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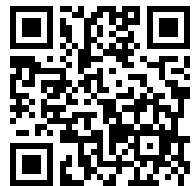
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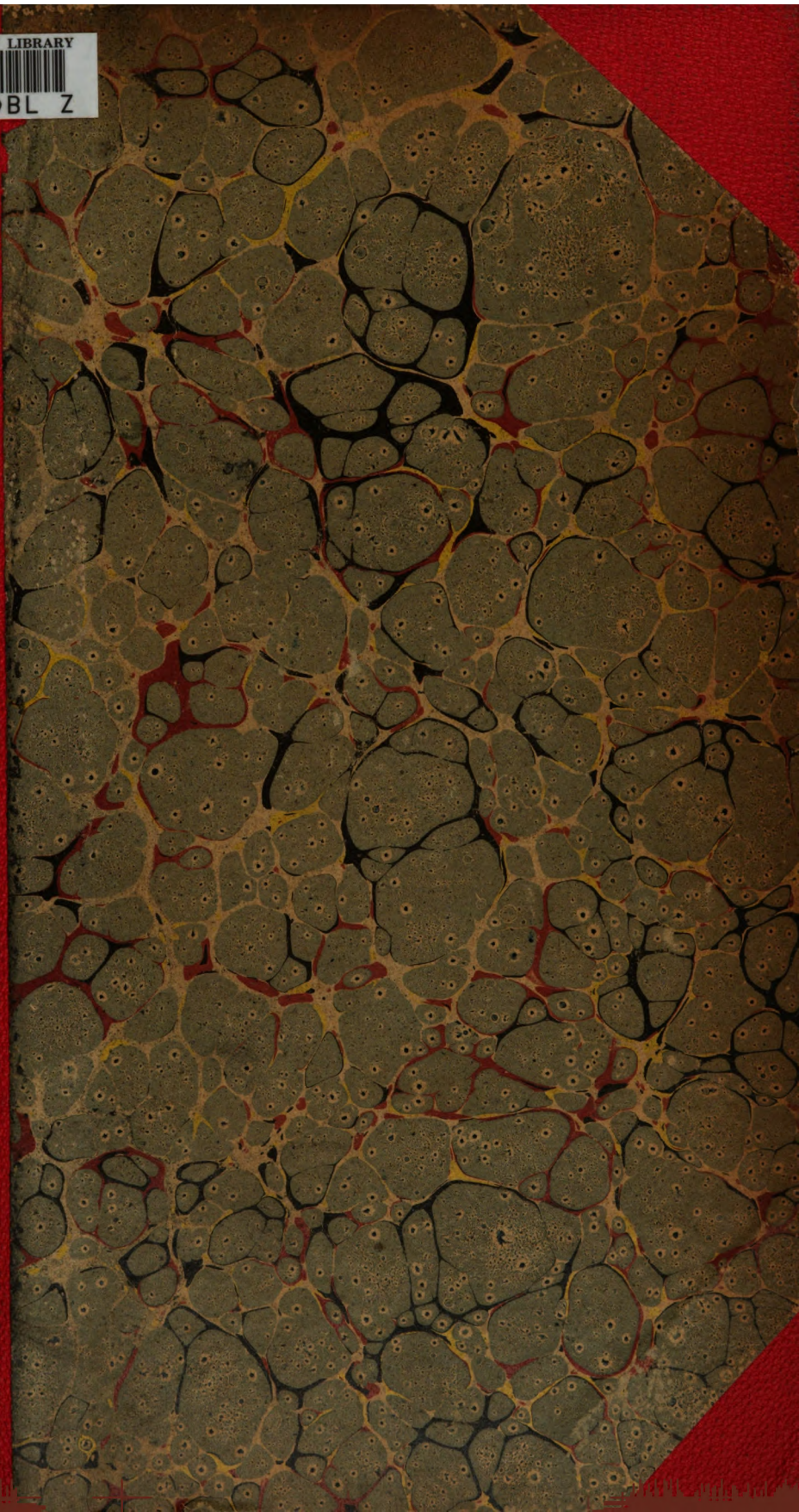
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# THE QUARTERLY JOURNAL

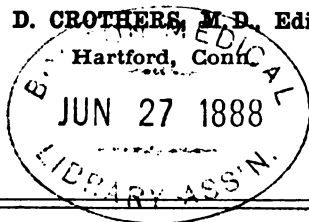
OF

# INEBRIETY.

PUBLISHED UNDER THE AUSPICES OF THE AMERICAN  
ASSOCIATION FOR THE CURE OF INEBRIATES.

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T. D. CROTHERS, M. D., Editor,  
Hartford, Conn.



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Vol. IX, 1887.

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HARTFORD, CONN.:  
THE CASE, LOCKWOOD & BRAINARD CO.,  
PRINTERS.

EUROPEAN AGENCY:  
BAILLIERE, TINDALL & COX,  
20 KING WILLIAM STREET, ON THE STRAND, LONDON, W. C.

CATALOGUED,

R. F. D.

6/27/88.

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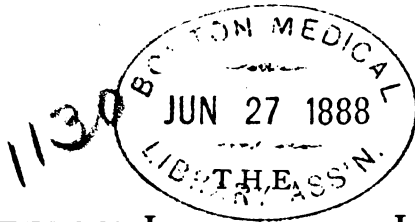
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# QUARTERLY JOURNAL OF INEBRIETY.

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Vol. IX.

JANUARY, 1887.

No. 1.

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## ALCOHOL ON RESPIRATION.

BY DAVID BRODIE, M.D.,

Honorary Member of the American Association for the Cure of Inebriates, Canterbury, England.

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[Continued from page 203.]

Dr. Hammond published his physiologico-chemical researches in the "American Journal of Medical Sciences" for 1836. His experiments embraced a wide range both as to the materials submitted to experiment and the effects produced on all the various excretory functions of the body. But we limit our references to the influence of alcohol on the elimination of carbonic acid. Dr. Hammond experimented also on himself. First, with the supply of food, so adjusted as to maintain the weight of the body. Second, with deficient food supply, so adjusted as to secure loss of weight, and third, with excessive food so as to secure an increase of weight. Under each of these conditions he took an average, carefully determining the quantities of all the excretions of five days, first without alcohol, and then with the addition of half an ounce of alcohol to each of his three meals, viz.: at seven, one, and five, the observations on the respiration being made at nine, two, and ten. In the first case with food sufficient to maintain the weight of the body,

under alcohol, the average diminution of carbonic acid was from 11.674 grains to 10.344 grains, equal to 1.330 grains per day.

In the second case, with deficient food, the diminution with alcohol was from 10.774 grains to 9.945 grains, equal to 729 grains.

In the third case, with excessive food, the diminution was from 12.159 grains to 11.577 grains, equal to 581 grains.

Dr. Hammond reports that the effect of the alcohol on the diminution of the carbonic acid was constant and unvarying. Dr. Hammond was preoccupied with the theory of which he was an enthusiastic advocate, that diminution of excreta was evidence of diminished waste and a "saving of tissue," and we are losers by the times unfortunately chosen to make the observations, viz.: two, one, and five hours after the administration of the alcohol. All the truth, therefore, regarding the influence of this strange agent has not been disclosed by this experimenter, but we shall take what he gives us.

Dr. Hammond's account of his experience under these three conditions are worth noting.

Under the first (with alcohol), he reports: My general health somewhat disturbed, pulse increased from 81 to 90; headache and increased heat of skin. Mental faculties were certainly not so clear as on abstinence days, general lassitude, and indisposition to exertion of any kind.

