THE FIRST AND ONLY JOURNAL DEVOTED TO SPIRIT AND DRUG NEUROSIS

Volume 33, Number 1 ESTABLISHED 1876 Subscription $2.00 a Year

THE JOURNAL OF INEBRIETY

OFFICIAL ORGAN OF THE AMERICAN MEDICAL ASSOCIATION FOR THE STUDY OF INEBRIETY AND NARCOTICS

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SPRING 1911

RICHARD G. BADGER, PUBLISHER, THE GORHAM PRESS, BOSTON

Entered as second-class mail matter at the post office at Boston, Mass.

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A CLINICAL NOTE ON ALCOHOLIC AUTOMATISM

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THE occurrence of prolonged phases of dream-consciousness is, as is well known, a not infrequent phenomenon of pathological drunkenness, and since these phases are often marked by conduct of a seriously criminal character, their study is, from a medico-legal point of view, of much practical importance. For this reason I have thought it worth while to put together a few clinical observations which tend to illustrate fairly well some of the main facts in connection with these dream-states.

I have confined myself to cases where the actions performed were not very grave socially, so as to exclude as far as possible any motive for untruthfulness on the part of the agent, on whose evidence we have necessarily to rely a good deal. It is, I think, legitimate to suppose that the nature of the dream-state in such cases is not essentially different from that which exists in automatism with, for instance, homicidal impulses; and that therefore, from the clinical condition in the simple cases, we may infer the possibility of similar conditions in the socially graver cases.

A further qualification, which restricted one's choice very much more seriously, was that the individuals examined should possess a certain degree of intelligence and education, so as to be able to assist in the elucidation of their symptom. It is needless to insist on the meaning and effect of this limitation as it regards the average chronic drunkard, and it is precisely in that class, mentally enfeebled and prone to suggestion and to objectless lying, that states of dream-consciousness are very apt to develop.

In the result, therefore, out of a very large clinical material the number of available observations is meagre.

It should be added that efforts have been made, as far as possible, in the selected cases to control the statements of the patients by outside evidence.

The object of the observations—the exact determination of certain characters of the dream-state—will sufficiently explain the minute detail of the notes on various points otherwise of trivial moment.

With the four alcoholic cases I have placed, for the sake of comparison, another observation of considerable intrinsic interest, where entirely similar symptoms developed under some other obscure influence.

Obs. I.—H. C.—, aged 30, draper, third of a family of six children, the rest living and healthy; father a chronic alcoholic, died of dropsy. Nothing else special in family history. Patient has suffered from attacks of vertigo as long as he can remember; at the age of eighteen he had his first attack of *grand mal*, and has had similar fits at irregular intervals since; attacks are of classic type with aura of obscured vision, tongue-biting, and occasional enuresis.

For some years past patient has taken alcohol intermittently, drinking from convivial motives. A very small quantity makes him "lose his head," and he then gets into a state of dream-consciousness, in which he performs a series of elaborate acts of which subsequently he retains only a fragmentary memory. This peculiarity was present from the outset of his drinking habits, but has become more pronounced of late. Alcohol frequently brings on a fit, but even when no fit occurs the dream-phase is apt to develop. On the other hand, epileptic attacks occurring in the absence of alcohol are not followed by any such phase. The patient has had two or three attacks of hallucinatory delirium with dropsy after severe drinking bouts.

Received into prison on Tuesday evening on a charge of drunkenness and disorderly conduct, patient was emotional and rather tremulous, but answered questions readily and coherently, was able to sign his name, count out the contents of his pockets, and perform other actions of a fairly elaborate character. He said he had been drinking heavily since Sunday morning, that he was arrested on Monday for repeatedly going in a state of intoxication to the shop where

he was employed, that he remembered going there once, but only knew of the other times from hearing the evidence at the police court; that he had two fits last night in the cells (tongue was slightly bitten). He had a fresh scratch about four inches long on the right side of the neck, the origin of which he could only explain by saying that he heard he did it himself, he could not say how or why.

Though a little restless during the night, he was a good deal clearer next morning; and in another twenty-four hours had quite come back to his normal level, and was able to give an intelligent account of himself. He repeated the statements he made on reception regarding the circumstances of his arrest, and his version of them was in accord with the police evidence, but he had no recollection whatever of his interview with me, knew nothing of the scratch on his neck or of the explanation of it that he originally gave, was utterly unable to account for the episode, but insisted strongly that he could not have had any suicidal idea. His memory of the other incidents during the drinking bout was very imperfect, and this amnesia was even, as had happened in previous attacks, retrospective, *e. g.*, he changed his lodgings before he got drunk on Sunday, but has now no idea of his new quarters.

Patient is above the average in intelligence. He presents no signs of chronic alcoholism, and no stigmata of hysteria, of indecent exposure.

A little tremulous and depressed on reception, but mentally quite clear. States that he has no recollection whatever of the alleged offence, that his mind is a blank between about 11 p. m., when he remembers coming out of the Holborn Music-hall, and 3 a. m., when he found himself being questioned in the police station. He accepts, however, the accuracy of the police evidence which he heard at his trial, and which he correctly repeats. It appears that about 2 a. m. he was seen by some passers-by making water ostentatiously in the presence of some girls at the corner of Fleet Lane, and was therefore given into custody.

There is nothing of note in the patient's family history. Health has always been fairly good, except for syphilis contracted about ten years ago. He was temperate up to seven

years ago, when, owing to special business conditions, he was induced to drink rather heavily, especially brandy. Within the last eight months he has had two attacks of delirium tremens.

He had been intemperate for fully four years before he developed any tendency to phases of automatism; of late such phases have been increasingly frequent after even slight excess. Amnesia is absolute during the attacks, which have so far never lasted more than about twenty-tour hours. During the automatic phases he has frequently made business engagements, etc., of which he has subsequently no knowledge; this has been a source of considerable trouble, as his manner in this condition has been so perfectly rational and coherent as to excite no suspicion of a morbid state. He has occasionally wandered about in these unconscious phases, and has even made short train journeys, but he has never before done anything to bring him into collision with the law.

The patient presents slight nervous signs of chronic intoxication—morning tremor of hands and tongue, hyperæsthesia of the calf-muscles—but no symptoms referable to the digestive system. Vision is defective, owing to extensive atrophic changes following syphilitic chorioretinitis. There are no stigmata of hysteria.

Obs. 3.—J. S. L.—, aged 45, journalist. Convicted of larceny of a bicycle.

On reception a little tremulous, but mentally clear. It appeared from the police evidence that a constable saw the prisoner shortly before midnight near Waterloo Bridge rolling a bicycle along in an aimless way; he stopped him, and asked him what he was doing, and prisoner replied that he was minding the bicycle for "some one," whom he was unable to describe. He was taken to the station, and shortly after the messenger boy of a newspaper office where prisoner had occasional work identified the bicycle as his (the boy's) property. Prisoner gives a correct version of the above evidence, which he heard in court, but denies absolutely that he has any memory of the theft of the bicycle. He recollects drinking in a public-house in Fleet street a little past 4 p. m., but from that time till he found himself in the police station his mind is a blank, except that he has

a hazy memory of rolling a bicycle about in the street and talking to the constable. He recalls, though imperfectly, the scene in the station when the boy identified the bicycle; he remembers particularly that he said to the boy, "Did I not ask for Mr. X?" (manager of the office and an acquaintance of his), and that the boy said, "Yes, and I told you he was in Russia." But while he remembers so questioning the boy he has no memory of the actual incidents to which the question referred. Though the prisoner, in consequence of his drinking habits, has got rather low in the world, his reputation for honesty has been hitherto good, and there appears to be no sufficient reason to doubt the truth of his statements.

There is no neuropathic taint in the family history. Prisoner always had fairly good health. At the age of nineteen, however, he had a severe nervous shock in a railway disaster, he was bruised, and his head was cut, but he did not lose consciousness. From the age of twenty-four he has been intermittently intemperate, taking spirits chiefly. He has had no hallucinatory or delirious symptoms, and no symptoms referable to the digestive organs. On the other hand, almost from the outset, his drinking bouts have been marked by a tendency to automatism. In the dream-phases he has done various absurd acts, *e. g.*, on one occasion tried to drive a cab in a crowded thoroughfare, on another walked off with a cannon ball from the Hoffman House in New York. As a rule there has been total amnesia of these actions, but in a few instances he has had a fragmentary memory of one or two episodes in the obscured period. Prisoner is physically well developed. Motor power and sensation appear normal; patellar reflexes are increased; superficial reflexes normal; pupils are rather small and do not contract to light or on convergence; no sympathetic reaction; visual acuity — colour vision normal; fields of vision of normal extent, fundus oculi normal; sphincter functions normal, except for slight slowness in micturition, which, prisoner states, has always troubled him. Digestive and other functions normal. Memory and judgment a little defective. Emotional tone optimistic.

