindler without any restraint except to conceal his motives. After a time he would disappear to some place where he could drink to stupor. From this he would recover in a week or more with much prostration, or become delirious and be taken to an insane asylum. These attacks had a uniform beginning, history, and progress. Other cases are noted in which the preliminary period is marked by concealed drinking and unusual changes of character, immoral conduct with extreme dishonesty and selfishness and low cunning. This finally ends in extreme drunkenness from which recovery follows. These attacks resemble epilepsy in many ways and are due to central causes, in which the use of alcohol is only a symptom.

Another form is marked by the sudden overwhelming drink impulse that fills the mind with intense desire for the narcotism of alcohol. This is associated with moral insanity and acute mental activity, that might be called reasoning mania. This period may last some weeks and is followed by profound stupor from spirits and recovery.

The same delirious states follow and are associated with the use of spirits. The drink stupor is followed by a subsidence of all these symptoms, and a long period of rest. This season may be one of prostration and invalidism at first, then recovery, later at irregular or stated intervals a return of a similar paroxysm.

These cases are enigmas, but studied as forms of epilepsy are clear. The strange conduct and stranger motives, and reasoning manias limited and marked by alcoholic causes, are not explainable from any moral theories. The term psychic inebriety or psychic epilepsy with symptoms of inebriety best describes many of these symptoms.

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#### THE TERM DISEASE OF INEBRIETY.

This name is applied to persons who use spirits to excess, and who are intoxicated, and show marks of poisoning in both mind and body. It is correctly used to designate all persons who take spirits continuously or at intervals, marked by mental changes of motive, thought, and conduct. So far no researches have been able to point out paths of moderation in the use of spirits, or to prove that within certain limits its use as a beverage was safe, but beyond this full of danger. On the contrary, all scientific study indicates that the use of alcohol in any quantity is uncertain in its effects, and always more or less dangerous. In many instances these effects of alcohol are unnoticed, and may be concealed for a long time; in others the organism is markedly injured from the beginning of its use. The moderate use of spirits may be followed by more profound degenera-

tion, although covered up, than in cases where it was taken at intervals in great excess. In the former case sudden death from slight causes, acute inflammations changing into chronic conditions, with marked susceptibility to disease, are unmistakable evidence of this fact.

The term inebriety not only describes a class of cases in which the use of spirits is a common and prominent symptom, but implies a certain central brain degeneration, either caused directly by spirits, or brought into activity by it. Inebriety, like the term insanity, has the same general significance. Both indicate abnormal acts and conduct. In one it is associated with the use of spirits; in the other it is attributed to certain more or less distinct causes; and in both there are many forms and classes. The divisions and degrees of insanity, after half a century of study, are still in great doubt. No classification of inebriety can be made at present, because of the uncertain data to start from. To dispute the accuracy of the term inebriety as a disease, because the causes are unknown, and be content to ascribe it to moral states, is a sad confession of ignorance. To say inebriety is a vice at first, meaning by the term vice not only changed character and conduct, but a lower plane of living, in which duty and obligation are unrecognized, is a clear statement of disease.

A line of conduct at variance with all principles of right and wrong, duty to self and others, is the strongest evidence of degeneration and disease. Many forms of insanity are preceded by distinct changes of character and vicious conduct, using the term in its broadest meaning. To call such cases vice at first and later disease would be obviously absurd. Of all other drugs known, alcohol acts most prominently on the higher brain centers. The ethical centers which regulate and form character are the first to suffer from the use of spirits. Degeneration here may be manifest in an alcoholic impulse, which is further intensified by all use of spirits. Hence an early period of moderate use of spirits, associated with or without changed conduct, is a



natural history of the progressive degenerative disease of inebriety. The statement that inebriety is first a vice — meaning by this a state of willful and controllable immoral conduct — then later a disease — meaning a developed progressive degeneration — is assuming a degree of knowledge of causes and conditions of the brain that does not exist. In reality, it is one of those reckless statements that means exactly the opposite of what is intended. The so-called *vice* stage of every case of inebriety will be found, from careful study, to be unmistakable degeneration and disease.

Inebriety is a psychopathic disease, and no theories which assume a degree of health up to a certain border line and disease beyond this are of any value. We have persistently urged the full recognition of inebriety as an organized progressive degeneration. This is the point from which all accurate studies must begin. All half vice and half disease theories means faith cures and hospitals, pledges and specifics, drugs and punishment as means of cure and treatment. The term *inebriety* must be recognized in the same way insanity is, and be used to designate a disease, in which the use of narcotic drugs is a symptom.

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### THE SAME OLD STORY.

John Jones, an educated and successful physician, was injured in a railroad accident, and was a nervous invalid, using spirits continuously, and to excess at intervals. He came from a neurotic family, and had used spirits occasionally from early life. From the time of the accident he became more and more addicted to the use of spirits. Finally he came under my care, suffering from delusions, insomnia, and general prostration. He recovered slowly, and retained ideas of persecution, believing his brother (who brought him to the asylum) wished to destroy his practice and reputation. He was impatient of restraint after the first month, and was intriguing and bitterly slanderous.