Under the second, the report with alcohol is, general condition never better, pulse down (to 83 from 88 without alcohol); no headache, intellect clear, and normal energy, all functions regular and satisfactory.

Under the third, Dr. Hammond reports (first, without alcohol), health much disturbed, headache almost constant, pulse 92 - full, sleeplessness, unpleasant dreams. Second, with alcohol, healthy action very much disturbed, headache constant, sleep disturbed, skin hot, pulse 98 - full and bounding, palpitation, severe illness, threatening diarrhoea of considerable violence occurred, lasting forty-eight hours.



Dr. Edward Smith is the next investigator who undertook, (in 1859), to prosecute this important research. His observations are most elaborate; they were sustained for two years, and extend to 2,000 experiments performed on himself and a friend. The results have been most widely circulated through many channels, and much attention and a too general credence has been accorded to the inconsistent and most inconclusive conclusions presented. Dr. Smith's deductions as to the action of alcohol on the respiration are not consistent with those of the scientific observers of the highest reputation, who preceded him in this inquiry, nor with those of others who followed after, which we shall by-and-by adduce. But we think it will be possible to show, notwithstanding Dr. Smith's very confident assurance to the contrary, that in several respects his conclusions are altogether untrustworthy. We think, also, it will appear that he greatly overestimated the accuracy and value of his conclusions. The effects of alcohol which Dr. Smith regards as a class of agents, having among themselves fundamentally different, even antagonistic, actions, are thus summarized.

First. The direct action of pure alcohol does much more to increase than to lessen the respiratory changes, and when the quantity is sufficient to act upon the sensorium the influence is chiefly a disturbing one.

Second. Brandy and gin, particularly the latter, always lessened and sometimes caused great depression of the respiratory changes.

Third. Whisky commonly lessened them, but sometimes it increased them.

Fourth. Rum increased them almost always and to a greater extent than alcohol alone.

Fifth. The vapor of all spirits, pure alcohol, gin and rum, and wines, when inhaled lessened in the course of ten or fifteen minutes the quantity of carbonic acid exhaled and usually lessened the quantity of air inspired, but increased the quantity of watery vapor exhaled from the lungs. The vapor of fine old port had the same influence, but in a greater

degree. This result was without one exception. We have seen that the experiments of Prout and Fyfe, Vierordt and Böcker, were performed under the various conditions which enable their effects to be fairly and usefully compared with those which attend the use of alcoholic liquors in any of the ordinary, though sufficiently varied circumstances in which they are employed. But Dr. Smith believed that he greatly enhanced the value of his results by performing his experiments under conditions which are as exceptional and peculiar and as far removed from the normal circumstances under which alcohol is used, as can well be imagined. Thus, for instance, he choose the early morning hours from seven to nine o'clock for taking the tremendous dose of alcohol (one and half to two ounces) diluted with water, and this on an empty stomach; next he maintained throughout the experiment body and mind in a state of perfect quietude and rest; and lastly he limited the observation of the effects to two hours. Dr. Smith fixed on the early hour on the assumption that the body was then in the most sensitive and vigorous condition and best fitted for testing the physiological action of alcohol.

Popular experience gives a very different estimate of the effects of the morning dram, even when limited to half the quantity taken by Dr. Smith and his friend. From the narrative of their sensation, we may well be allowed to question their capability to give a true record of observations requiring so much care and acumen. This Dr. Smith reports lessened consciousness occurred in from three to seven minutes, and as it increased the power of fixing the attention was lessened, the perception of light, and we believe of sound also, was lessened. My friend, whose countenance I could watch, had a flushed face and streaming eyes, and was very hilarious in about ten minutes, and for about fifty minutes seemed as happy as a king, but gradually we both felt less happy and became less talkative, our excitement subsiding by degrees until we became quite taciturn and felt extremely miserable. A condition of intense depression, with muscular

relaxation, was realized ; he was nearly unconscious. There was a sense of impeded respiration—it was panting and gasping, coldness of the feet, and general chilliness, even to shivering, and diminished frequency in respiration and pulsation. Then we felt the horrors and the sorrows as we had experienced the so-called pleasures of the drunkard's lot, the duration of the effects varied with the different alcohol "from 46 to 120 minutes," the description concludes.

It must be remarked that the last power to be regained was that of consciousness. We ask earnestly, is it the conclusion of a sober mind, in view of these effects of alcohol, that the experimenter is using an agent which can augment or increase any of the vital functions, or can be anything else than a depressor of vital action, and we further ask are we not fully justified in absolutely ignoring the conclusions of Dr. Smith in reference to the variation in the action of alcohol? He stands alone among the distinguished scientists who have with the greatest ability and care prosecuted this inquiry in maintaining an essential difference in the various alcoholic liquors, and in maintaining that any form of alcohol augments the exhalation of carbonic acid from the lungs. We make no remark on the strange hypothesis which underlies Dr. Smith's entire research, viz. : the classification of alimentary materials into excito-respiratory foods and non-excito-respiratory foods. It seems to belong to the same department of science as the famous theorizing of Liebig, and strangely enough it seems to have proved nearly as captivating to a large section of the profession.

Dr. Smith would have done well if he had simply accepted Dr. Prout's judicious conclusions from his observations that the effects observed from food have not been remarkable, a sound physiology, even in Dr. Smith's day, might have told him that the carbonic acid eliminated within two hours of taking food had no connections whatever with the food value of the materials so recently taken, and might thus have saved him all the labor, including "the horrors and sorrows" involved in this most heroic research. Dr. Smith,

however, has left on record in the Philosophical Transactions, his claim to two positive results of his great and laborious inquiry, to which we by no means dispute his right, viz. : that alcohol is the great disturber of the system, and that men differ in every subject which has been investigated. M. Perrin of Paris, professor at Val de Grace, published, in 1864, a valuable contribution to this inquiry, which had been presented to the Academy of Sciences. The entire essay would well repay translation, but we must be content to present some only of the facts and conclusions. White and red wines of various alcoholic power, which was in all cases accurately determined, pale ale, and Strasbourg beer, and grogs, or simple diluted alcohol, were submitted to experiment, the drinks were limited to strictly hygienic doses, so as not to disturb the stomach or brain, an important precaution, and were taken to dejeuner at 10.30 A. M. The observations were begun at 12.30, and continued till 5.30, six records made during that time. A rich, white wine (Chablis) of 11 per cent. alcohol, determined a diminution of carbonic acid of 22.44 per cent. A very light wine of 6 per cent. alcohol, a diminution of 11.43. A light, red wine of 9 per cent. alcohol, a diminution of 20.00. Strasbourg beer a diminution of 17.71. In general the diminution of carbonic acid has been in direct relation to the alcoholic richness of the liquid employed, but as a *contre preuve*, M. Perrin tried simple diluted alcohol "grogs," with the following results: 90 grammes of diluted alcohol of 45° according to the alcoholimetre of Gay Lussac, determined a diminution of carbonic acid of 11 per cent. These observations are quoted by Dr. Parks in his "Practical Hygiene," as proving a very great diminution in the exhalation of carbonic acid when alcohol is present in the system, and we gratefully accept the facts which have been so carefully established by M. Perrin. Unfortunately, for purely hypothetical reasons, and evidently to support a preconceived theory, like Dr. Hammond, M. Perrin did not commence his observations till two hours had elapsed from the imbibition of the alcohol. The value of

the observations would have been much enhanced had M. Perrin followed Dr. Prout in instituting his observations immediately after partaking of the liquid. We should then have had the opportunity of learning M. Perrin's explanation of the almost instantaneous action so emphatically remarked upon by Prout and Vierordt.