Obs. 4.—J. L.—, aged 30, gardener. Convicted of indecent exposure.

Beyond slight tremulousness presented nothing abnormal on reception. Stated that on the previous day he left work about 5.30 p. m., and meeting some acquaintances went with them to a public-house where he stayed "a long time," at least over an hour and a half; he does not recollect leaving the public-house, nor does he recall anything of his movements until he was accosted by a policeman accompanied by a lady who said, "That's your man, officer." He was taken to the station, it being then a few minutes past 9 p. m., and the lady stated that he met her in the road and deliberately exposed his penis, making some indistinct remark. The place where this occurred was on a direct line from the public-house to prisoner's home, and about a quarter of an hour's walk from the former. Prisoner voluntarily adds that he has twice before been charged with the same offense under almost identical conditions. In these cases also he alleges drunkenness and amnesia. His version of the police evidence in the present instance is correct.

Prisoner is the fourth of eight children of healthy parents. There is nothing of note in the family history, or in prisoner's personal antecedents, except an obscure enteric disorder in infancy and a head injury (without loss of consciousness) in boyhood. He has worked all his life as a gardener, and has been in steady employment. A teetotaler to twenty-

From the outset of his drinking habits he has been peculiarly susceptible to alcohol, five or six glasses of beer bringing him to a condition of ambulatory automatism. In this state he is, he has been told, fairly coherent, though a good deal more talkative than usual. It has occurred to him in this phase to make gardening engagements which he has afterwards been quite unable to recall. Though his amnesia is usually complete, a striking impression, *e. g.*, the vigorous exhortation of a policeman, will often remain in his memory.

As regards his sexual history, he masturbated moderately as a boy, practised normal coitus from the age of twenty-one, and has been married for the last two years. Alcohol does not, he says, increase desire, nor does it lead to any sexual preoccupation in speech. He denies all exhibitionist tendencies when sober, and his erotic dreams are associated with images of coitus, never of exhibition. He is emotionally

unstable, but of very fair intelligence. He presents no sign of alcoholism, and no stigmata of hysteria.

Obs. 5.—J. T.—, aged 54, gardener. Convicted of malicious damage to a fire alarm.

From the police evidence it appeared that the firemen, going in response to a call to Paddington alarm station, found prisoner seated beside the alarm in a dazed condition, unable or unwilling to give any explanation of his conduct; they supposed that he was drunk.

On reception into prison he was a little confused as to time and place, spoke with some difficulty of articulation, and showed a marked tendency to use periphrasis: said he "did not know" why he broke the fire-alarm, that he "was afraid of something;" he answered questions with some slowness, but frankly and relevantly. Gait, writing, etc., were normal. There were no signs of chronic alcoholism.

After a night's rest he was much clearer, but still appeared a little aphasic, *e. g.*, had some difficulty in naming familiar plants in the garden. A few days later seemed practically normal, except that he complained still of some difficulty in articulation and of some fatigue in continued thought.

There was nothing of note in the family history; patient himself had enjoyed excellent health up to the present. A skilled gardener, he has always been in good work. He drinks very moderately, taking about a pint of beer a day, and hardly ever touching spirits. He has got drunk a couple of times, his intoxication being of the ordinary type.

He states that he remembers going in the morning to a nursery-man to arrange about work, returning to Waterloo, and going on in the afternoon to Covent Garden. From that time he has no clear memory till he found himself in the police van on his way to prison, and asked where he was and how he came to be in custody. In the interval of obscured consciousness, which lasted about twenty-six hours, he can just recall the act of breaking the fire alarm; he does not know the time or place of this occurrence, nor can he even say whether it was day or night; he only remembers that as he broke the glass he had a feeling that "something was going to happen," that he would be safe if someone came, and he

recollects seeing a man in a brass helmet approach. Before and after that his memory is a blank.

Careful examination of the nervous system fails to show any defect, except that memory for recent impressions is a trifle weak, and that attention is readily fatigued. Motor power is normal; dynamometer gives pressure of 87k. with right, 79k. with left hand, a dynamometric index (left-hand x 100) of 91, which is above the average for men of his age and education; writing is clear and firm. Sensation, general and special, normal; reflexes normal.

Remarks.—The points which I desire specially to discuss in the light of these cases are the following:—(*a*) Condition which predispose to the occurrence of automatism in alcoholic intoxication; (*b*) character of the defect of memory in the automatic phase; (*c*) conditions which influence conduct during the phase.

(*a*) *Conditions which predispose to automatism in alcoholic intoxicants.* —An element of cerebral automatism belongs of course to the common phenomena of intoxication by alcohol. When, however, the symptom develops beyond the rudimentary stage to the prolonged dream-state which we have here in view, the cause is generally to be sought in some nervous abnormality in the intoxicated subject. Crothers lays it down in one of his earliest papers on the question that "this trance condition will always be found associated with a peculiar neurotic state, either induced by alcohol, or existing before alcohol was used." The soundness of this opinion has been supported by all subsequent experience. When distinct automatism develops under the influence of alcohol, it may almost be taken for certain that the individual is a chronic drunkard, or that he presents some definite evidence of instability of brain. One of the cases in this paper (Obs. 4) is one of he nearest approaches to an exception that I have yet come across; and in that case, despite the absence of the more usual predisposing conditions—for the head injury in childhood seems to have been trivial—yet the patient's emotionalism, the sentimental origin of his inebriety, and his sexual conduct, all indicate some degree of mental abnormality.

As a rule, however, the neuropathic condition is a good deal more definite. Its different causes, in the order of their numerical importance, would rank in my experience as follows:—Chronicity of intoxication; epilepsy or epileptic heredity, head injury, insane or alcoholic hereditary degeneracy; certain acute infectious diseases, notably typhoid and influenza; syphilis. Very commonly more than one of these causes are operative in a given case, but most of them, if not all, seem to be capable singly of creating the special predisposition to pathological drunkenness. An exception ought perhaps to be made for syphilis; personally, at least, I have not yet seen any case of alcoholic automatism in which it could be regarded as the sole neuropathic cause, but instances are not infrequent in which it appears to be an important co-operating influence, determining, for example, in habitual drinkers a rather earlier development of automatism. It may possibly have had some such influence on Obs. 2, and also in Obs. 3, where, though there was no history of syphilis, the pupillary symptoms were suspicious.

Epilepsy is of course, in a medico-legal aspect, a peculiarly important predisposer to automatism. Its influence is well illustrated in Obs. 1, in connection with which it may be specially noted that the dream-consciousness was related to the intoxication, and not to the epileptic fits. Epilepsy of traumatic origin seems peculiarly to predispose to automatism under alcohol.

(*b*) *Character of memory defect in automatic phase.*—Special importance attaches to the study of this question, since it is in the disorder of memory that the main exidence of the automatic condition is to be found. The inquiry is, however, attended with a good deal of difficulty, more even than is presented by the study of the automatism of epilepsy.

The most important cause of this difficulty is that in alcoholic cases the automatic phase is, as a rule, gradual and and not abrupt in its onset and termination and subject to modifications from additional doses of the intoxicant. To avoid fallacy, accordingly, one must be able to exclude this intercurrent influence, and one must leave out of account the transitional conditions at the beginning and end of the dream-state.

Considered with these limitations, alcoholic automatism has, as has very often been noted, a close resemblance, at least in a good many cases, with the automatism of epilepsy.

In the latter disease it is of course the rule that there is total amnesia for the period of the automatic state. It is however, a rule that admits of a good many exceptions; a partial retention of memory in the automatic phase is by no means rare, and illustrative cases are fairly numerous in medical literature, especially of late years. In alcoholic automatism also, in the majority of cases there is total amnesia; but the proportion of instances with partial memory appears to be higher than in epilepsy. For example, in a series of twenty-four personal observations of automatic suicidal attempts by female inebriates, specially noted from this point of view, there were as many as four cases of incomplete as against twenty of total amnesia.

The cases of complete absence of memory do not call for special remark here. The problems they present are practically the same as in the corresponding class of epileptics. Our interest centers in the more difficult cases where there is a more or less vague and partial memory of the incidents in the dream-phase.

The first and most important point to note is the sort of impressions that are retained in this condition. Any impression may be so retained, but I think it may be stated, at least provisionally, as a general rule that in any case where there is partial memory, a very vivid impression with intense emotional agitation will certainly persist.