After three months' treatment he went away restored, and resumed practice. The next year he relapsed, and became impulsive and reckless in his use of spirits, and was intoxicated all the time. He lost all pride of character, and associated with the lowest people. The Gold Cure Specific attracted his attention, and after three weeks' treatment, he became the most enthusiastic believer in its merits. Later he was in charge of a branch asylum, then he became a lecturer, and wrote papers advocating the value of this secret specific in the most positive manner, posing as an example, and confirming his assertions by statistics that were at least startling. Asylums for inebriates, who did not use Gold Cure Specifics, were severely condemned, and this JOURNAL was regarded as unworthy of notice. In some medical societies he obtained a hearing and made some converts, and was considered authority of great weight. Finally he disappeared, and was found in Ward's Island, N. Y., where he had been sent for drunkenness for thirty days. At the expiration of this sentence he drank to great excess and was found dead in a barn, probably from cerebral hemorrhage.

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#### NATIONAL COMMISSION ON INEBRIETY.

The Philadelphia *Medical and Surgical Reporter*, in a recent editorial, urges the need of a national commission to inquire into the causes and cure of inebriety.

For several years bills to create a board of inquiry into the uses and abuses of alcohol have been presented to Congress and voted down. Sometimes they have passed one house and been defeated in the other. Then they have been buried up in the committees. The spirit interests have bitterly opposed all inquiry into the alcoholic traffic, giving as one reason that such an inquiry would be partisan, and in the hands of fanatics. In England, three different parliamentary committees at different times have made extensive

inquiries into abuses of alcohol, cure of inebriates, and intemperance, and volumes of testimony have been issued that comprise the most authoritative facts known. Before these committees all classes of partisans have appeared, and a free discussion allowed; and all the testimony and conclusions of the committee have been published in the Blue Book, open and accessible to any one. *The Reporter* very justly asks: "Why not have a commission of able scientific gentlemen who will search out and set in order the real facts and the relation of causes and effects?" This information is accessible, and from the absence of it we have all sorts of quack methods, quack laws, and the most conflicting reports and theories.

Inebriety has become a national topic and demands recognition and study before national and governmental measures of cure and relief can be instituted. Congress should appoint a committee to formulate a series of questions that would bring out the fact on the prevalence and causes of inebriety and the relation of alcohol, and means of prevention and relief. This committee should call witnesses from all parts of the country and examine them orally. From such testimony would come authoritative facts that would be a basis for future legislation and accurate public sentiment.

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THE fact is not recognized that much of the present confusion in courts of law concerning medical testimony arises from the ignorance of judges. From this has grown up a system of rulings in which all medical testimony is reduced to arbitrary dogmatic statements that are false in fact and implication. The attempt to determine motives for crime, and the capacity or incapacity of the will to govern, and the varied questions that are included in the term sanity and insanity, arise solely from misconceptions of the brain and mind.

The medical profession when in court have vainly tried to bring the facts of science down to the arbitrary critical

test of judges only to fail and become involved in absurd conclusions.

In the very common cases that involve the question of the drinking of the prisoner before or during the commission of the crime, the dogmatism of the law and the strange interpretation of the judges make the case confusion worse confounded.

The medical witness is in error who attempts to bring the facts to correspond with some rulings of judges, or statements of law that are false as a statement of fact.

He should state only general principles and leave the application to others.

Where only a partial truth is known and that as the clearest fact of the present, the law in its application cannot be limited to any statement that is dogmatic and positive. No physician can truly assert any fact that is not open to correction or change. All statements must be based on this, and it is for the judge to apply the principle. The medical expert is merely a witness stating the probable facts based on his conception of the circumstances.

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THE Tyson Gold "Cure" for drunkards has been exploded in Melbourne by the proceedings instituted against the secretary of the Tyson Sanatorium Company for a breach of the Sale of Poisons Act, in having sold drugs which were poisonous under the act without the "poison" label, as required in such cases, being attached. Among the witnesses examined was Cuthbert R. Beckett, government analyst, who said that he received the bottles under seal, and, on analysis, found that one contained chiefly nux vomica, in which strychnine was the active principle. The medicine contained also another alkaloid — brucine. There was 1.1 per cent. of the mixed poisons in the medicine, and a tablespoonful in one dose would kill an adult. Ultimately, a fine of £3 and costs was inflicted, and since then the ten-guinea fees for the "cure" have declined considerably.

## Clinical Notes and Comments.

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### PSYCHOLOGICAL PHASES OF INEBRIETY.

The physiological phases of inebriety — the flushed face, the sparkling or dulled eye, the thick tongue, the unsteady gait — are always not only very evident, but also sufficiently explicable according to well-known physical laws. The direct effect of alcohol, like that of other strong stimulants, upon the physical parts of the human system is fairly well known from constant study and long experience. The hot, dry skin and flushed face are the result of fires just as real as those that burn on our hearthstones; the thick tongue is from a deadening drug just as evidently as when produced by hellebore.

There are some psychological phases of inebriety, however, which, while fully as interesting, are far more mysterious. Perhaps if our mental workshop were as thoroughly understood as our physical being, some of the mystery might disappear. But the progress we have made in physiology has by no means been equaled by our progress in psychological research. We have never yet been able to take knife or scalpel and separate the imagination from the judgment. The time is doubtless far distant when we can open the skull and take stitches in a defective memory, or bind up a fractured fancy. Hence, perhaps, it is because of our limited knowledge of psychological phenomena, generally, that the mental freaks from alcoholic indulgence are so little understood.