It would have been interesting, also, had he followed Dr. Fyfe in making observations on the day following that on which a somewhat large dose of alcohol had been taken. From M. Perrin's conclusions we present the following: 1st. Taken in moderate doses and under the usual conditions, which may be regarded as hygienic, these drinks have for their constant effects the diminution of the quantity of carbonic acid exhaled by the lungs. This diminution which progresses during the three first hours which follow the ingestion, varies from 5 to 22 per cent., according to their respective alcoholic strengths. 2d. When the production of carbonic acid diminishes, as it does steadily during the first three hours after a repast in which alcohol has been taken, the volume of air expired diminishes also, but in a less marked degree, and not with the same regularity.

Dr. Richardson, in his Cantor Lectures on Alcohol, 1875, adduces his own observation on the diminution of carbonic acid exhaled by the breath under the action of alcohol. He says, in the extreme stage of alcoholic insensibility, short of the actually dangerous, the amount of carbonic acid exhaled by the animal and given off into the chamber I constructed for the purposes of observation, which was reduced to one-third below the natural standard. On the human subject in this stage of insensibility, the quantity of carbonic acid exhaled has not been measured. But in the earlier stage of alcoholic derangement of function, the exhaled gas was measured with much care by a very earnest worker, Dr. Edward Smith. In these early stages, Dr. Smith found that the amount of carbonic acid was reduced in man as I have found it in the lower animals, so that the fact of the general

reduction may be considered as established beyond dispute.

Lehmann, in his valuable work, has recognized the great practical importance of the investigation bearing on the various conditions which influence the elimination of carbonic acid. Of the effects of different diseases in their influence on the respiratory products, and the various results deducible from the numerous experimental researches in connection with the phenomena of respiration, no better or more enlightened account can be found than is given in the third volume of his "Physiological Chemistry" (pp. 376-382). Lehmann mentions some original observations of his own, and he had himself proved by experiment the diminution, both absolutely and relatively, of the exhaled carbonic acid after the moderate use of spirituous liquids, which he observes confirmed the observation of Prout and Vierordt on the subject, in his remarks on this influence of alcohol on the respiration, he says: We cannot believe that alcohol belongs to that class of substances which is capable of contributing towards the maintenance of the vital functions. Lehmann takes a wide grasp and sound philosophical view of the subject, and presents some most valuable reflections in the direction of applying this knowledge to important practical purposes in the treatment of disease. We offer no apology for presenting them here. He says the value of investigation on normal respiration in reference to the science of medicine can never be over-rated, for when once the fact is universally admitted that the thing to be considered, in many diseases, is to furnish a copious supply of oxygen to the blood, which has been loaded with imperfectly decomposed substances, and to remove as speedily as possible the carbonic acid which has accumulated in it, these observations will have afforded as true remedial agents which exceed almost any other in the certainty of their action. We may thus aid a tuberculous patient quite as much by recommending him to respire a moist, warm air, as if we prescribed Lichen Carrageen or Ol. Fecoris Aselli, instead of torment-

ing our emphysematous patient suffering from congestion and hæmorrhoidal tendencies with aperients and saline mineral waters, we might relieve him far more effectively by recommending him to practice artificial expansion of the chest in respiration (filling the lungs several times in course of an hour), or take such exercise as is fitted to produce this result, while we should forbid in this and many other cases the use of spirituous drinks, and not prescribe tinctures which hinder the necessary excretion of carbonic acid. We abstain, however, from offering any further illustration of these doctrines, since the reflecting physician will not blindly follow any guide, while the mere empiricist can never learn thoroughly to heal any disease, whatever may be his knowledge of physiology and pathological chemistry. We have now presented a sufficiently extensive and conclusive body of evidence for the establishment of a great fact, that under all circumstances and under all conditions the introduction of alcohol into the system diminishes the product of respiration. To convey to the unprofessional reader an adequate conception to the terrible significance of this interference with this most essential of all the vital functions, would require such detailed discussion of the elementary principles of physiological science, as would be impossible within our limits. To these we would, therefore, very earnestly suggest the careful study of the respiratory function, which may be accomplished with the aid of those excellent text-books on physiology which are now within the reach of all, and where the value of oxygen as a life sustainer, and the power and danger of carbonic acid as a life depressor are fully set forth. This study will be the more profitable and the more attractive, the more extensively it is prosecuted, and the whole truth which concerns the science of life, and of living wisely and well, will abundantly reward the student in the pursuit of such knowledge. For the present we must be content in few words to indicate to our medical brethren some of the many weighty truths which are brought to the surface in this research. There we find truth overflowing

and abundant, truth profitable for doctrine, for reproof, for correction, for instruction. It is a veritable scripture written, we say it with reverence, by the finger of God, in the hidden recesses and secret places of vital phenomena, and revealed and read to us by these painstaking interpreters of His works and ways of working, and to be read by all those (if they will know His will in this matter) who take pleasure therein. True doctrine and sound instruction on the nature and action of alcohol are required, that we may protect ourselves individually, socially, nationally, from the dangers of which it is the prolific cause; reproof and correction are needed, scathing as the truth of God can make them, for the exposure of the many plausible pretences which are current and fostered under the cloak of interest and prejudice as to the innocency and benignancy of this deceitful spirit, this enemy of the human race.

One important consideration we must not omit to state, viz. : that all this accumulation of evidence as to the deportment of alcohol, comes at the cost of much personal labor from men of science, with no prejudice against vinous or other alcoholic liquors, many of them with strong and decided prejudices in their favor, and what have they discovered for us?

1st. What alcohol is in its action on the body. *A.* That it is always a depressor of the vital functions. *B.* That its effects are immediately and directly depressant, without any previous stage of excitement. *C.* That it deports itself as poisons are known to operate. *D.* That the phenomena of alcoholic intoxication are largely influenced and determined by the detained carbonic acid caused by alcohol.

2d. What alcohol is not. *A.* That it is not a stimulant of any of the vital functions. *B.* That it is not a food, accessory or otherwise; it acts by depressing the respiration almost instantaneously, and before any modification of or influence on the tissue changes is possible. No more important, practical lesson can be drawn from these researches,



than a sound principle of guidance as to the true and proper place which alcohol ought to hold as a therapeutic agent, and if any deduction can be more direct and conclusive than another, or more inevitable, it is this, that when exalted sensibility or vital activity require to be repressed, when a vital stimulus is contra-indicated, when the detention of the products of vital changes in the system is to be desired, and by all means secured, then the physician, guided by science, will find his most powerful resources in alcohol.

To complete the picture of the doings of alcohol in this hidden sphere of its operations, the examination of other facts in its history will be necessary. In tracing its action in the system, the characteristic physical properties of alcohol claim attention, its low specific gravity, and low boiling point, its extreme volatility, its perfect and singular diffusibility in the animal fluids, its solvent power over and capacity for adhering to the living tissues; then must be traced the influence of this peculiar agent on the chemical constitution and vital properties of the blood, its influences on the temperature of the body and on the processes of the nutrition and metamorphosis of the tissues, determining, as it is known to do, an infinity of morbid degenerative changes in these.

On all these subjects a large amount of most valuable material has been accumulated, and only waits to be effectively utilized to supply light and leading on this most perplexing and momentous question. We regard the depressant action of alcohol on the respiration as the starting point, the prime fact in a great series of most important consequences which attend upon its introduction into the living system, the full significance of which will not be realized, till they are viewed as a whole, and in their true relations one with another.

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## ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE CURE OF INEBRIATES.