The limitation of the cases recorded in the present paper to instances of socially indifferent conduct makes them irrelevant on this point; but the rule has been constant in my experience of suicidal and homicidal impulse. The suspicion of suicidal intent in Obs. 1 is too remote to be considered in this connection. The normal condition of things in the graver class of cases is shown in the non-alcoholic Obs. 5, where the only traces left in the patient's memory refer precisely to the emotional distress and the impulsive act arising out of it. One should certainly view with extreme suspicion an allegation of amnesia referring to serious criminal acts when trivial incidents deep in the supposed auto-

matic phase are remembered.

Another point of considerable importance is that impressions may be recalled very soon after the automatic phase, or may be revivable in consciousness towards the end of the phase, but may subsequently lapse totally from memory. This has been noted also in cases of epileptic automatism (Samt) (2), and has then been sometimes attributed to the occurrence of a second fit. In alcoholic cases, however, an analogous explanation is not admissible; the phenomenon may be observed in circumstances where further intoxication can be absolutely excluded. Obs. 1 and 3 in this paper are cases in point: in the first the patient when seen on reception offers an explanation of the scratch on his neck, and subsequently knows nothing either of the scratch or of own earlier account of its origin. In Obs. 3 the patient similarly shows in his cross-examination of the messenger boy a knowledge of facts occurring in the automatic phase which he afterwards forgets altogether, though remembering the questions he put regarding these facts. The point has an obviously important bearing on medico-legal practice; not infrequently it happens that in cases of alcoholic homicide the murderer immediately after the crime makes some remark which apparently implies premeditation and conscious motive, but subsequently alleges total amnesia of his act. In a case, for instance, mentioned in Maschka's *Handbuch*, the murderer, after killing his victim, said to his companions, "Don't tell any one about this"; later on he professed to have no memory whatever of the offence. Judging by analogy from the cases reported above, one must admit the possibility of such amnesia being quite genuine, despite the earlier evidence of memory.

Another question of some moment is whether the state of memory is similar in different attacks in the same individual. In epilepsy it appears to be usually so, but exceptions are met with; in one observation, for example, an epileptic who on two occasions had committed acts of arson in the automatic state was able to recall the circumstances in one instance, but was totally amnesic with regard to the other (J). In alcoholic automatism variations in this respect appear to be fairly frequent, even apart from ascertainable differences

in the nature or amount of the intoxicant consumed on the different occasions. Cases in which chronicity of poisoning is the chief or sole predisposition to the occurence of automatism are particularly liable to show this inconsistency; and in such cases the general tendency is for phases with total amnesia to occur earlier, phases with partial memory to occur later in the subject's alcoholic career. One sees this not infrequently, for instance, in the repeated suicidal attempts of chronic alcoholics.

(*c*) *Conditions which influence conduct during the automatic phase.*—Not less than in regard to the condition of memory, opinion has changed a good deal respecting the possibilities of conduct in the cerebral automatism of epilepsy. Clinical observation has shown often enough that the epeleptic dream-state, beside acts which are habitual, imperfect, and inappropriate, admits also of conduct which is unfamiliar, elaborately co-ordinated, and hardly to be distinguished in appearance from fully purposive action.

In this automatism related to alcoholic intoxication seemingly deliberate conduct of this sort is even more frequent. It is therefore a matter of interest to determine the conditions which govern the nature and direction of such acts. Unfortunately in any given case only a very small part of the many influences concerned can, as a rule, be traced out, and even these cannot usually be established with more than an approach to accuracy. Through the obscurity, however, a few broad facts may be discerned with tolerable clearness, and they are of some practical value as guides in estimating the probabilities of conduct in such cases.

The conditions which govern impulse and thought in dream-states are thus formulated by Maudsley:—"(*a*) Impressions made on sense from without the body; (*b*) internal impressions from the viscera and other organs of the body; (*c*) stimuli arising from the state of the blood, both as regards supply and composition; (*d*) the exhausted effects of recent experiences, whereby lately vibrating parts are prone to be stirred easily into renewed vibration; and (*e*) the proclivities of the mental organization, as determined by hereditary causes and the special experiences of life."

Considering these conditions in their bearing on the impulses in alcoholic automatism, one may distinguish two categories of cases, *viz.*, those in which the organic stimuli that make up the cœnæsthesis are normal, and those in which they are disordered.

In the former category of cases, where the emotional tone is optimistic or indifferent, the character of conduct presents a generally acquisitive tendency, and is more likely to be influenced by intercurrent impressions or by the residues of quite recent experiences. The cases recorded here are instances of this kind; in all of them there is a predominance of the cerebral symptoms of alcoholism, with a relative immunity from its peripheral disorders; and correspondingly their actions are expansive or nuetral. The pertinacious efforts to get into the employer's shop in Obs. 1, the *sane-gene* in the satisfaction of the need to urinate in Obs. 2, the repeated thefts and the efforts to perform difficult and unfamiliar feats in Obs. 3, all indicate a relative optimism of mood. And in Obs. 4, whatever view be taken of its more complex problems, the emotional state is similar.

In the second category of cases, on the other hand, where, either through original temperament or through the organic disorders of chronic poisoning, the affective tone has got a pathological set to pessimism, the impulses tend to be destructive, and the action of extrinsic impressions is small and limited to influencing the direction in which the impluse fulfills itself .To this category, of course, the greater number of cases of alcoholic automatism belong; pessimism is the more general rule in the chronic intoxications, and it is also the more frequent mood in the degenerate, in whom the native deformity of organization seems to be expressed no less in disorder of the processes that underlie cœnæsthesis than in the discord of the more complex intellectual combinations. This aspect of alcoholism I have discussed at length in other papers previously published in this Journal and I need not dwell on it further now except to reiterate the practical point that the fixity of the morbid condition in which the impluse has its origin is likely to give to action in the automatic phase a continuity with that in the waking-consciousness which is easily construed into evidence of

premeditation. In the alcoholic, threats before murder by no means exclude automatism.

Diagnosis.—To conclude these remarks one may summarize as follows the points of most importance in arriving at an opinion in a case of alleged alcoholic automatism:

(1) Existence of one or more of the neuropathic predispositions to pathological drunkenness.

(2) Previous occurrences of automatism under the influence of alcohol.

(3) Amnesia during the automatic phase, or, if amnesia be incomplete, then retention of the emotionally keenest impressions more than of the indifferent, other things being equal.

(4) Demeanour of the agent.

(5) Character of the act.

Of these points, the last two may have, of course, a very great positive value, enough in fact at once to fix the diagnosis. The existence of total amnesia, is conclusive proof of automatism, but, as we have seen, the difficult cases are just those, by no means rare, where the absence of memory is incomplete. The differential mode of memory is, I believe, a valuable test in such cases but the instances to which itcan be confidently applied are few. The first two points, on the other hand, are comparatively easy of determination, have a considerable positive value and a very high negative value, and of a history of similar reaction to alcohol on previous occasions, should go far to decide against the theory of automatism in a criminal case.

THE ETIOLOGY OF ALCOHOLIC INEBRIETY, AND ITS TREATMENT FROM A MEDICAL POINT OF VIEW.

BY L. D. MASON, M. D., BROOKLYN, N. Y.

A RECENT German writer places alcoholism at the head of the list of folk-diseases (Volkskrankheiten)—alcoholism, tuberculosis, syphilis—being often also the direct or indirect cause of the two latter. In fact, all these may be said to bear a causative relation to each other in some degree, alcoholism being the most prominent factor. The importance of alcoholism as a direct underlying cause of individual, social and national degeneracy cannot be overestimated. It has no limitations. "No pent-up Utica contracts its powers, but the whole boundless continent" and humanity at large is its field of operation. Eliminate alcoholism and its baneful influence from the physical, mental and moral life of individuals, from social conditions and the state, and a social and political millenium would dawn. No subject is more important than the consideration of the underlying causes of alcoholic inebriety and the means and methods by which we may eliminate these causes—not so much the evils of alcohol, which form the cut and dried subject of the temperance lecture or writer for popular journals, dealing principally with the results of these causes, but rather what these causes are, why they exist at all, and by what process they can be removed.

In testing the disease theory of inebriety, we apply the same methods as we do in determining and classifying other diseases, and we assert that these tests applied to inebriety will place it at once in the nosological list.