The most striking of all the different phases of drunkenness is the complete change of character in the individual which takes place frequently without any apparent reason, and subject to no known or recognizable rule. One who is an upright or circumspect business man may be changed by

a drink or two of whisky into an example of calculating dishonesty, while another, his counterpart in every respect, may be converted by the same strange fluid into an extravagant spendthrift. A dignified and reserved gentleman will become cheek-by-jowl with every mouthing stranger, while his neighbor, a jovial companionable fellow, with the same liquor, stands upon a dignity that is painful. The tender-hearted become cold and calculating, while the cruel become kind to sentimentality. The same person may, indeed, at one time be jolly and at another time sad; now wild, now gentle, angry or kind, silly or wise, laughing or weeping, and throughout all no rule seems to apply. Then again, the mind and the body in the same individual are affected to very different degrees. With one the nerves, muscles, and senses are active and alert, while the mind is a blank; with another the legs and arms are useless, while the mind is vigorous and clear, as has been noted in distinguished speakers who could sit and talk eloquently for hours when too drunk to stand.

All this is as difficult to explain, and, in fact, as difficult to understand thoroughly, as the strange moral characteristics of the inebriate, — a phase which may be called moral strabismus. One who is ordinarily the soul of honor may become for the time a thief; a person of the most austere virtue may become grossly licentious, and though purest in thought, grow ribald in speech. One who is ordinarily frank to bluntness will — remarkable as it may seem — stoop to the most contemptible and cowardly lies. And this disposition to tell deliberate and wholly unnecessary falsehoods is characteristic of nearly all those who drink to excess, and is one of the inexplicable psychological phases of inebriety.

Another interesting feature of the subject is the different expressions and changeableness among the mental faculties. At times there are certain faculties which seem deadened completely, while others are phenomenally active. The judgment may sleep while the imagination is rampant and the fancy runs riot. The memory is guilty of the queerest

freaks of all. At times the simplest and most recent events are hidden away in its labyrinths and defy all search; then again, the most out-of-the-way facts, hidden for years in the "lumber-room" of old recollections, spring out into the light and are as clear and bright as if born last night. Moreover, the memory, which is clouded on one subject now, may be as clear as a bell on it to-morrow. Even the names of his closest friends—sometimes his own—may be entirely forgotten by an inebriate. Then again, these changes are different at different times, seemingly affected by changes of health, or of diet, or environment. The story is an old one of the two chums reeling home in the early morning and holding a maudlin argument as to whether the heavenly luminary they saw was the sun or the moon, and agreeing to leave the decision to the first passer-by. The seriousness with which the tipsy umpire gave, and they accepted, the excuse that he couldn't say because he was "(hic) a stranger in the city," illustrates one of the interesting phases of inebriety and shows a mental, as one of the foregoing illustrations does a moral, strabismus.

And these freaks of the judgment are duplicated daily in ways that are made familiar by the humorous periodicals. There are, however, few traits more abnormally developed by frequent libations than the musical desires and capabilities, and a fondness for expressing them. If a man really has any fondness for music, or knowledge of the divine art, it will become manifest in proportion to the number of his potations, though, perhaps in geometrical ratio. He sings as long as he can remember words and music, and hums at random when his memory and knowledge desert him. The strange desire for "concord of sweet sounds," which sometimes prove just the opposite, not only attacks those who know something of the art, but also overcomes those who cannot distinguish the "Fisher's Hornpipe" from "Old Hundred." Perhaps this is only another exemplification of the inexplicable mixture of wisdom and folly, of the miracle which makes a double of one's self, which presents two

moons to the vision, two voices to the hearing, and forms two distinct personalities that argue, explain, upbraid, and defend with strangely mingled intelligence and imbecility.

These phenomena are practically inexplicable except upon hypotheses that cannot be proved and whose chief recommendation is that they cannot be disproved.

There is one phase of inebriety, however, of which we know something and can imagine more, because it touches more upon the physical side of man, and this is what may be called the lachrymal phase. The weeping inebriate is common. Whether fear or pity, anger or affection, grief or joy, pulls upon his heart-strings, he weeps and weeps, and then weeps again. An analysis of the tears of drunkards must be, to some extent, an analysis of tears in general, but is none the less interesting on that account. In fact, did space permit, many interesting facts and illustrations could be given of the causes and sources of tears. They are due sometimes to exclusively physical causes; sometimes they are simply the natural outlet of emotional tension. The little briny drops of fluid which flow "from the gateway of the soul" are composed of the same elements, whether they come as pearls from the fountain of divine sympathy, or as glistening protests against the intrusion of some foreign physical substance. A cinder from a locomotive and the broken heart of a mother give rise to the same changes in the vascular terminals of the tear gland and induce the same sort of saline secretion. The lachrymal glands, we are told, lie between the nerve center and the mucous surface of the eyeball, and tears afford a good illustration of the way in which nerve fibers are capable of conveying to a secreting organ existing impulses from either side of a gland lying in their course.

But, attractive as is the physical side of the subject, we have not that now under discussion. The phase which interests us at present is the question of the internal nervous vibrations causing the flow of tears. It is difficult to give a rational or lucid explanation of how a writer of fiction or an



actor on the stage can call forth a flood of tears; how, then, shall we attempt an analysis of the weeping which follows intoxication? Of course the "internal nervous vibration" which induces the weeping of the inebriate is wholly emotional, but so is that of the susceptible reader of sentimental fiction. The susceptible reader, however, has his emotions worked upon in a way that can be partly understood even by those who are not themselves thus affected. But with the inebriate it is different. A fit of weeping will overtake him from no assignable cause. If questioned, he cannot himself give any reason, and usually will not even attempt it. It is a phenomenon due to a condition which cannot be classed as wholly mental, and certainly not as wholly physical. The weeping is unquestionably due to a change of the "vascular terminals" of the tear-secreting gland; but is this change the result of mental vagaries which develop into emotional extravagances? Is it, on the other hand, due simply to the physical action of alcohol on the lachrymal gland? If it were the latter alone, the effect, while not necessarily the same, would be very similar in all cases, just as blood flows from a cut finger in all cases. And yet there is evidence that the cause of the phenomenon is not wholly mental in the fact that the subject may be able to restrain his tears while sober, even when under the stress of the most intense grief.