The sixteenth annual meeting of this association was held in Brooklyn, N. Y., November 10, 1886, in the parlors of Dr. Shepard's Turkish Bath Hotel. The president, Dr. Joseph Parrish of Burlington, N. J., occupied the chair, and delivered the regular address, "On Climacteric Periods in Inebriety." The usual resolution of thanks followed, and also a very commendatory discussion in which all the views of the president were most heartily sustained. (This address will appear in our pages in full in the future.)

*Dr. T. D. Crothers* of Hartford, Conn., read a paper on Cocaine Inebriety (published in this number.)

In the discussion which followed, Dr. J. B. Mattison of Brooklyn, N. Y., said he had seen seven cases, and been consulted in three others. Of these, five were physicians, two druggists, and one a journalist. All took it hypodermically, and nearly all had begun it in the hope of freeing themselves from opium, to which they were more or less addicted. One physician asserted that he used it as a stimulant after fatiguing professional work. None succeeded in the effort at self-cure, and all but one forged another link in their chains. Of the ten, one became demented in less than a fortnight, six had hallucinations or delusions, or both, while two were greatly emaciated — one more so than he had ever noted. He believed addiction to cocaine alone quite uncommon, though such cases had been reported abroad, and probably would be here. He regarded its continued use, hypodermically, in any disorder as one calling for caution, and thought this method of employing it more dangerous, especially for self-using, than when taken by the mouth. Cases of its habitual use, with or without opium, he considered more disastrous, less hopeful, and requiring longer treatment than where opium was used, and that any estimate of its

effect which did not include its power for ill, as well as good, was mistaken and incomplete.

*Dr. F. A. Blanchard*, superintendent of the Inebriates' Home, had noted two cases under his care. Mental impairment, delusions, and hallucinations, were observed. One patient, as *Dr. Crothers* had mentioned, used the drug frequently, sometimes every fifteen minutes. He thought its use by those addicted to alcohol or opium intensified the injurious effect, and that when the drug was withdrawn, the bodily recovery was more prompt and decided than that of the brain hallucinations and delusions, the latter persisting after marked physical improvement, and necessitating a more prolonged period for complete convalescence. He believed it impossible for any one to use this drug in doses of eight or ten grains a day, without becoming insane. The hallucinations which followed from large or long-continued doses, very closely resembled those of general paralysis, only they were more transient. In all cases, great disturbances of nutrition are noticed; nausea, vomiting, and inability to retain solid food in the stomach. This seems more of a nerve failure than from local irritation or inflammation of the stomach. In one case a bronzed skin, and hyperanæsthesia of the surface of the body was prominent. He also thought great danger came from the extravagant accounts of such cases published in the daily press. It attracted attention, and roused inquiry among the drug neurotics, to test the drug, and should its first effects be pleasant they continued its use ever after. Mania and dementia was sure to follow its use, and he advised strongly against its use except for specific purposes under the direct care of a physician.

*Dr. E. C. Mann* of Brooklyn, N. Y., had seen only a few cases, and they were all mixed ones, associated with other neuroses. He had no doubt of the existence of simple uncomplicated cases where cocaine was found to produce pleasing effects, and its use was continued. In small doses in neuresthenia it was valuable; an increase of the dose seemed to be followed by different effects. The acute delirious mania and dementia, which is noticed in these cases, are

undoubtedly distinct forms of drug mania. Great fear and dread of danger in the future was one symptom, the painful hallucinations of the senses was another. This associated with states of anæmia and hyperaemia were very marked. Its action in large doses was very profound and rapid, and it could not be used indiscriminately without great danger. He agreed with the remarks of others that these cases of coca inebriates were difficult to treat, and the use of this drug should be restricted, and should never be used as a substitute for narcotics.

*Dr. Lewis D. Mason* of Brooklyn, N. Y., fully agreed with the experience of others in these cases. He had found coca-preparations vary greatly, and had concluded this was due in many cases to the alcohol, the drug itself being inert. The use of tinctures of coca in the opium or alcohol inebriates were dangerous, and also cocaine, which instead of benefiting the case, brought on other and worse disorders. As a local anæsthetic, cocaine was valuable, but its effects on the system taken hypodermically or by the mouth, were entirely different. He did not think it would come into general use as a narcotic, and be used as alcohol or opium, but it was the duty of physicians to warn others of its dangerous effects.

*Dr. Albert Day* of the Washingtonian Home, of Boston, Mass., remarked that he had treated eight cases, and had seen a half a dozen more in the course of the year. Most of these were drug neurotics who had used alcohol and opium before. Three of them seemed not to have used any narcotic before, and began its use from a physician's prescription, for some nerve trouble or defect. In all of these cases, pronounced and delirious mania followed its use. After this subsided, dementia and stupor followed. I have seen several cases of insanity that was traced to this cause. The mania in two cases resembled that seen in delirium tremens, and the man was thought to be suffering from this disease. He had cocaine secreted about his person, and was using it every hour hypodermically. He soon became demented and lost control of his extremities, and was quite manageable. He suffered from a period of suicidal depression. These are the

worst cases of inebriety I have ever treated, and their recovery seemed unusually prolonged and complicated. For weeks the nutrition of the body suffered. I should never use cocaine for its narcotic properties; it is too dangerous and uncertain. I feel assured it will never come into general use as a narcotic drug. I have never obtained much benefit from the coca preparations, unless given in enormous quantities, and even then its action was transient.

*Dr. Joseph Parrish*, the president, remarked that his experience was limited with the use of cocaine. He had seen cases of cocaine inebriety, and considered them very dangerous and difficult to treat. In these cases, it was taken to relieve a feeling of weariness and pain, and its effects were most charming. But the action of the drug on the nutrition was marked, and while bringing relief, was associated with intense lassitude and debility. He thought the fact that coca users in Central America die of phthisis so commonly, was good evidence of its peculiar action on the nutrition, and that its poisonous effects might be traced to the disturbance of this function. He trusted that these cases would be studied more carefully by the profession, and the facts be better known.

*Dr. Shepard* of Brooklyn, N. Y., thought that hot air baths and free perspiration would, by diverting the blood to the surface, greatly relieve the evident internal congestion in many of these cases, and be a most valuable remedy.

*Dr. F. E. Turner* of Wilton, Conn., thought all these cases should come under early restraint, and be prevented from using this or other drugs until they were insane. He would restrain any one who was found using narcotic drugs regularly. It was suicidal insanity and should be recognized.

*Dr. Albert Day* of the Washingtonian Home, Boston, Mass., read by title a paper "On the Hygienic Care of Inebriates," which will be published later.

The annual election of officers resulted in the re-election of the former board. After the usual resolutions of thanks to *Dr. Shepard* for the use of his parlors, and his election as member of the association, the association adjourned to meet in Hartford, Conn., June 10, 1887.

## COCAINE INEBRIETY.

BY T. D. CROTHERS, M. D.,

*Superintendent Walnut Lodge, Hartford, Conn.*

My experience in cocaine inebriety is limited to seven cases. Two were under my care for treatment, three came personally for advice, and two consulted me by letter.

In the cases under my care a correct history was obtained; in the five cases who sought my advice by person and letter, their own personal statements were the chief sources of information. In two cases their statements were confirmed by other parties, and where such statements corresponded with the facts in other cases, they were accepted as probably true. The following are some of the facts which appeared from the history of these cases:

Alcohol, opium, chloral, bromides, and other narcotics, had been used more or less to excess in all these cases before cocaine was taken. In four of these cases coca had been used for months before cocaine was tried. Hence, they were all literally drug maniacs, or inebriates, whose special symptom of disease is a morbid impulse for narcotic drugs, which will bring rest and relief to the organism. Some details of the history of these cases will indicate the leading facts.