Why do men drink alcoholic liquors or use narcotics? What is the origin of the drink craze or inebriety? Is the condition symptomatic of a latent condition or conditions? If so, what is the underlying cause? For there must be a cause. Is it normal, mental or physical—for inebriety has been attributed to all of these—and which is right? Shall we send for the family lawyer, or pastor, or doctor? Shall law, or religion, or medicine deal with the case?

Shall we reform the inebriate in the prison or the mission, or cure him in the asylum? Is the inebriate responsible or irresponsible? Are we dealing with a vice or a disease, or both? Is it a cause for legal and moral discipline and punitive measures, or for medical treatment? These questions have been asked and theories practised from time immemorial. All cannot be right; all cannot be wrong.

This assembly of medical experts and the thirty-odd papers presented at this meeting, each on some phase of the subject of inebriety, answer my question. It would have been both futile and foolish to attempt to secure your attention and interest under any other theory than that inebriety is a disease, and demands the same care that pertains to other diseases of a similar character, by the individual practitioner and by the State.

What has brought about this change? The keynote was started by Dr. Benjamin Rush, of your own city, in the past century; then by Dr. Turner, of Wilton, Conn., and then through a host of prominent names, shining lights in the medical world—Drs. Mussey, N. S. Davis, the elder Mason, Quimby, Parker, Didama, Parish. Time would fail me to mention these and others who, through faith in the belief that inebriety was a disease, passed through all the experience that attends the fate of a reformer. And all these died in faith, not having yet received the promise. They have labored and we have entered into their labors, and Fellow Members of this Society and Friends, this Society, and this and similar meetings of professional men, as well as the universal acceptance through the medical profession at home and abroad of the theory they promulgated, constitute the fruitage of the tree they planted, whose leaves are for the healing of the nations. We stand with uncovered heads in the presence of the memory of these men who have wrought out for us something even greater than civil liberty, whose persistency and faith has and will rescue thousands of their fellowmen from the disease of inebriety, who could not have been cured in any other way or under any other theory. The celebrated Pinel, of France, opened the door of the dungeon of the lunatic, and brought him from the dark, the filth, the straw and chains of Bedlam, and the obloquy

of devil possession, into the air, sunlight and reasonable liberty. So, because of the efforts of these men, the inebriate began to lift up his head and see that the day of his redemption was nigh. Instead of the prison, the asylum, instead of punitive measures—humane consideration, and the best of all possible chances to "enter the kingdom of Heaven," and to secure in this life in a measure some comprehension of what that means.

Etiology of Alcoholic Inebriety.—I believe that the uncontrollable use of alcoholic liquors is in itself symptomatic, and based on a latent pathologic condition. For example, diabetes may be traced to irritation of the floor of the fourth ventricle. In this disease uncontrollable thirst is a prominent symptom. But the excessive thirst and water craving is not the disease; it is the result of the disease, and is symptomatic. We may cover up and hold in abeyance a symptom or symptoms of disease, treat the disease, tentatively, so to speak, but this is not rational or reasonable practice. We must remove the cause. All inebriates are not so from a similar cause. There may be some points in common, but each individual case has its special etiology, idiosyncrasy, stage of development, complicating and contributive conditions. The same rule applies here as in other diseases. As with dispositions and faces, no two are alike. Commercial quackery fails to recognize this fact, and treats all cases alike, on the principal that if we all take a pinch of snuff we shall all sneeze.

The etiology of alcoholism has received too little consideration from the medical profession, and is too often attributed to mistaken conditions. Hence wrong conclusions, faulty diagnosis, prognosis, treatment, and failure to recognize the disease theory.

There are one or more causes in a single case. These causes are predisposing or exciting, direct or indirect. Some maintain that there is always a latent predisposition, inherited or acquired, which the alcohol habit simply develops or calls forth. Professor Dr. Gaupp, of Tubingen, believes that recourse to narcotics represents one of the most striking symptoms of a neurasthenic tendency. He says: "So long as there is call for these narcotics must our race be

stamped as degenerate." If this be the case, there are a large number of latent drunkards who will sooner or later meet their inevitable fate. This pessimistic view, which has much of truth in it, we would not advocate outside of scientific circles; we should hold up the optimistic view along the lines of general treatment, suggestion and psychotherapy, whenever practicable. This fact, however, should regulate the therapeutic use of alcohol—if, indeed, it should be given at all in any case where the family tendency or individual idiosyncrasy would precipitate habit and subsequent disease.

In regard to the treatment also the fact should receive especial attention, that *each case should be dealt with on its own merits*, and the past as well as the present condition of the inebriate be considered. Every case would have a full and exhaustive record as to the physical, mental and moral condition. The condition of every inebriate will call for special, individual attention and treatment. In a practice of over thirty years at the Inebriates' Home for Kings County, of Hamilton, N. Y., several thousand inebriates passed under my care and personal inspection, and were individually dealt with by myself and assistants as diseased mentally and physically.

Inebriety may be acquired or developed as the result of habit, due to social customs, delusions and false ideas, faulty education, or positive ignorance. Let us consider a few of the popular fallacies that lead to the use of alcoholic beverages and its consequent evils.

1. The so-called moderate or temperate use of alcoholic beverages as a table habit, or as treating on the "American plan," as a social custom, or the secret habit of tippling, all of which will develop in time into chronic alcoholism with its attendant evils.

2. The false and pernicious idea that the so-called moderate use of alcoholic beverages is essential to literary successes. This fallacious doctrine, recently issued from the chair of psychology of one of our leading universities, has done incalculable harm.

3. Another old-fashioned delusion is to teach the young man or woman to drink like a gentleman or lady, in order that later they will not depart from it (lamentably true in

one sense) and will not abuse the privilege—a wrong conclusion; the test of experience disproves this. Alcohol is no respecter of persons any more than arsenic, strychnine, or carbolic acid.

4. The use of alcoholic beverages as a hereditary privilege —another old-fashioned faééacy. The days of the winecellar and the sideboard as a sign of gentility and social standing, hospitality and good fellowship, which finds its counterpart in the lower ranks in the pocket whiskey flasks offered on all occasions as an evidence of friendship, have passed.

5. Alcohol as an appetizer or table tonic. The inevitable cocktail or cordial to stimulate or rather to irritate the worn-out stomach of the alcoholic habitue. Alcohol is neither a stomach tonic nor appetizer. It dehydrates the tissues and eventually produces gastrointestinal irritation and chronic disease.

6. Alcohol as a food—exploited as the product of laboratory and physiological experiment, and cause of much agitation in medical and especially temperance circles. Alcohol has been proven not to fulfill the definition of a food in its most important and essential particulars. The supposed value, if any, of alcohol in the treatment of disease is certainly not as a food, and its advocates, confessedly few, will have to look elsewhere for its asserted advantages.

These are a few of the principal fallacies which lead to the use of alcohol, as a habit, and finally to disease.

The alcoholic habit may be *innocently acquired* by the use of *patent medicines containing alcohol*, of which fact the person is in ignorance. These contain a greater or less percentage of alcohol, in some as high as 44 per cent. The United States liquor-tax laws now demand that the percentage of alcohol be printed on all patent medicine labels. The action of *Collier's Weekly*, of the New York Medical Society, of the American Medical Association, through its journal, as well as of this Society, through its official organ, *The Journal of Inebriety*, has done much to expose these frauds.

Dietetic conditions are receiving special attention in modern medicine as the cause of the alcohol habit, and of autoin-

toxication of intestinal origin. The laboratory work and clinical experience of Drs. Kellogg, of Battle Creek, Mich.; Kress, of Washington, D. C., and Benton, of Chester, W. Va., fully confirm this view. *Environment*, climatic conditions; dark, unhealthy tenements; poor and insufficient food, also have their causative influence. Read Jacob Riies' book, "How the Other Half Live," and then wonder why men and women keep sober at all under these conditions. *Occupation*, unsanitary conditions, long hours, continued exposure —these are likewise of etiologic importance. To these social causes may be added all *emotional factors* that produce unhappiness, mental distress in the individual experience or family relations.

The *climartic period* in male or female was pointed out by the late Dr. Joseph Parrish as the critical period for the cause or cure of habit, a waning or weakening of desire occurring at this time, in which the habit is left off if not too far advanced. The taste for stimulants and tobacco is lost, the period being at or about sixty years in the male. This fact might help to give a little optimism in the way of prognosis. On the other hand, we have seen incipient dementia ushered in by a lapse into inebriety and moral indiscretions.