It is probable that the psychological phases of inebriety are explicable upon the same class of hypotheses that is relied on to explain other questions in the domain of psychology. They are, perhaps, the effects of actions not altogether mental nor altogether physical; and they will probably be for some years to come within the boundaries of that shadowy and little-known land between mind and matter, touching and partaking of both and yet properly considered as neither.

The toper may say in paraphrase of Burns:

O wad some power the giftie gie us  
To drink and not to get "inebrious,"

but so long as he continues to put an enemy into his mouth

to steal away his brains he will continue to cut his fantastic pranks before a laughing or pitying world. The curiosities of intoxication furnish food for thought in many directions, but in none does the field appear to be more fertile for speculation than in the shadowy land mentioned, between the domain of physiology and the realms of psychology.

HARRY W. COCKERILL.

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ALCOHOL in some cases produces intense depression of brain activities. The heart's action is lowered, and a sense of constriction and feebleness comes on. This may become frontal headache. Champagne not unfrequently depresses both nerve and muscle functions, and is avoided. This effect of spirits is not noticed except in a few cases, but it occurs in all, only in a varying degree.

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INEBRIETY has become so extensive a subject that no one can study it exhaustively. Each person has different views of it, according to his tastes and opportunities. One considers it from a speculative point of view, or from a practical, physiological, racial, individual, social, legal, pathological, or other standpoint. Each one feels that his studies are exhaustive or complete until he ascends and enlarges his field of vision ; then he feels the incompleteness of his views.

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It has been discovered that bacteria organisms are essential to give flavor and quality to the taste of tobacco. The leaves of the tobacco plant before being manufactured into cigars undergo certain fermentative changes. These changes are purely chemical, and can be produced by cultures of some kinds of bacteria with others on the leaf of the the plant, and give taste and aroma to the tobacco. Poor tobacco may be inoculated with the bacteria of the Havana tobacco and fermentative changes induced so as to change

the quality and give it a rich flavor. How far these bacteria changes may or may not be poisonous is not clear. These new discoveries suggest possibilities that are startling.

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### THE OLD FAMILIAR STORY.

The daily press tells us of the death of General Gresser, the prefect of the St. Petersburg police, at the hands of the "Vitaline cure." This cure was used by one Gatchowsky, a Russian quack, who affirmed that he procured its composition from a Chinese scientist. He pushed it as a cure for tuberculosis, gout, and debility, and gained for it the confidence of the Russians generally. He claimed that the cure had miraculous qualities, being a veritable fountain of youth. His unbounded confidence and some seeming good results gave it immense popularity. Generals, ministers, state officials mingled with the poor in his rooms. From the rich Gatchowsky took enormous fees, and from the poor weekly installments.

He used his cure subcutaneously in some cases and internally in others, *a la* gold cure. It was in vain that chemists analyzed the remedy and found it composed of borax and glycerine, almost without effect for good or ill; the people knew better than chemists and doctors the value of the cure because they were not swayed by jealousy. But when the deaths of distinguished persons followed the administration of the remedy, the bubble burst and the quack fled. On searching his rooms bank books were found showing heavy bank accounts and a considerable amount of cash, hastily thrown into a box to facilitate flight.

Such experiences as these in one portion of the earth or another are so common as to scarcely merit attention. In America the gold cure is having its run. The deaths which follow its administration, its numerous failures, its brazen effrontery, all are daily paraded before the public gaze. If this were to disappear, some other thing would take its place.

Medical history of this sort has been constantly repeated from the earliest times, and doubtless will continue in its recurring cycles.— *American Lancet.*

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### ALCOHOLIC PREDISPOSITION.

The following are extracts from Dr. Wilson's excellent work on "Drunkenness," to be had in this country from Scribner & Co. of New York city :

"It is well known that every human constitution has an inborn bias toward some form of ill-health. The technical name of this proclivity toward a special disease is the diathesis. Thus we speak of a gouty or of a consumptive diathesis, and it is equally proper to say that predispositions to a certain form of nervous disease constitute the alcoholic diathesis. In other words, there are some brains so constituted as to react to alcohol in an unusual degree. Luckily, there are generally well marked peculiarities which characterize the individuals possessed of brains so predisposed. In the first place, there is frequently an unusual love of alcoholic intoxication, and, indeed, of all forms of excitement. Such people have an unusually strong desire for cerebral stimulation, for some pleasurable outlet for their ill-regulated energy, and an unusual impatience at uneventful routine. Associated with these traits there is frequently a clearly defined capacity for intense feeling and for deep absorption in the interest of the moment. Obviously these characteristics are only of importance to the student of alcoholic etiology when they are coupled with a deficiency of the other qualities which act as a check upon the tendency to alcoholic enjoyment.