Case 1. Had been under my care twice before for alcoholism and opium excesses, at intervals of two or three years; he had taken cocaine for six months, but latterly had suffered a delirious mania after using this drug, and becoming alarmed, came to me for treatment. He was a "repeater," who alternately went from one drug to another for relief.

Case 2. Under my care; had been treated for morphine excess two years before. He had used cocaine for one year, and had been a moderate and occasionally excessive user of spirits. He belonged to that class of drug-takers who try everything that promises relief for real or imaginary ills.

Case 3. Not under my care ; was a landlord who had used alcohol for a long time ; finally he resorted to chloral and bromides to break up the alcoholic impulse. He suffered from rheumatism, and took coca and then cocaine. He had used the latter for six months, and was alarmed at the extreme debility and nausea it produced.

Case 4. Not under my care ; had used the bromides for insomnia, then changed to alcohol, and finally used cocaine ; he had taken cocaine eight months, and was greatly debilitated, had night-sweats, and thought he had consumption.

Case 5. Had used alcohol for years, then tried chloroform, finally used coca, then cocaine ; the latter he had used for over a year ; he was anæmic, and had deranged nutrition, and his mind was greatly enfeebled.

Case 6. Facts by letter. Had used patent bitters for years, then wine, and finally coca and cocaine. He was delirious from the latter at times, and unable to do business.

Case 7. Facts by letter. Had always used wine and cider ; took bromides for sleep, then tinct. coca, then cocaine.

In these cases the use of cocaine was merely another stage of the drug mania. The use of alcohol and other narcotics to excess had developed a state of the nervous system which called for relief, and they turned to any drug that would answer this purpose. Such persons often develop a credulity and a morbid impulse to try everything that promises relief, hence they are pioneers among experimenters.

Another fact of general interest from these cases was an inherited neurotic taint or tendency. Thus, four cases inherited a marked nerve defect from their ancestors ; two had acquired a brain and nerve debility, and no history on this point was obtained from one case.

To particularize, Case 1 had an inebriate father and consumptive mother, and was an unstable, impulsive man.

Case 2 had an insane father and an epileptic brother, and two inebriate uncles on his mother's side.

Case 3. Had a pauper ancestry, paralysis, hysteria, and great eccentricity of conduct in parents and near relatives. He was a very nervous, excitable man.

Case 4. Had two uncles in insane asylums, mother died of consumption, one brother an imbecile, and his 'father' was a wine-drinker.

Case 5. Had a severe army experience, was a neurotic dating from wounds in the army, attacks of malaria and typhoid fever.

Case 6. Had a head injury in childhood, a sunstroke later, followed by a most persistent dyspepsia for years.

I think that further study and experience will sustain these two facts :

First. That nearly all the cocaine, bromide, chloral, ether, chloroform, and coca inebriates are complex cases or those who have used other drugs, including alcohol and opium, and have finally turned to some one of these drugs. That all of these cases have had a period of drug preparation, and may be called drug neurotics, who are always using some similar compound. Probably a large proportion of the alcohol and opium cases begin without this drug taking, but it may be said that the cocaine, bromide, ether, chloroform, and chloral takers follow as a rule from states of previous excess in drug taking.

The second fact is, that nearly all these drug maniacs are neurotics from inheritance and acquired states of degeneration. The morbid impulse for this or that drug is only another symptom of brain defect.

It is evident that a study of the symptoms and effects of any new narcotic must include the heredity and history of other drug excess. Where these clinical facts are not considered, such cases will present many confusing histories.

While cocaine has come into prominence as a local anæsthetic, the statements of its action in large and long-continued doses are of necessity vague and contradictory. Exhaustive histories and studies of many cases are needed before accurate conclusions can be reached.

The following are some of the facts which seem to be peculiar to cocaine cases. The first effect seems to have been that of a transient stimulant ; a most agreeable exhil-



aration ending in sleep, with no unpleasant after effects. Later, when large doses were taken, the general stimulation at first became a marked exaltation, and in many cases a mania. The mind seemed to be in a whirl from one thought and subject to another, without ability to concentrate on any one object.

This stage would of course vary largely with the case and conditions, and resembles alcoholic delirium, only it is more diffuse and transient. The second stage, that of sleep and stupor, comes on quickly, and the desire for sleep seems overpowering and intense. The stupor is more like that from opium, only less pronounced and more easily broken up. On awakening, the least exertion is followed by extreme and most wretched debility; nausea and vomiting came on in some cases, also a pronounced melancholy which seeks relief from this drug again. The three stages of stimulation, narcotism, and depression, seem very intense, and may be called literally mania, coma, and melancholy.

In three of the cases I have noted, the first stage of exhilaration was protracted for a long time by taking small doses. The state produced was one of great satisfaction, with freedom from care and contentment with everything. After a time, the sleep impulse became annoying for the reason that it was not gratified. A short sleep would be followed by a waking period, filled with similar ungratified impulses. Large doses had to be taken to break up this impulse. In two cases large doses were taken for its rapid narcotic action. The first stage was to the patient a short confused exaltation, with a pleasing rush of thought and events. To others, this stage was a wild confused mania. The sleep which followed was deep and profound. Profuse perspiration and general failure of nutrition followed.

In one case under my care a relapse took place, and I observed the heart's action. In the first stage of mania it was increased to 108, and as stupor came on, ran down to 70, but at all times was regular. The temperature did not vary over one degree, and was generally higher than natural.

The pupils were at first dilated, then contracted. A profound anæsthesia of the mucous membrane of both eyes, nose, and mouth was noticed. The narcotism resembled that from opium. On awakening a general prostration was apparent; the pulse and temperature were lowered. The stomach would not retain anything. Intense hyperæsthesia pervaded all parts of the body; insomnia and the deepest melancholy was present, and yielded slowly to treatment.

Another case, of an intelligent man, who described the first effects of cocaine as a sudden expulsion of all aches and pains, followed by a quiet satisfaction and a most pleasing natural sleep. Later, when taking large doses, his wretchedness would lift like a cloud, and great activity of both mind and body that was pleasurable followed. After the narcotic stage ended, he seemed to be worn out, without any hope or faith in the present or future. Every sensation was most miserable. Taste, sight, hearing, and feeling were all perverted, and, as he expressed it, seemed in league to drive him to madness.

In one case the mania of the first stage was noted by loss of memory and inability to recall any event of the past. The duration of the different stages varies greatly. Sometimes the mania of the first stage is longer than the period of narcotism, and *vice versa*. In some cases the last stage of melancholia is of great length.

So far, I believe the common sequelæ of alcohol and opium inebriety, particularly the neuralgias and congestions, are much less frequent in these cases. But in their place appears a general mental and muscular degeneration with extreme depression, particularly of the nervous, respiratory, circulatory, and vaso-motor systems. I think it very probable that the continued use of coca is often followed by excess in cocaine. One of the reasons is that the various preparations of coca on the market are compounded often from dangerous alcohols. In this case the action of coca is destroyed and replaced by the degeneration which comes from the alcohol. Thus, when tinctures of coca are given,

made from wood spirits, the effect of this remedy is to produce degeneration of both brain and nerves, which will seek relief from narcotics of any kind. I am also persuaded to believe that cocaine inebriety, or coca mania, will never become prominent, and will be confined to a class of neurotics who, by the use of other drugs, have prepared the soil for this new drug-mania. It will never take the place of alcohol or opium in common use. Its action is too uncertain and transient. The present novelty and glamour about its effects will die away when its real value is ascertained. The element of contagion in these cases presents a curious psychological phase; thus some extravagant newspaper statement of the terrible effects of this drug will rouse curiosity to test it. Or the printed history of a case appearing as daily news draws the attention of neurotics, and it is safe to say that a large per cent. not only purchase, but test this drug on themselves. Cocaine should not be used as a substitute in breaking away from the use of other narcotics. It should not be used in large or long-continued doses. In melancholia it is likely to provoke the disorder it is supposed to break up. It cannot be used indiscriminately. However valuable it may be, there is a certain limit to its power and practical use.