There is an *inebriate diathesis* in the same sense that there is a tubercular diathesis, or an inherited or constitutional tendency to other diseases. Some are aware of it, some are not. There are those who spend their lives fighting this tendency—whose sole ambition is to live a sober life, and die a sober death. There are thousands who are conceived and born under alcoholic influences, and enter the world with the "hallmark" of alcohol stamped upon them, live and move in an alcoholic environment, and die from the effects of alcohol. They are ignorant, non-resistant, and incapable. They are in the current of a diathesis, a peculiar constitutional susceptibility, and are swept over the falls of physical, mental and moral ruin. Some have been caught in this current and have gotten out, or been pulled out, but these are few. Does the tendency leave them? Is the inebriate diathesis ever wiped out? It is said that there is no good Indian but a dead Indian, shall

we be regarded as being extremely pessimistic when we say that there is no cured inebriate but a dead inebriate, in the sense that none are free from danger of a relapse, of falling again into the swift current of the diathesis that leads to the falls, the Niagara of destruction?

Let this be written over every alcoholic diathesis: "Touch not, taste not, handle not." Here is an axiomatic truth. No one, with this diathesis or constitutional tendency either inherited or acquired, should taste alcohol either as a medicine, a beverage, or in the church sacraments. I would say to my fellow physicians, "Is your object to cure, or the reverse—to save life or to destroy it? Then never prescribe alcohol at all." Do not give it to any person who has the history of the alcoholic diathesis, inherited or acquired—the constitutional susceptibility to alcoholic inebriety—do not place him in the current. An experience of nearly thirty-five years as physician to an asylum for the treatment of inebriety and other forms of narcosis has brought to my knowledge, not infrequently, cases where the person having such diathesis, inherited or acquired, had been placed in the current through the medium of an ill-advised and unneessary alcoholic prescription. And these are only surface cases. There are thousands which never come to the surface. We never hear of them again. They are sucked down in the undercurrents, lost in the alcoholic flood, through alcohol either self-prescribed, or given in a medical prescription for a neurasthenic condition or for one demanding an anæsthetic for painful conditions or an euthanasia for mental disquiet.

It is a law of experimental physiology, and one which is confirmed by clinical experience, that a drug that will stimulate above the normal the vasomotor nervous system and consequently the vascular system will be followed by a corresponding depression, or subnormal condition, and this oscillation between the supernormal and subnormal continues until finally the normal is attained upon cessation of the cause of disturbance. No drug is more active in producing this condition of alternate excitation and depression, so rapidly, markedly and consciously to the person, as alcohol. Under these conditions, the means being

readily accessible, the person naturally desires to shorten the periods of depression, being experimentally conscious of the fact that it is within his power to do so, and takes another dose of alcohol, and repeats it, meeting every stage of discomfort or depression in this way. The drunkard carries, as it were, a self-winding clock to which the key is whiskey, and so ten, twenty, thirty, forty drinks a day will mark these periods of discomfort or depression. The habitual drunkard is thus kept "comfortably full" under the narcotic influence of alcohol—except when he cannot get it; and, when he does not, he suffers for the time being from a prolonged stage of depression. In order that the inebriate shall recover from his alcoholic habit, he will have to fight this stage of depression, of greater or less duration and frequency, and possibly overcome the habit by such assistance as may be given him. Then the intervals of recurrence will become longer and the periods of depression shorter until finally he reaches a normal condition, or one where by an intelligent exercise of his restored will power he can resist the temptation to take any alcoholic beverage either habitually or periodically. Thus, whatever be the cause behind the drink craving, we must recognize in addition to this the physiological action of the alcohol itself in producing periods of vasomotor excitement and depression, and so consider this also an etiological factor in the alcohol habit and the chronic disorder.

It would be a very simple method of curing alcoholism or "reforming" the drunkard, as it is called, were only the "leaving off" of the use of alcohol to accomplish it. But unfortunately other conditions are present which either antedate the alcoholic habit and are the cause of it, or are due to the effects of the alcohol itself; or, again, we may have to deal with both conditions, as is usually the case. In either case the desire for alcohol will not necessarily disappear on the removal of the alcohol, or will only disappear temporarily, and therefore be the cause of frequent relapses. These conditions of which the habitual use of alcohol is largely symptomatic must be treated and removed before we can cure the confirmed inebriate. The removal of the alcohol is, however, the first step toward the cure—a most

essential and immediately beneficial part of the treatment. We cannot impress too much on the would-be reformer that while we may admit that there are purely psychic cases that are "reformed" without the aid of medicine, yet many of these cases relapse because behind them were unrecognized diseased conditions that were not removed, and therefore they were not cases amenable to treatment by psychotherapy or suggestion. All sorts of methods for the cure of the inebriate are practiced by reformers, and no doubt in a certain class meet with temporary and sometimes permanent success. But many cases relapse, and fail to respond to the emotional treatment. Shall we regard such treatment as final, and refuse to investigate further, or shall we place our failures in the hands of an intelligent physician, and ask him to find the hidden cause of physical, mental or moral degeneracy? From any point of view we are driven to this conclusion: That the starting point of the treatment of the inebriate is the knowledge of the underlying cause or causes of his inebriety. Therefore all so-called "cures" or more properly called "reformations" outside of the legitimate practice of medicine are not cures in the medical use of that term, but simply cases in which a bad habit has been reformed, and are confined solely to physchic cases or that class amenable to suggestion only. Such methods are of value and have their place, but should in no wise be allowed to substitute the practice of regular medicine in cases in which they are not appropriate. Such a substitution would be unjust to the great class of inebriates at large. As we have said, we refer especially to the various "movements" along reformatory lines as practiced under the auspices of certain religious denominations, which we heartily endorse in their proper relations, but not in an indiscriminate sense as opposed to common sense and medical science. Outside of these so-called "movements," we most positively denounce all forms of quackery practiced in the so-called "cures," just as we denounce all forms of quackery and for the same reasons.

Aside from social conditions and fallacies based on ignorance, let me call attention to the more scientific phases of the subject. We have:—

1. *The inherited or congenial form*, due to a defective ancestry or progenitor—an "inebriate diathesis," a decided predisposition or inherited tendency. All degenerative tendencies (not necessarily alcoholic) in an immediate ancestor establish or favor such a predisposition. What is the average family history? Is it as a rule normal or abnormal? Who shall decide what is the correct physical, mental, moral standard which we may call normal? It is only relative or comparative at the best. Are we not a defective generation? We may well ask, is the tendency of the race toward further degeneracy or regeneracy? Whether we take the pessimistic or optimistic view, the fact nevertheless remains. The nations are fighting for national life, not along the line of principle, but that of social economy and sanitary science and medical teaching, and the worst foe to national life, efficiency and intergrity, is alcohol and its degenerating tendencies, inherited or acquired.

2. *The pathologic form* includes all forms of traumatism, such as injury to the skull, cerebrospinal axis, etc. Personal mutilation of any kind, so repulsive to some natures, produces not only physical reflex, but also mental or moral disturbance. Diseases of a depressing or painful character, especially syphilis in its later stages, various painful neuroses demanding anæthesia or narcotism, exhaustion or neurasthenic conditions—these are also included. The innate craving for alcohol or other narcotics is symptomatic and an indication of an abnormal state. A perfectly healthy person has no such craving or desire; let me repeat this fact as an axiomatic assertion.

3. *The Psychic Form.*—This is hysteroid in character—the result of social disquiet, unhappy relations, business reverses or mental or emotional causes demanding a mental sedation or state of euthanasia or temporary forgetfulness under narcotic influence. This condition is often amenable to the influence of psychotherapy or mental suggestion, change of environment, occupation, etc.

4. *Dipsomania.*—A monomania—a true psychosis of insanity. The etiology is imperfectly understood. The condition is periodic, cyclonic in its advent. The prominent symptom is the drinking of alcoholic liquors to complete

coma or alcoholic satisfaction, followed by intervals of sobriety and total abstinence of varying duration. In the present state of medical science it is regarded as incurable. At least, in true forms the prognosis is unsatisfactory.

Alcohol as an Anaesthetic.—This is the one characteristic that recommends alcohol to the laity; it is usually accidentally or experimentally discovered. Alcohol will relieve pain or gastric distress, and is not only a nerve but a mental sedative. It will relieve high nerve tension and neurasthenia, not as a stimulant, but owing to its narcotic effect. It produces an euthanasia or soothing effect in melancholia, drowns sorrow and mental distress, and gives a temporary oblivion. It is popularly used to produce sleep. Alcohol engenders a temporary anæsthetic or analgesic effect. It was the anæsthetic of the older surgeons. Even modern surgery reports cases where major amputations were performed on persons, who had received injury while in a state of alcoholic coma, without the aid of any other anæsthestic. My experience as a hospital surgeon also confirms this. There is a pathological anaesthenia which occurs in cases of chronic alcoholism, in which certain parts of the body are insensitive to the prick of a needle or even a moderately deep incision. This is not an uncommon condition and should be looked for in all cases of chronic alcoholism.