"The second sign of alcoholic predisposition is a palate which appreciates the first taste of alcoholic liquor. To the normal child spirituous drinks are distasteful, and, in many men also, a taste even for good wine requires education. There are, on the other hand, children who take to alcohol from the first, perhaps when it is medically prescribed ; and

the appearance of such a phenomenon should always suggest care and watchfulness. The third characteristic of the kind of brain in question is a liability to be affected by small doses of the stimulant. Such a susceptibility is normal in children and women who are of a comparatively delicate, nervous organization; but there are some children in whom this peculiarity is more distinctly marked, and who continue to manifest it even in adult life. The term small dose is always, of course, relative, and it is only when the idiosyncrasy just referred to is unusually pronounced that it is of pathological significance. The next sign of alcoholic diathesis is one of much more importance, though it is frequently overlooked." Dr. Wilson here refers to the habitual or frequent exhibition of that mode of nervous action which is called explosive or fulminating. "This quality predisposes men to spasmodic and impetuous conduct, inappropriate to the circumstances out of which their actions arise. In the matter of drinking it is frequently manifested. Men are often observed to indulge suddenly and impulsively in a bout of drunkenness, without any warning, either to themselves or their friends, without any appreciable occasion for it, without any conscious desire to be intoxicated, and with an unprecedented disregard of consequences. In some unaccountable way the idea is suggested to their mind, and it is followed out without much question — very much in the same blind fashion that a man acts upon an instinct. Such paroxysmal conduct is apt to be periodic in its recurrence, and demonstrates the relationship between such constitutions and those liable to epilepsy and impulsive insanity." Dr. Wilson points out one more indication of a constitutional proclivity to alcoholicism. "We should be," he says, "on our guard when we note an unusual order in the development of the symptoms of intoxication. Leaving out of account the minor discrepancies dependent on the personal equation, all observers are aware that the ordinary development of intoxication is of a compound order, and includes motor, as well as mental, symptoms. The normal conse-

quence of continued indulgence in alcoholic stimulants is that a man should become 'drunk and incapable,' harmless, and helpless. In some men, however, it may be a long time before intoxication goes far enough to make them incapable. They tend rather to be 'drunk and disorderly,' excited, outrageous, and violent; in other cases intoxication may not for some time go deeper than the emotional state, leaving the drunkard quarrelsome, affectionate, or lachrymose; or it may only lead to the trance state, or to continued stupidity and apathy. Such unrelated symptoms — that is to say, a conspicuous impairment of the mental function, conjoined with relative integrity of the motor level — distinctly contraindicate the free use of alcohol. To these signs of predisposition to alcoholism may be added defective inhibition, or, in other words, the disclosure of an extreme difficulty in keeping within physiological limits in the use of stimulants.

"Fortunately, a very large number of men are physically incapable of continued excess. Normally, with alcohol, as with other things, excess creates a strong feeling of repulsion. In some cases the general discomfort attending intoxication is extreme; sometimes the slightest excess produces violent sickness; very often the day following a liberal indulgence brings with it something like loathing for the stimulant. In any case, considerations, either altruistic or of an enlightened egoism, effectually control alcoholic desire in the minds of well-constituted men. But in individuals afflicted with the alcoholic diathesis self-control is apt to be notably defective; so that, to borrow a figure from equitation, not only are the horses wild, but the driver is incapable.

"We now come to the question: In what brains does alcoholic predisposition arise?" Dr. Wilson enumerates seven classes of persons who exhibit an abnormal susceptibility to the destructive effects of alcohol. We shall only allude to two of the cases, namely, that in which inebriety is due to alcoholic inheritance, and that in which it is ascribable to the altered relations of the nervous system incidental to the

reproductive crises. As regards the heredity of drunkenness, the author submits "that this requires some reconsideration, under the fresh light thrown on the subject by Weissmann's theory. We have been in the habit of believing that every new function or mechanism acquired by a human organism produced some definite change in the reproductive elements, whereby, to a certain extent, the acquisition was passed on to the offspring. According to Weissmann, the elementary mechanism of reproduction is all but independent of environment and uninfluenced by use and disuse, by acquired character, or, in short, by any of the changes initiated during the life of the individual. Acquired conditions, therefore, morbid or otherwise, cannot be transmitted to posterity. The peculiar nervous organization favorable to the acquisition of a particular character is all that can be transmitted; the force of circumstances acting on the individual existence does the rest. But, although we may accept this theory, we cannot reject certain observed facts. It is still notoriously true that drunkenness often seems to run in families, as other habits and vices do. It is not the facts, but the ordinary explanation of them, that Weissmann disputes. If his doctrines be correct, drunkenness in the parent can make no difference in the moral character of the offspring through the direct influence of organic inheritance. But indirectly the offspring may be affected through its surroundings." Dr. Wilson is convinced that, when the confusion of criticism has cleared away, and we take possession of what is true in Weissmann's theory of heredity, it will be admitted that we have hitherto egregiously failed to estimate the real importance of the environmental factor in development. "Given a child of an unstable nervous system, which he has inherited from an alcoholic parent, it only requires surroundings which do not effectually provide against temptations to drinking in order to develop the vicious potentiality. The influence of parental personality is much the most important environmental factor in moulding character, not only because bad family arrangements and habits give

sanction and opportunity to the indulgence of vicious propensities in the children, but because the whole bearing and habits of mind of the parent unconsciously furnish just the kind of moral environment calculated to foster in the child the very tendencies requiring to be checked. Thus it comes to pass that environment perpetuates vicious taints which used to be regarded as inherited."

The author finds it necessary to say something about the effect of certain crises in the life history of men and women on the development of drunkenness. There are, of course, several reproductive crises. The first occurs when the function of reproduction is making its appearance; next, there is the period of evolution — that is to say, the period of adolescence, when character is rapidly changing, and permanent habits are being formed; this extends to the age of about twenty-five. Then, in women, there are certain periods at which important organic developments occur, as, for example, the period of pregnancy and the lactational periods. Lastly comes the climacteric, which marks in both sexes the end of adult life, and ushers in the second non-reproductive stage of existence. To call them crises is by no means to exaggerate the importance of these periods. Never are they unimportant, and in some cases the effects on the constitution are momentous, both physiologically and ethically. At any or all of these seasons there frequently occur changes in bodily and mental functions, which, at the time, appear unaccountable.