The treatment of cocaine inebriety is the same as that of alcohol or opium cases. Forced abstinence from the drug, rest, and building up the system, are the general methods pursued. More profound degeneration and debility exist than in other forms of inebriety, requiring a longer time for successful treatment.

States of mania and melancholy often continue for some time after the use of the drug is given up, and disappear very slowly. It is for these states that special surroundings and care are essential. The prognosis is always uncertain. The craving for drugs for their effects may be broken up and restoration follow, but such cases generally are unable to bear much exposure, and not unfrequently relapse on the slightest temptation. In the cases under my care, both

recovered, but will probably relapse, using the same or some other drug in future.

The following conclusions are sustained by the best evidence which has been presented so far.

The use of cocaine to excess in persons who have never used alcohol or other narcotic drugs before, is very rare. Among inebriates and drug maniacs, cocaine inebriety is no doubt increasing. Its peculiar dangerous effects on the body will prevent its general use as an intoxicant to any great extent. It acts more rapidly than opium, but its effects pass off more quickly. Its first effect is more exhilarant than alcohol, but it is uncertain and variable. This stimulant action develops mania, followed by narcotism and melancholia. When given in cases of melancholia in large doses, it changes the case to mania, then finally relapses bringing back the case to melancholia again. As an intoxicant it is more dangerous than alcohol or opium. As a form of inebriety it is more difficult to treat, requiring a longer time to break up, because of the physical and psychical complications. It cannot be used as a substitute for any other narcotic, or as an antidote or remedy.

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The exportation of New England rum from Boston and other ports for the last few years shows the same tide-like movements that we have called attention to before. Thus in 1880, over 1,200,000 gallons were sent away, the next year it fell to 889,599 gallons. In 1882, it was at the lowest point, 563,911 gallons. In 1883, it went up to 578,789 gallons. In 1884, it rose to 667,847, and last year it was 875,539 gallons. It is noticeable that the most of these spirits go to places on the coast of Africa.

It is a curious fact that although the use of opium and its preparations are increasing, the American market has lately been over stocked, and a lot which cost four dollars a pound was sold at auction for one dollar and seventy-five cents a pound.

## OPIUM ANTIDOTES.

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BY J. B. MATTISON, M.D., BROOKLYN, N. Y.

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If ought were asked for as to further proof of the widespread extent of opium addiction in this country, it could easily be given by citing the number of individuals engaged in vending the various nostrums, each of which it is asserted has the only true claim to merit as the one genuine sovereign cure for this phase of human ill. It is now about seventeen years since an illiterate brick-layer in a western city, who made some pretension to the healing art, by virtue of a small stock of herbs stored in a little back apartment, was struck with the shrewd idea that in this peculiar field lay a mine, which, perchance, might be worked to no little pecuniary profit. Acting on this impulse, the opiate mixture was compounded, advertising circulars, vaunting the nostrum, made their appearance, the aid of the press was secured, and business began. It grew apace, and the coffers of its enterprising projector expanded as the circle of his deluded victims widened, in their costly but luckless efforts for relief. It was not to be expected that this genius would long be permitted to enjoy a monopoly of such a stroke of fortune, and so, ere many moons had waned, claimants for like honor put in an appearance, the rivalry between them being measured by extent of their pecuniary resources, and fertility of advertising device. It proved a fatal attraction to more than one, who had begun a legitimate medical career, and had taken obligations, binding as an oath could make them, to do right by their suffering fellows, but who ignored both personal and professional pledges in their greed for gold, and betook themselves to the camp of the common charlatan. The reason of this, probably, is the peculiar nature of this disorder, which impels its subjects to court privacy, and in every way secure themselves from public gaze. This feel-

ing, which is largely the outcome of that mistaken opinion, held by the laity, and, strange to say, some in the profession as well, that those who by force of necessity, quite beyond control, have become victims to opium, are simply the slaves of a vicious indulgence, deserving censure rather than charity; this feeling, we say, is the main cause of that desire for secrecy on the part of the patient, so essential to the charlatan in this special field, and of which he cunningly takes advantage, to his own financial good. In hope of escape, the habitue often spends much of both time and treasure to no purpose, and after months or years, may be, realizing it futile, he abandons further efforts, and berates himself for his folly, yet finds some consolation in the thought that no one else is aware of the course he has been pursuing. Proof of this fact is not needed, yet it may be noted, one of these nostrum circulars is before the writer, in which, among several asserted claims to special merit, his absolute secrecy, even from nearest and dearest friends, or relatives.

It really is surprising, that men of more than average intelligence, some of our own fraternity, again and again, we have known such, will consign themselves to such keeping; case after case has been under our care in which months and years of time, and hundreds of dollars had been expended on these nostrums without good; in many instances, doubtless, ignorance as to the make-up of the mixtures leads to their purchase, yet it would seem that every well-educated physician should be aware of their nature. Such, however, is not the fact, and so with the hope that the reports given in this paper may be accorded with as wide publicity as their value demands, that it here sufficed to say, that what great advance has been made in the knowledge of drugs and their uses, no agent has yet been discovered that will take the place of opium, when once the system has become habituated to its use, and any individual making an assertion to the contrary, may be safely set down as a knave or a fool.

Some time ago, the writer was requested by an editor of

a well-known journal, to prepare this exposé, and not long after a letter was received from the gentleman who has made the main report given, stating that he had been instructed by the State Board of Health to examine as many specimen opium antidotes as could be secured, and asking my aid in making the list as large as possible. The result is appended, making, it is thought, the most extensive yet presented, and one which should suffice to convince every reader, who may have had any doubt as to the true nature of these nostrums. Before giving details, it may be of interest to note the *modus operandi* of these individuals. In every instance, an accurate statement as to the daily or weekly amount of opium, or its equivalent, used, is an absolute essential in their so-called treatment, as one says: Be especially careful to determine accurately, how much of the drug you use in twenty-four hours, or in every seven days, if preferred. The time of taking, at what hours, is another point desired, and these being given, it is quite easy to prepare the mixture of such opiate strength as will give a certain amount of the habitual narcotic in each prescribed dose, this amount being exactly that of the previous taking. This done, the habitue is simply continuing his addiction under a new name, and care having been taken that the opiate shall be quite enough for his need, he trudges along, hugging the delusive hope that in no very long time he will reach his wished-for good. The initial amount of the nostrum supplied, is intended for one month's using: Then the patient having become accustomed, it is supposed, to this new order of things, another supply is given for a similar period, differing from the first, only in that the amount of opium is lessened with each succeeding month, and so the play goes on until the patient, failing in his effort, becomes distrustful and betakes himself to some other specimen of the same genus, or else abandons the whole affair. The price, per month, of the nostrum, depends mainly, of course, on the amount of opium it contains; supposing a habitue to be taking one grain of morphia daily, it ranges from two and one-half to twenty dollars.