There is a popular idea that a man is not drunk if he does not stagger and retains his senses to a reasonable degree. As far as alcoholic intoxication is concerned, no matter how moderate the quantity, the average drinker is always drunk in his tissues and in his physiological processes. This can be proven by instruments of precision, the slight disturbances not being noticeable to ordinary observation, but being readily detectable by tests applied to the perceptive faculties, etc.

Alcohol as a popular medicine and universal panacea represents a deeply rooted fallacy almost amounting to a superstition. The alcohol bottle in the closet is a veritable household god, and the whiskey flask is reserved for all emergencies. If there is one characteristic of alcohol above any other that makes it of all etiological factors the principal

cause of degeneracy, it is its effect as an anæsthetic, producing a sense of relaxation, inhibition and temporary relief from physical pain or mental distress.

The doctor as an etiolical factor, so often quoted, too often without grounds, is made the excuse of the average drink. I trust there is no physician who knowingly would act in such a role. He may be popular with a certain class, but the time has come when no physician can so act without confessing his ignorance of the true status of medical science in the use of alcoholic beverages. The period is rapidly approaching when careless off-hand advice as to the use of alcoholic liquors will no longer prevail, but, if at all prescribed, alcohol will be given with the same caution that pertains to other drugs. The consensus of opinion both at home and abroad is that alcohol is being rapidly eliminated from intelligent medical practice. This is especially true of the rising and modern practitioner. The advice of the doctor or his practice will soon no longer be the stock in trade of the chronic seeker for an excuse as to his bibulous habits.

Briefly then, the causes of alcoholic inebriety are: 1. Congenital or hereditary. 2. Acquired or developed under supposedly normal conditions. 3. Environment, social conditions, climate, poverty, unhealthy surroundings, improper and insufficient food, unhealthy tenements, various employments, long hours, unsanitary conditions, etc. 4. Pathologic. 5. Psychic. 6. Dipsomania, not clearly understood, but classified among the neuroses.

Whatever the cause may be we can safely say the average inebriate is not so by choice, nor does he remain so by choice. The popular notion is that it is simply a matter of will power. It may be so in a certain class of cases of the psychic form, but not in the confirmed inebriate, often organically diseased, who needs all the aid medicine can give. I do not believe men as a rule become inebriates by choice. Even if, as it is said, a man "deliberately drinks himself to death," we would hesitate to believe the statement. If so, it is simply a form of slow suicide with all the false reasons that accompany a disordered or unbalanced mind. Why do men continue to drink, or remain incur-

able, and why cannot they "leave off?" Because inebriety is always complicated and associated with other disorders, functional and organic. These severely handicap the man. In fact, the advanced alcoholic is hopelessly involved with disease. The chronic alcoholic is a walking pathological museum, a subject of general fatty and fibroid changes, especially the former. He may stop drinking, but he is practically incurable under any treatment.

Alcoholism may cause disease, be the result of it, or be associated with it as a complicating or contributory factor. Thus, alcoholic neuritis is caused by alcohol, protracted by it, and relieved by it temporarily, the alcohol acting as a quasi-remedy. The tendency to drink alcohol is often the symptom of a diseased condition. It is very important to differentiate in this particular, and if possible remove the cause of the condition of which the alcoholic habit is merely a symptom.

Finally, the correct knowledge and significance of the etiology of alcoholic inebriety point out and determine the *true line of treatment.* The only basis on which we can act is that inebriety is a disease, and if so there must be a cause for the disease, of which the inebriety is in a large measure symptomatic, and we must treat the disease, not the symptom. To simply remove the drink craze temporarily is not to get at the real cause of the trouble. If these facts be true, then the *confirmed* inebriate is no more responsible for his acts than the *confirmed* lunatic. I am now speaking of the organically diseased inebriate—the man suffering from neural, cerebral and glandular changes.

But, you may say, are not cases of inebriety cured *outside* of the limits of legitimate medicine? Yes, but these cases are not seriously organically diseased as the result of the habit or associated conditions. Purely psychic cases can be *reformed* without any treatment at all by merely leaving off the alcohol. Hence the success of commercial quackery in a certain percentage of cases, and also, through its indiscriminate, non-selective method, its failure in many cases. I believe a large percentage of selective cases could be cured and are cured by suggestion and psychotherapy, but these cases are in the hands of experienced physicians who take

only selective cases. Our argument is that to get the best average results we must classify our patients and let this proper classification regulate their disposition. *We must place the treatment of the inebriate on a scientific medical basis.* Then we will begin to reap success, because we will understand our cases and be familiar with the etiological factor in each. Under the present irregular methods we aim at about 40 per cent. of cures in non-selective cases. The rate from a selective list would run much higher. A large proportion of inebriates who belong to the psychic class are amenable to such treatment. We can only account for the success of commercial quackery and all kinds of treatment, regular and irregular, on this supposition. I believe that when we give the case of the inebriate the same advantages as to diagnosis and treatment that obtain in other diseases, such as early recognition of the etiological factor or factors, prompt, appropriate treatment, and complete control of the case, we shall have a large proportion of cures. I do not hesitate to say concerning the inebriate that he has not had half a chance, and that we physicians have not had half a chance as to his treatment.

As the average confirmed inebriate is irresponsible, we need appropriate legislation. The well-to-do inebriate in the numerous private asylums has especial and sufficient care. The pauper inebriate should be the ward of the state, not as a criminal or moral delinquent, but as suffering from mental and physical disease.

Prophylactic or preventive measures may act along the line of educational influences. It is a source of gratification that alcohol as a drug, and also from its etiological, physiological, pathological and clinical aspects, has been taken up as part of the curriculum of our leading medical schools. As this is a matter in which education plays so important a part, the public should be duly instructed by specially qualified physicians or trained speakers, as to the physical evils of the alcohol habit. In a large measure through the work and influence of the late Mrs. Mary H. Hunt, of Boston, this has been done in the public schools of America; her system has also been adopted in the public schools of Great Britain on the endorsement and recommendation of the

English medical profession. In this country some 20,000,000 children are instructed in the dangers attending the use of alcohol and other narcotics, as taught in the text-books. The National Temperance Society, the Temperance Press in its periodical issues and publications, and the various temperance societies, are dealing with the so-called temperance question from a purely scientific standpoint, and their platform lecturers gladly welcome and give out scientific matter from medical sources largely. The Scientific Temperance Federation of Boston prints in its issues a world-wide, up-to-date review of the medical status of the questions relating to alcohol, and from the physician's standpoint a resume or synopsis of the substance of leading medical journals of the day on this topic. We need hardly refer to the medical side of the question as considered in *The Journal of Inebriety*, the organ of this Society; *The British Journal of Inebriety*, and the medical press here and in Europe.

As a sign of the times and the interest that has been taken by our government in the work of this Society along the line of educational effort, it is worthy of note, and a great source of inspiration and encouragement, that the proceedings of our Society and the papers read at its semi-annual meeting held at Washington, D. C., March 17, 18 and 19, 1909, were ordered to be printed as a Senate Document by the Sixty-first Congress at its first session. The publication is known as Document No. 48, the title "The Alcoholic Problem and its Practical Relation to Life."

In medical practice based on a correct knowledge of etiological conditions and clinical experience with the evils of alcohol as a drug, its use is now being eliminated—just the reverse of what was a few years since. For a physician not to be up to the present medical attitude of the leaders of the medical profession at home or abroad shows that he is not a conscientious student of the signs of the times, is too prejudiced to seek information, or is still in the Rip Van Winkle sleep of fifty years ago.

All this great change of professional opinion and practice may be attributed to this Society, which will soon celebrate its fortieth anniversary, and to the labors of a few physicians who for an average lifetime have endeavored and finally

succeeded in convincing the bulk of the medical profession at home and abroad that inebriety is a disease, dependent on well-known etiological factors (which we have endeavored to specify), and have confirmed the attitude taken by that physician of your own city, over one hundred years ago, Dr. Benjamin Rush, that alcoholism was a disease having its own etiology, pathology, and clinical history, and that it demanded special treatment and hospitals and asylums as other diseases. I feel honored to stand here to-day and assert that the leading men in the medical profession at home and abroad, by their precept and in their practice, and by tongue and pen, endorse fully the opinion of Dr. Rush, one of the most notable, far-seeing, clear-headed and patriotic physicians, not only of the past but of any age, and, if there should be, as has been proposed, a monument erected to his memory, I would suggest—and I am sure this Society would endorse my suggestion—that upon the tablet be inscribed these words: "Dr. Benjamin Rush, Physician—Philanthropist—Patriot—The First Physician in the World to Point Out Definitely the Etiology of Alcoholic Inebriety and Determine its Proper Treatment as a Disease."