"The reproductive function is so essential to the race, so deeply organized in the human constitution, so intimately related to all the other functions, that the outstanding epochs in its development and decadence may entirely unhinge the normal balance of the nervous organization, and profoundly alter the relations of the various functions. Without keeping these facts clearly in view, one would necessarily fail to appreciate the full meaning of certain changes in character which arise at the crises specified, particularly in persons of an unstable organization. Now, at these crises, the strain



thrown on the nervous system often impairs the normal inhibition so as to exaggerate alcoholic tendencies and weaken self-control." The author tells us that he knew a woman who became wildly drunken with each pregnancy that he observed, and he saw her pass through several. "The nursing period also is, in this respect, fatal to some women, partly because their weakness seems to call for the use of stimulants, and sometimes because they are advised to act on the delusion that alcohol improves the nourishment of the child. Similarly, recurring outbursts of intemperance in women may often be found to bear a direct relation to periodic functional changes, and it is pronounced a culpable negligence that fails to provide against such a contingency. Not infrequently patients who have exceeded in youth, but have abstained through the greater part of adult life, break down under the climacteric. But of all these crises adolescence is the most important. Some of the closest students of the subject believe that more true dipsomaniacs develop the habit of excessive drinking and acquire a keen craving for it between the ages of eighteen and twenty-five than at any other period."

The author holds, in common with nearly all authorities on the subject, that no one should indulge in alcoholic beverages before the age of twenty-five, and that it is wise to postpone their use as long as possible. He denounces as fallacious the belief that the sudden renunciation of alcoholic stimulants by a victim of alcoholism is dangerous, and that it is apt to bring on grave nervous disorders. "There are but a few cases in which a real danger exists, and that is usually a risk of heart trouble, which may be ignored by all but the physician. The supposition that an occasional indulgence helps to brace the nerves and strengthen self-control in a patient who is recovering from a fit of drinking is a mistake which has often proved disastrous. Great emphasis is likewise laid on the importance of diet in the treatment of drunkenness. Very commonly, alcoholic patients have a poor appetite, especially in the morning; and, if abstinence

from food be persisted in, the lowering of vitality tells seriously against the patient. A great many attacks of grave disorders would be prevented if this distaste for food could be overcome, and that can often be achieved by care. Another point deserving of attention is the need for much sleep. Without it, recuperation is incomplete and self-control precarious; but if the patient sleeps well, the chances in favor of recovery are enormously increased.

“We come lastly to the moral means adapted for the development of self-control. The problem is how to reconstruct the character of the patient, whose mode of living has stripped him of the very qualities which are most potent in the evolution of a moral life. In his case unselfish interest is at its ebb; the power of attention and perseverance is slight; of surplus energy he has none. But, though it be true that alcoholic dissipation impairs the basis of much that is good in a man, it is also true that nearly all men, under care and proper direction, are capable of developing a new line of life when the old has lost its vigor. It has been put on record again and again that, when cerebral disease or accident has destroyed the basis of certain functions, new areas of nervous mechanism have taken upon themselves the functions of the lost parts, and have acquired the requisite proficiency in the performance of them. Some analogous process of re-education is what may be aimed at, and can be frequently attained in the case of the victim of alcoholism. It only remains for us to consider how new motives can best be suggested to his mind. To the question—What is to be the patient's relation to the habit which he is endeavoring to overcome?—the answer is peremptory: He must abstain. Are we wise, however, in bringing the temptation frequently before his mind, if even to try and strengthen him against it? Assuredly not. The drunkard's experience confirms that of the nursery—that to forbid indulgence is to suggest it. The unanimous opinion of physicians of the mind is that, generally speaking, the way to cure a delusion is not to contradict it, and the way to correct an evil

propensity is not to malign it, not laugh at it, but, so far as is practicable, simply ignore it. It may be necessary for the patient's own peace of mind that he should sign a pledge; as a rule, short pledges are to be preferred, and it is of value to the patient that some one else should sign it with him who is not a total abstainer proper, and yet who can keep his drinking within proper limits. On the other hand, the author of this book is convinced that the periodic meetings to denounce drinking, which are solely of the character of a negation, do as much harm as good; and that, above all, it is hurtful to make an important occasion out of every relapse, and thereby to lessen the patient's self-respect, and waste his energy in fruitless remorse.

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RULES FOR THE ADMINISTRATION OF COCAINE.—Dr. Magitot, in the *Repertoire de Pharmacie*, formulates the following rules which should govern the employment of cocaine as an anæsthetic :

(1) The dose of cocaine injected should be appropriate to the extent of the surface desired to render insensitive. It should not exceed in any case one grain to one and three-quarter grains. Each dose should be restricted in large surfaces.

(2) Cocaine should never be employed in cases of heart disease, in chronic affections of the respiratory apparatus, or in nervous subjects; and this exclusion applies also to other anæsthetics.

(3) Cocaine should be injected into the interior and not under the derm of the mucous membrane of the skin. This is the intradermic method of reclus, which should be substituted for the hypodermic method. By this means the introduction of a substance into the vein is avoided, and the risk of accidents minimized.

(4) The injections should always be practised upon the subject in a recumbent position, and he should only be

raised when the operation is to be performed upon the head and mouth, and then only after anæsthesia is complete.