Patients are urged to procure a "full course," several months' supply, in the out-set, the reward for which is a more or less generous reduction in the cost of the nostrums, and though this is not very explicitly stated, a large stock of shekels to the credit of the vender. The mock honesty of some of these charlatans is amusing. One writes: I do not advertise or send out circulars; as there are hundreds of quacks who are doing such low and mean work, I have become disgusted. Another says, I am aware that there are heartless imposters, destitute alike of position and principle, who are constantly endeavoring to entrap and victimize the anxious and, perhaps, too credulous, sufferer. The cunningly-devised spurious recommendations of these swindlers are well calculated to deceive the unwary. You will most certainly be swindled by trusting to their representations. Still another, speaking of the so-called treatment which he, in common with others adopts, says, with an outburst of indignant virtue, it is practiced so shamefully and heartlessly by charlatans in various western and southern States.

Some of these nostrums are nothing but disguised solutions of morphia. Several years ago, the writer read a paper on this topic, before the Kings County Medical Society, and among the specimens, presented one analysis made by a competent chemist:

Water,	.	.	.	.	.	.	.	.	28.66
Glycerine,	.	.	.	.	.	.	.	.	66.89
Morphia,	.	.	.	.	.	.	.	.	<u>4.45</u>
									100.00

The coloring was aniline; others may contain quinine, strychnine, cannabis, atropia, hyoscyamia, or other ingredients; but be the mixture what it may, the prospect of failure is vastly greater than that of success.

Through the kindness of Dr. Abbott, health officer and secretary of the Massachusetts State Board of Health, I quote from the last official report of that gentleman, as follows:

One of the most evident proofs of an increase in the



consumption is the existence and growth of a considerable number of so-called cures or antidotes of the opium habit. These preparations are advertised broadcast in the public prints, and occasionally in professional journals, which should serve a better purpose. If these so-called cures were of a similar composition to the great mass of empirical remedies, but little harm would result from their use. This is not the case, however, with the preparations in question. With but one exception, the active ingredient in the so-called cures examined by the analyst, prove to be opium itself, in one or another of its varied forms. The preparations of this character, enumerated in the analyst's report, were obtained, in all instances, either directly from the proprietors or from their authorized agents, and were accompanied by their published circulars.

The purchaser of such preparations thus becomes the victim of a cruel fraud, under the supposition that he is obtaining a remedy or antidote, the article which he receives being simply the enemy in disguise, against which he is bending his energies to obtain relief. This shameful practice deserves nothing but the severest condemnation. The circulars referred to as accompanying the cures, are omitted from this report. It is sufficient to say that their style is remarkably similar, in their methods of securing and fleecing their victims. Each one accusing the other of fraud, and publishing as endorsements the names of many prominent persons in various parts of the country. We have sufficient proof that, in many instances, such names are published without the least shadow of authority.

The nostrum samples we secured were examined by Dr. B. F. Davenport, State analyst of the Massachusetts Board, and his report is appended :

“I have to report upon twenty samples of so-called opium cures, which have been obtained from their proprietors. They have all been tested for the presence of morphine, and they have all responded to the usual reaction thereof, except the ‘Keely's Double Chloride of Gold Cure.’ This one, how-

ever, gave no reaction for the presence of even a trace of gold therein. The cures were all uniformly obtained, as for one who had acquired the habit of taking the, for an opium eater, very moderate quantity of only one grain of morphine per day. It was expected, as proved to be the case, that the cures for even such a mild case, would contain enough morphine to furnish unmistakable evidence of its presence, if they contained any at all. The twenty varieties of cures, were as follows: S. B. Collins, La Porte, Ind.; Mrs. J. A. Drollinger, La Porte, Ind.; W. B. Squire, Worthington, Ind.; P. B. Bowser, Logansport, Ind.; J. C. Beck, Cincinnati, Ohio; J. L. Stephens, Lebanon, Ohio; H. L. Baker, Toledo, Ohio; J. S. Carleton, Chicago, Ill.; L. Meeker, Chicago, Ill.; W. T. Phelon, Chicago, Ill.; L. E. Keeley, Dwight, Ill.; H. Kane, New York city; Charles C. Beers, New York city; Salvo Remedy Co., New York city; F. E. Marsh, Quincy, Mich.; B. S. Dispensary, Berrien Springs, Mich.; B. L. Woolley, Atlanta, Ga.; Geo. A. Bradford, Columbus, Ga.; J. C. Hoffman, Jefferson, Wis.; Jos. A. Dunn, Elizabeth, N. J."—*Journal of Medical Association.*

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The following are some of the conclusions from the late excellent address by Dr. Peterson, president of the Alabama Medical Society. Alcoholic liquors are never necessary in health. They are never necessary as food for man, etc. They do not give warmth and strength to the body, but diminish both. They do not increase the powers of resistance and endurance of mental and physical fatigue. They do not increase mental vigor. They give the heart accelerated action, temporary, followed by a reduction of tonicity. They may increase nerve tension for a time, but reaction follows quickly and greater exhaustion. They are harmful to brain workers who take but little exercise. In a physiological condition of the system they are never beneficial, and in disease should only be prescribed by an expert. As a medicine they are often important, but every possible restriction should be thrown around their improper sale and use.

## Abstracts and Reviews.

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### INEBRIATE MANIACS.

Psychologists and students of mental science have long been aware of the presence of a new division of the army of the insane, a division which is steadily increasing, more mysterious and obscure than the ordinary insane, and constituting a new realm of the most fascinating physiological and psychological interest. It consists of the alcoholic, opium, chloral, ether, and chloroform inebriates. They appear in law courts, as both principals and associates in all degrees of crime, and are called drunkards, tramps, and dangerous classes. In conduct, character, and motive, they constantly display many prominent symptoms of insanity, such as manias, delusions, deliriums, and imbecilities. Yet public opinion refuses to recognize these symptoms, because they are associated with intervals of apparent sanity in act and conduct. Clergymen and moralists teach that these cases are simply moral disorders, growing out of "a heart deceitful and desperately wicked," and only remedied by moral and legal measures. Scientists, who study the history and progress of these cases, find that they are diseases, following a regular line of march, from definite causes, on through certain stages of growth, development, and decline, the same as in other maladies.

Many theories are urged to explain the presence of this army of inebriates; one of which asserts that inebriety is evidence of the moral failure of the age, of the increasing wickedness of the times, of the triumphs of the growth of evil over the good, etc. Another theory assumes that the great increase in the manufacture of all forms of alcohol and other drugs, and the facility with which they are procured, will fully explain the presence of this class. A third theory

considers them the defective, worn-out victims of this crushing, grinding civilization; the outgrowths of bad inheritance, bad living, and the unfit generally, who are slowly or rapidly being thrown out of the struggle. A fourth view regards them as simply coming into prominence, through the great advances in the physiology and pathology of the brain and nervous system, in which the physical character of these cases is recognized.

Inebriate maniacs have been called "border-land" lunatics, meaning persons who move up and down on the border-line between sanity and insanity, and, when studied closely, divide naturally into many classes. One of these classes, which in most cases represents extreme chronic stages, appears prominently in the daily press, in reports of criminal assaults and murders. When the genesis of the crime and the so-called criminal are studied, unmistakable symptoms of mental unsoundness appear. In most cases the victim is a neurotic by inheritance and growth. In other words, he was born with a defective brain and organism, and both growth and culture have been imperfect. Many and complex influences, of which alcohol or other narcotics are prominent, have prepared the soil, furnished the seed, and stimulated the growth of a positive disease of the brain. The higher brain-centers have slowly succumbed to a paralysis, as mysterious as it is certain in its march. The victim's capacity to comprehend his condition, and adjust himself to the surroundings, becomes less and less, and he is more and more a waif, drifting with every possible influence. In appearance, head, face, and body are angular and imperfectly developed, the nutrition is defective, the eye, the voice, and every act and movement indicate degeneration and disease. Any general history of the crime reveals delirium, hallucinations, delusions, and manical impulses. Thus, in one day, the papers recorded the following among other cases of this class: An inebriate, of previously quiet disposition, killed his wife, supposing she had put poison in his food. Another man in a similar state shot a stranger who differed with him on the age of Queen

Victoria. Another man killed his father, who remonstrated with him for overdriving a horse. Still another assaulted fatally his brother, who would not give him money. Two men, both intoxicated, mortally wounded each other in a quarrel as to who should pay for the spirits drank. Another man killed both wife and child, supposing the former was going to desert him. Thus, day after day, the records of these inebriate lunatics appear, and each case is as positively the act of a maniac as if committed by an inmate of an asylum, whose insanity was long ago adjudged. In each case a long premonitory stage has preceded this last act; the individual history of almost any inebriate furnishes abundant evidence of this. In the court-room this insanity of the prisoner is ignored, and the legal fiction, that drunkenness is no excuse for crime, prevails. The prisoner is assumed to be always a free agent, and the use of alcohol a willful act, the consequences of which he should be held accountable. As a result, the victim is destroyed, and the object of the law, to reform the offender and deter others from the commission of crime, lamentably fails.