EDITORIAL

The 40th anniversary of the formation of the Society for the Study of Inebriety, now the American Medical Association for the Study of Alcohol and Other Narcotics will be celebrated at Baltimore the second week in April, 1911.

Dr. L. D. Mason the Vice-President, is the only living member of the organizers. Three years after it was formed, Dr. Crothers became a member and these two are the only ones left of the original founders and workers of this Society.

During this long period about 500 physicians have joined. Nearly all of those who joined twenty years ago are dead. The membership is scattered all over the country, and only by holding meetings at the same time and place as the American Medical Association, have we been able to keep in touch with them.

It can be said with great truthfulness that this Society has done great pioneer work in keeping the subject before the public, and even now there are distinct intimations of a great future, both as a society and as a work for the development of a new range of medical work.

ALCOHOLISM CURED BY SURGERY

Dr. Kenney of San Antonio, Texas, has opened up a new field of study.

He is convinced that the disease of inebriety is centered in the stomach, and that an operation in which some part of the stomach is resected and repaired in some way not very clear, will result in permanent cure.

He cites cases to prove his contentions. There are a number of cases in history in which surgical operations have removed the exciting causes, and the cessation of the drink craze has followed, but removing the section of the mucous membrane of the stomach is a new idea.

NICOTINE POISONING DUE TO TOBACCO CHEWING

Dr. Tandberg in the Norsk Magazine describes a case of nicotine poisoning in which the fact of tobacco chewing was the cause of the great variety of symptoms of poisoning of great severity and seriousness. The patient was a business man of 50 years of age who complained of swelling of the feet. This accompanied with

albuminuria was considered renal disease for which he had been treated by eminent physicians for a long time.

The writer failed to find albumin in the urine, but noted an enormous secretion of urine which was normal in other respects. In addition to this he had nausea, loss of appetite, diarrhoea, pulse 90, irregular, oedema of the lower extremities and scrotum, weakness of his lower limbs and inability to walk up stairs, or to get up from a chair without the use of his hands, inability to raise himself upright without help, diminished sense of touch and of pin pricks, diminished sense of pain on pressure over certain areas of the lower limbs; patellar reflex absent, left cremaster reflex also absent, slight oedema of the fingers with diminished sense of touch over the finger tips, weakness of the extensers of the thumbs and the pupil reflexs. The temperature was normal.

Multiple neuritis was present, but its origin was doubtful. There was no history of syphilis. The patient, who was a moderate smoker and beer drinker, was deprived of beer and cigars, and was fed on a light diet, but the condition grew worse. It was then discovered that the patient was in the habit of chewing about 40 grams of tobacco every day. Examination of the eye showed defective perception of red on the nasal side of both visual fields.

The patient was at once deprived of tobacco, and in four days time the nauseau, thirst, and anorexia disappeared. The pulse fell from 92 to 60, and the daily excretion of urine also fell. Except for a brief attack of pain in the heart, simulating angina, two days after the tobacco was cut off, the patient suffered no ill effects from his compulsory abstinence.

The oedema disappeared in a week, and the beer and a full diet was resumed. In three months time all the symptoms were gone, only to return again when the patient in spite of warning resumed his tobacco chewing. This relapse was immediately checked when the supply of tobacco was stopped.

Although tobacco chewing is common among the working classes in Norway, the cases of nicotine poisoning have been almost altogether attributed to smoking. The dangers of tobacco chewing have been underrated, not knowing that they could be the cause of nicotine poisoning. In the preparation of tobacco for the purpose of chewing some of the nicotine is lost, and this may account for the apparent immunity of the tobacco chewer.

In Sweden where snuff is frequently chewed, symptoms of a

psychic character are frequent, and include hallucinations, insomnia, and depression of both body and mind. Both Auld and Jacoby found intermittent albuminuria in cases of nicotine poisoning. This is no doubt due to the irritation of the kidneys by the excretive nicotine. Several cases have been reported in this country of similar symptoms, which disappeared when the supply of tobacco was stopped.

This seems to have been the first case of nicotine poisoning and neuritis directly attributable to tobacco chewing. A number of cases have been reported of very complex symptoms among snuff dippers in the South, but no one seems to trace them to the real cause, nicotine poisoning.

Many of these persons become spirit drinkers, and the first causes are overlooked. Hence nicotine as a distinct poison from tobacco chewing has been largely unknown.

COFFEE AND ITS EFFECTS

It has been urged that the harmful effects of coffee were not only from its alkaloid caffein but from other substances, such as the glucosides, acids, oils, fats, etc. It has been found that coffee seems to have a special effect on the red blood corpuscles, causing them to shrink in size and to lose their natural color and even surface.

The changed appearance of the skin from excessive use of coffee is in some way due to a change in the red blood corpuscles which effects the mucus membranes. Its frequent diretic action and special effects in diminishing the capacity of the bladder and urinary passages have been the subject of many theories, also its special action in diminishing the peristaltic action of the intestines and subsequent chronic constipation.

Whether this is due to cell changes or to nerve palsies, or to the presence of some toxins is not yet clear. There is some probability for supposing that the alteration of the cells and the particular stimulation from caffein produces some toxic property, which is not eliminated, but continues to increase in its activity on the system.

Clinically coffee drinkers show a peculiar change of vigor and strength marked by insomia and excessive nervousness, pointing to a toxin introduced from without, or formed within, and this is the best explanation up to the present time.

THE PREVENTION OF INFANTILE DISEASES

Prof. L. F. Barker of Baltimore, Md., in a discussion of Biology as applied to the prevention of Infantile Diseases spoke as follows

"If the teachers of our schools knew that drunkards, lunatics, idiots, prostitutes and habitual criminals are such because in the majority of instances they have been born with defective nervous systems; and if they knew that such drunkards, lunatics, idiots, prostitutes and habitual criminals are more likely to bred their kind than to have healthy offsprings, we should have taken a large step forward in that education of public opinion which would be necessary before we can pass laws which will prohibit parenthood in the notoriously unfit."

If the teachers could know the family history they could determine the physical and mental development of the children and could be of great assistance in sane culture and direction, to overcome the weakness and strengthen and develop the best elements possible.

MISLEADING MORTALITY LISTS

Several new authors have called attention to the misleading terms in the mortality lists. Thus in one city pneumonia is made to stand for a large list of deaths. On examination over 80 per cent of these deaths occurred in persons suffering from acute alcoholism, and the pneumonic symptoms at the last were confined to a few hours at a time.

Gastritis, a name given to a large number of fatal cases was found to occur in over 90 per cent of alcoholics and be only the result of spirit poisoning, and not the cause of death.

Apoplexy and cerebral hemorrhage were equally falacious terms and described a class of cases that were pronounced alcoholics and inebriates; dying specifically from toxins, and so on through the list. Consumption appeared in a large number of cases. Rheumatism stood for others. In the realm of accidents spirits were invariably the cause in so large a proportion of cases that even the reporter was astonished.

It is evident that the mortality statistics do not give correct indications of the causes of death, and that alcohol among other causes occupies the very largest place in not only disease, but accidents and fatalities. A curious pride prevails to conceal the real cause, toxic poisoning, as a reflection on the character of the person. A better knowledge will change this.

SOME FACTS IN THE PSYCHIC PATHOLOGY OF INEBRIETY

Dr. Searcy, Supt. of the Alabama Insane Asylum in a very elaborate article on the Pathology of Psychic Philosophy brings out many facts that are fundamental in the study of inebriety.

Of neurasthenia he writes as follows: "This disorder is a very frequent cause as well as a result of the repeated use of an anesthetic or anodyne. Such persons readily take to the habitual use of the milder less toxic of these drugs to relieve them of discomfort. The drink and drug habitues have usually become so because of neurasthenia in the first place, or have become so by the chemic action of the drug on their delicate nerve structures.

Neurasthenia is increased by drugs. The longer and more the habitue takes the drug, the greater his difficulty. This is seen by his efforts to stop. General bad health impaires the nervous system and results in this disorder.