(5) The cocaine should be absolutely pure, since, as pointed out by Laborde, its mixture with other alkalies forms highly poisonous compounds.

(6) Cocaine should be injected in divided doses, with a few minutes' interval. This method of "fractional injection" renders it possible to guard against the production of sudden symptoms of poisoning.

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DYSPNŒA AFTER TEA-DRINKING.—Mr. Jonathan Hutchinson, in the January issue of the *Archives of Surgery*, describes a case of alarming attacks of dyspnœa that were probably due to tea-drinking. The patient was a rather delicate man, of nervous temperament, and there was a suspicion of gouty heredity. The attacks occurred after breakfast, at which he drank tea freely, the meal being brought to him while he was yet in bed. During the attacks he had a corpse-like pallor, and seemed quite unable to take a respiration, on account of a pain like that of angina pectoris caused by the effort. The pain was referred to the epigastrium and lower part of the chest, rather than to the shoulder. Inspiration was accompanied with the greatest pain. The pulse was feeble during the time of the attack, and the patient could speak only in a whisper. The duration of the attacks was about an hour. An injection of morphine terminated the seizure quite promptly on two or more occasions. A careful thoracic examination, made by Dr. Gowers, resulted for the most part negatively. At any rate, no organic affection was discovered that could explain the difficulty. The man was not a user of tobacco, but would imbibe tea freely, and this was sometimes followed by flatulence and a feeling of distension of the stomach. An over-indulgence in tea, especially with little or no food taken at the same time, will in some persons produce a sense of constriction behind the sternum, with some feeling of dyspnœa. In the case of a medical man who par-

took of tea of unaccustomed strength, and without eating any food, a distressing attack of dyspnoea occurred which lasted over thirty minutes. The recurrence of somewhat similar attacks having followed other indiscretions of tea-drinking on subsequent occasions, the mind of that physician became strongly impressed with the agency of strong tea in causing such attacks ; so much so that for a long time he never ventured to drink tea except in his own home, where he knew its strength and quality. Mr. Hutchinson states that the painful attacks of the patient first above referred to bring to mind very distinctly those from which John Hunter suffered, and which he himself so graphically described.—*New York Medical Journal.*

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#### TRAUMATISM IN INEBRIETY.

According to Bevan-Lewis, there is a history of traumatism in more than 18 per cent. of all the cases of alcoholic insanity. We may well question the causative relation of the injury in some of these cases. When the insanity has the special characteristics of the traumatic variety we can at least infer that the injury acted as a predisponent to the mental disorder ; and when in a person, previously temperate, alcoholic excess develops soon after an injury, and the alcoholic excess produces the special symptoms which have been described as characteristic of traumatic cases, we are justified in attributing at least the alcoholism to the traumatism.

In a large number of cases the influence of the traumatism is indirect. It either acts as a predisposing cause, intensifying the influence of various excitants, or the effects follow the injury only after the lapse of weeks, months, or years. Change of character, moral perversion, irritability, or a tendency to alcoholic excess may be the only evidences of this predisposition until existing causes develop an acute attack. In other cases there is a gradual evolution of one symptom after another, until a condition of marked mental

disturbance is developed. Homicidal tendencies, extreme suspicion, fits of maniacal exaltation or fury are frequent. A strange and unaccountable feature in some cases is the development of a craving for alcohol. There is developed also not infrequently a marked intolerance of alcohol. The ingestion of a small quantity sometimes develops homicidal tendencies, when they do not exist at other times.

From a psychological standpoint, the great similarity in the mental disturbances following epilepsy, alcoholism, and traumatism is of great interest. There is the same combination of motor and psychic phenomena in each, and the same impulsive and explosive tendencies. Cranial injuries occurring in so large a number of cases of alcoholism (nearly 20 per cent.) also indicates the close relation which subsists between the two. The prominence of traumatism in the recurrent types also gives evidence of the same unstable type of cell in traumatic cases that is found in epilepsy and alcoholism. — *From Dr. Richardson, in Lancet and Clinic, in Cincinnati.*

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TREATMENT OF CHRONIC INEBRIETY IN SWITZERLAND.— The powers which the communes of several cantons like that of Berne possess and exercise in the case of habitual inebriates, in order to safeguard the general interests of the community, are considerable. If the communal authorities have sufficient grounds to satisfy them that any member of the commune is dissipating his property and means of livelihood in such a manner as to render it probable that he or his family will eventually become chargeable on the communal funds, they can interfere administratively by placing him and his property under guardianship, and, in the case of an habitual drunkard, can put him into an asylum for inebriates.

— *British Medical Journal.*

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ACCORDING to statistics in France, for 1891, every inhabitant consumed over thirty pounds of tobacco yearly.

CHLORIDE of ammonium in dram doses, with four ounces of water, will quickly break up the stupor of intoxication. In some it is followed by intense disgust for spirits.

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DR. WIELOBYSKI recently died at London, one hundred years and eight months old. His centennial was celebrated last January by the Society for the Study and Cure of Inebriety, of which he was a member.

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HERACLITUS, a Grecian philosopher, asserted that an inebriate differed from others in having a moist soul, that was unstable and unreasoning, and could be easily influenced. Such persons died early and were under the influence of bad spirits.

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DR. BAER OF BERLIN says fully fifty per cent. of all criminals who come under his care are inebriates. Three-fourths are crimes against the person, and only one-fourth against property. A large proportion of these alcoholized criminals show marked signs of physical degeneration.

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THE confusion of our present literature concerning inebriety is the simple want of accurate knowledge. We still cling to absurd theories of what inebriety is and try to make our conceptions fit such views, and faintly believe they are accurate. We want independent research beyond all theories.

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DR. WILLIAMS of the American Deaf and Dumb Asylum, at Hartford, Conn., reports that of five hundred and ninety marriages of former pupils there has sprung eight hundred and eleven children, of whom one hundred and four, or thirteen per cent., were congenitally deaf. Nearly one-half of the marriages were without issue.

THE stimulating action which alcohol appears to exert is literally a paralytic one. The belief that alcohol gives new strength and energy after fatigue has set in, is in effect simply the paralysis of this sensation, not the removal of this condition. It is like closing down the safety-valve so that the warning of the overheated boiler may be covered up. In all cases alcohol always destroys the feeling of fatigue.

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### SULFONAL AND HEMATOPORPHYRIN.

The fact is reported by Schæffer (*Therap. Monat.*, February, 1893), that non-ferrous hematin was found in the urine of a patient who had taken six ounces of sulfonal in nine months. But the writer is unable to say whether the cerebral manifestations shown at the time were due to hematoporphyrin or sulfonal. Goldstein (*Deut. Med. Woch.*, October 27, 1893), says, however, "There are a number of observations which show that hematoporphyrin cannot be produced intentionally in human beings and animals by a long use of sulfonal." Various authors have reported the presence of this substance where no sulfonal had been used, while Garrod reports fourteen cases of chorea and arthritis in which it was found, the cause of its presence being unknown. Goldstein inclines to the belief that sulfonal can only develop hematoporphyrin in those rare instances in which there has been a previous tendency to its formation. The author continues to administer sulfonal, as before, and speaks highly of the excellent results he obtains from it. At the same time he believes it to be a good plan when giving a prolonged sulfonal treatment to discontinue its use at times, for intervals of two or three days. He states that by this proceeding all danger of toxic effects from sulfonal would be prevented, since such results could only be had through a possible accumulation. As the effects of sulfonal continue for some days after suspension, this method is easily adopted.



PRIZE ESSAYS ON THE ACTION OF ALCOHOL  
AND ITS VALUE IN DISEASE.

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M.D., of Battle Creek, Mich., has decided to extend the offer of the following prizes for the year 1894:

1st. One hundred dollars for the best essay "*On the Physiological Action of Alcohol, based on Original Research and Experiment.*"

2d. One hundred dollars for the best essay "*On the Non-Alcoholic Treatment of Disease.*"

These essays must be sent to the Secretary of the Committee, Dr. Crothers, Hartford, Conn., on or before April 1, 1894. They should be in type writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at San Francisco, Cal., May 16, 1894, and the successful essays read.

These essays will be the property of the Association and will be published at the discretion of the committee. All essays are to be purely scientific, and without restrictions as to length, and not limited to physicians of this country.

Address all inquiries to T. D. Crothers, M.D., secretary of committee, Hartford, Conn.

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MALT EXTRACT.

Extract of malt is no longer an official preparation—at least it will very soon not be, as it is one of the dismissed articles from the Seventh Decennial Revision of the U. S. Pharmacopœia. Why this is "thusly," when it is an article of so much therapeutic value and so largely used, it is not within our province to say. It looks to us as if the revising committee were either perfectly satisfied with the quality of the present commercial supplies, or that they despaired of describing or defining the product in such a way as to permit of easily-applied tests for limitation and verification of the standard by the ordinary druggist. If the former supposition be the correct one, we surmise that Parke, Davis & Co.'s

Extract of Malt was one of the brands on the market that they found to respond to every test, both as to diastatic strength and palatability.

There are extracts of malt which will scarcely effect the conversion of starch, but these we need scarcely say are worthless in the treatment of carbohydrate indigestion, although they may in palatability be perfectly acceptable. It is almost out of place to speak here of the many uses to which a good extract of malt may be put, but probably the most frequent occasion is in handling cases of ovarian troubles, with the very common indigestion accompanying, that of the starchy foods in particular. Extract of Malt. (P., D. & Co.) will prove itself an efficient agent wherever the natural fluids are showing themselves to be unable to accomplish starch conversion, and its present high standard of activity in this direction may be depended upon even after the official guardianship of the Pharmacopœia is dissolved.

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*Hypophosphites* by *Fellows* has become a standard remedy in all forms of neurotic troubles. All leading specialists prescribe it.

Dr. Abbott of Ravenswood, Chicago, Ill., manufactures the most perfect granules on the market, comprising all the common drugs in use.

*Warner & Co.'s Broma Potash* is one of the simplest and most harmless remedies for the neuralgias and insomnias which follow from the withdrawal of opium or alcohol, and is the most effectual in the prompt relief which follows.

*Reed & Carnrick's* preparations of *Kumysgen* and *Lacto-Soluble* foods are of exceeding value and usefulness in nearly all cases of nutritive diseases and disturbances. Send to this firm in New York for some circulars and samples.

*Horsford's Acid Phosphate* has been found by analysis to contain in each fluid dram  $5\frac{1}{2}$  grains of free phosphoric acid, and 4 grains of phosphate of lime, magnesia, iron, and potash. This combination is unequalled by any on the market.

*N. F. Graham, M.D.*, Washington, D. C., says: "I used Papine in a case of dysmenorrhea, for the relief of which I had previously used all the preparations of opium, and can say that it relieved the pain as promptly as morphine, without leaving any bad after-effects, as was the case when I had previously prescribed other forms of opium."









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HARPER STORAGE