Toxins manufactured in the body by their chemic effect on the nerve structures are followed by a general hyperastehenia. Any predisposition to psychic abnormalities in the reasoning cortex is increased by the chemic effect of the toxine from within or without. The person may become insane. The whole cortex of the drug habitue is chemically impaired by the anesthetic drugs, like alcohol, or the anodyne drugs like cocaine, morphine, nicotine or caffein.

The result is mania, melancholia, dementia, hysteria, or any particular predisposed degeneration. It is a dangerous practice to treat neurasthenias with anesthesias or anodyne drugs, and it is very dangerous for him to treat himself by remedies of that class. He not only increases his disturbance, destroying the sensory centers, and impairs his judgment but his will power; has less inhibitory faculties and ability of any kind.

Hysteria is a psychosis of the emotions, and this is a particularly dangerous disease to be treated by anesthetic or anodyne drugs.

Paranoiacs are very susceptible to drugs of this class, and their derangement is increased by their use.

Perverts and immoral victims are all made worse by this same condition. There are no substances so thoroughly degenerative in their chemic and physiologic effects on the body as the anesthetics and anodynes, and there are no patients more thoroughly degenerate, who have a basic psychosis, on which these drugs depend. The author divides the nervous system into two physiologic portions, one the psychic, relating to the environment, the other the sub-psychic, relating to the organs of internal life. The derangement of these conditions constitute a distinct degeneration, which moves along uniform lines. He shows that the psychic center is most important and can be most easily disturbed and broken down.

The action of the brain is of very great importance, whether normal or abnormal. Beyond this there is a physiologic and chemic action in which the circulation of the blood and the toxins are profoundly important.

Anything that disturbs them will of course impair the whole organism. The anesthetics, like alcohol impair the psychic centers as well as the physiologic centers, and that is the beginning of very serious troubles. This condition may develop into automatic action, and become that is so-called habits in which the patient will do the same thing steadily from an apparent necessity, and without recognition of any possible harm.

The habit is not recognized as a physio-pathologic condition, but is supposed to be something which can be put on and taken off at will, when literally it becomes a fixed organic condition, which may be checked for a time, but is sure to come back.

This very interesting paper concludes with a very strong appeal to take up the subject of eugenics, and make it a practical study, how to advance and improve the mind and body to avoid the dangers and build up a resisting power in the brain and nervous system. He outlines in this a great new unexplored region of active work in which permanent benefit will follow.

In 1889 Dr. Kerr drew attention to the fact that ether drinking was a distinct form of addiction that had come into prominence in Ulster County, Ireland.

A year later, Mr. Hart, Editor of the British Medical Journal,

published an extended paper and study of this subject. This was noted in *The Journal of Inebriety* and some instances were given of the same addiction in mining towns in Pennsylvania and two or three instances recorded in Illinois and Minnesota.

The English Government placed ether among the poisonous drugs, and interdicted its sale. From time to time, instances have come to our notice of ether being used to intoxication, but they have always been associated with some former use of spirits and drugs, hence did not come into prominence,

During the past summer Dr. Cauldwell of Belfast, Ireland, has taken up the subject and given some farther information which is of special interest to our readers. It would appear that methelic ether is sold in some parts of Ireland in one or two ounce bottles at a very low rate, and is used by persons for the tremenduous exhilaration and supposed pleasure which apparently comes from it.

After drinking or inhaling this substance, a species of acute mania follows in which the victim becomes hilarious, dances, shouts, jesticulates and is in a state of great excitement for a short time; then becomes stupid and falls asleep. This ether is often mixed with water made into a punch, and while rapidly intoxicating has a very depressive effect afterwards, but this lasts so short a time, and the patient recovers without any impression except that of the pleasurable effects. This gives it a certain fascination which makes it very attractive to certain persons.

It is stated that 20 years ago, it was a very common addiction in a place called Cookstown in Ireland, and that hundreds of persons, both men and women would be intoxicated Saturday nights after pay day. The ether was put up in small bottles and sold for about two cents a dram, and this would be quite sufficient to produce intoxication.

The authorities together with the priests practically stopped its use, and now after a long interval it is coming back again, although it is sold more secretly, and is used for various purposes.

Doctors living in that neighborhood mention the appearance of the intoxication from this source. A number of circulars were addressed to medical men living in this region and 240 answered. Thirty-eight affirmed that they had seen and treated such cases. The others could give no information, they never having been called to treat persons that were clearly ether drinkers.

Some very curious facts have been quoted from this investigation. In one section a chemist reported that he put up large quantities of methelic ether in small bottles, retailing them at about 2 cents of our money, and these bottles were taken back to the country and used for intoxicating purposes. It was also reported that women went about the country selling it. Persons who wished to become happy or exhilarated, bought it in variable quantities from a dram to an ounce.

Persons who were depressed or suffering from severe pain used it for the relief which it gave. One correspondent mentioned that it was the drink of the very poor and half starved people in the mountain countries. Several accidents were reported where persons suffering from the stupor fell down, were burned or were injured in various ways. Another man wrote that it gave a peculiar fighting instinct to the person who used it, and in that way was attractive to persons who wished to retaliate or make it uncomfortable for their enemies, a drink of ether would give them force and energy which they did not possess before.

The effects of ether drinking is followed by dementia and extreme low grade of vitality, which is followed by acute inflammations and death. In this country there have been no distinct cases reported, but a number of alcoholics have found that small doses of ether produced a very pleasing effect, but the results have been so disasterous in the acute mania and wild excitement which followed, giving such prominence to their condition, that they did not care to repeat it.

A case is reported in one of the weekly journals by an alienist, of acute mania following the use of alcohol of a peculiar exciting type in which the person screamed, shouted and struck out wildly in all directions and was alternately angry and hilarious; laughing and swearing without cause, fighting and embracing those about him, was one of ether poisoning, although the reporter failed to get this fact.

To him it was a new phase of alcoholic mania. There is no doubt similar cases occur in which chronic inebriates use ether for its rapid effects, and relief from the depression from which they suffer.

Hilarious symptoms after the use of spirits, should always suggest ethers where the facility to procure them is possible.

RECOGNITION OF THE DANGERS OF ALCOHOL

The Brotherhood of Locomotive Engineers is the most complete labor organization of the world. It not only regulates the labor, but insists that its members should live along the highest lines of efficiency and health.

The rule that its members shall not drink in any degree is strenuously insisted upon. In 1909 35 members were expelled for using spirits, and their names were published, and corporations were requested not to employ them, in the work of running engines, because of their incompetency.

The authorities of all the roads were asked to co-operate with this Brotherhood and not allow any discharged persons to work on an engine.

A curious instance has recently occurred, in which an engineer, who had been with the company many years, and been above all suspicion, suddenly became intoxicated while off duty. The facts were reported. He was promptly discharged, but the company did not want to turn him out after his long years of service, for this one failure.

They urged to retain his services in some minor place. The Brotherhood insisted that he was a dangerous man, and should never be put in a responsible position again. The matter was referred to a prominent physician who decided with the Brotherhood that the man might break again at an unexpected moment, and be intoxicated while running an engine, to the great peril of the passengers and the interests of the company.

The Brotherhood insists that they are intended only to assist total abstainers and men whose conduct is above suspicion.

THE USE OF OPIUM AND COCAINE IN THIS COUNTRY

Dr. Wright, a member of the International Opium Conference reports that 400,000 pounds of opium and 150,000 ounces of cocaine were imported last year into the United States, and that 75% of the opium and 90% of the cocaine was used by drug habitues.

This statement is doubtless based on a general estimate of the amount of opium and cocaine called for legitimately by physicians and pharmacists in the manufacture of medicines and filling prescriptions.

Dr. Wright thinks that over 168,000 pounds of opium was used

for smoking and about 68,000 pounds was consumed by native Americans and the rest by the Chinese, of whom there are 150,000 in the United States.

He further estimates that 50% of all criminals use opium and cocaine and that 21% of the prostitutes are addicted to some drug habit. His estimate that 2 1-2% of all physicians are using drugs is certainly a minimum statement.

Competent authorities who are familiar with large numbers of active working physicians have variously estimated the number of drug habitues from 10 to 20%. The number of physicians who use alcohol is much larger, but as many of them resort to opium, giving up the alcohol, it is difficult to determine the exact number.

In a study of 5,000 physicians in three large cities over 40% used alcohol in some form or other, and it was estimated that more than half of this number sooner or later used narcotic drugs.

In the mortality rates the prevalence of pneumonia, arteriosclerosis and cerebral hemorrhage occurred in very large proportion of those who drank or used drugs. It is very evident that the amount of spirits and drugs taken by physicians exceeds any present estimates.