The second class of these inebriate maniacs are less prominent in the press, but are more often seen in the lower and police courts. They are arrested for drunkenness, minor assaults, and all grades of breaches of the peace. They use alcohol, opium, or any other drug for its effect, and their character and conduct are a continuous history of insane and imbecile acts. In appearance they are suffering from disease, and the hereditary history is prominent in ancestral degenerations and defects. They are repeaters for the same offense over and over again, and their crime is of a low, imbecile type against both person and property, characterized by profound mental and moral paralysis. In popular estimation they are simply armies of vicious, wicked persons, who are so from love of the bad and free choice of evil. This idea prevails in the court-room, and the judge, with a farcical stupidity, admonishes, rebukes, and sentences these poor victims, who are supposed to be made better by the moral and physical

surroundings of the prison, and the sufferings which the vengeance of the law inflicts. The case may have appeared many times before for the same offense, and the act committed may have been particularly insane and motiveless, and yet the judge deals out justice on the legal theory that the prisoner is of sound mind, and fully conscious and responsible. The result is clearly seen in the records of police courts, showing that the number of persons who are repeatedly arrested for drunkenness are increasing. Another result more startling but equally true, appears. Every law court where inebriate maniacs are tried and punished, on the theory that drunkenness is no excuse for crime, and that the victim should be treated as of sound mind, with free will to do differently, is a court of death, more fatal than all the saloons and beer-shops in the world. Such courts destroy all possibility of restoration, and precipitate the victim to lower grades of degeneration. It has been estimated that ninety-nine out of every one hundred men who are arrested for drunkenness for the first time, and sentenced to jail, will be returned for the same offense within two years, and appear again with increasing frequency as long as they live. The report of the hospital at Deer Island, near Boston, where drunkards are sent on short sentences, for 1883, showed that one man had been sentenced to this place for the same offense, drunkenness, seventy-five times. Before the temperance committee of the English Parliament, in 1882, many cases were cited of men who had been sent to jails and work-houses from twenty to two hundred times for drunkenness. Practically, every sentence for drunkenness for ten, thirty, or sixty days, costs the tax-payers from fifty to one hundred and fifty dollars; and more completely unfits the victim and removes him from the possibility of living a temperate, healthy life. Enthusiastic temperance men have drawn the most startling conclusions from these lower court records of arrests for drunkenness. Here each arrest stands for a new man and case. The nine thousand cases recorded as having been sent to Deer Island in 1883 in reality only represent a

little over two thousand different men and women, and yet the number of arrests is taken as evidence of the increase of drunkenness.

A third class of inebriate maniacs are less common, and yet they often come into great notoriety from some unusual act or crime. They are known as moderate or occasional excessive users of alcohol; or opium and chloral takers. In most cases they are from the middle and better classes of society, and are beyond all suspicion of insanity, and their use of these drugs are considered mere moral lapses. Such persons will suddenly exhibit great changes of character and conduct, and do the most insane acts, then resume a degree of sanity that corresponds with their previous character. Thus a prominent clergyman of wealth and high standing in the community, who was a wine-drinker, suddenly began a series of Wall Street speculations of the most uncertain, fraudulent nature. He implicated himself and a large number of friends, and finally was disgraced. A judge, occupying a most enviable position of character and reputation, who had used spirits and opium for years at night for various reasons, suddenly gave up his place and became a low office-seeker — was elected to the legislature, and became prominent as an unscrupulous politician. A New England clergyman, after thirty years of most earnest, devoted work, renounced the church and became an infidel of the most aggressive type. Later it was found that he had used chloroform and spirits in secret for years. A man of forty years, of tested honesty and trustworthiness, proved to be a defaulter. It was ascertained that he used chloral and opium in secret.

Hardly a year passes that bank defaulters, forgers, and swindlers do not appear among men whose previous character has given no intimation of such a career. When their secret history is ascertained, the use of alcohol, opium, and other drugs is found to be common.

Another class of previously reputable sane men suddenly commit crimes against good morals. The unusual boldness of their acts points to insanity, and it is then found that they

are secret or open drinkers, using alcohol or compounds of opium. Such men come into politics with a most insane ambition for office and childish delirium to appear in public as great men. They often become enthusiastic church and temperance men, acting along very unusual lines of conduct, and doing unusual things. Signs of mental failure are clearly traced in the childish credulity, or extraordinary skepticism, or extreme secretiveness, which are all foreign to the history of their past. Then, at last, such men leave strange wills, with strange bequests. They are contested; the expert is called in; and, while he is certain of insanity and irresponsibility of the testator from the history, he can not make it appear clearly to the court. These cases are more or less familiar to every one, yet the history of drinking or using narcotics is concealed. In an instance of recent date, the will of a very rich man contained a large bequest to the Freedman's Bureau. This was a very strange and unusual act; but the heirs, rather than expose the secret drinking of the testator, let the will stand. To history this was a very generous deed, but in reality it was the mere freak of a maniac.

These persons appear to all general observation sane and fully conscious of the nature and character of their acts; yet they are in a state of intellectual delirium and instability, which comes out prominently in the strange, unusual conduct. The co-ordinating brain-centers are so damaged as to prevent healthy, consistent, uniform brain-action. A certain range of thought and action may seem sane, but an ever-increasing undercurrent of disease carries them further from normal brain-health. These cases excite the wonderment of the hour, and to moralists are phases of human depravity, but to the psychologist are explosions of masked diseases almost unknown and undiscovered.

It will be apparent to all that the most unfortunate treatment and injustice is meted out to these cases. Thus, the inebriate maniac in delirium who commits murder and assault is not a criminal to be cured by punishment. His



brain has broken down and needs the most careful restorative treatment. He is physically sick, and can never recover except by the use of well-directed remedies and along the line of exact laws and forces.

In the second class, the profound failure of the present methods of management should direct attention to the real means of cure. Science shows, beyond all doubt, that a system of work-house hospitals, where all these cases can come under exact physical care and restraint, and be organized into self-supporting quarantine stations, will not only protect the community and tax-payer, but put the victim in the best condition for permanent recovery. Here he can be made a producer, and taken from the ranks of consumers and parasites of society. If he is an incurable, he can be made self-supporting, and society and the world can be protected from his influence.

In the third class, when public opinion recognizes that the occasional or continuous use of alcohol or other narcotics is dangerous and likely to produce grave mental disturbance, these alterations of character and conduct will be no mystery. Such men will be recognized as diseased, and come under medical care and recover. Medical and scientific men must teach the world the nature and character of alcohol, and the diseases which are likely to come from its use. This moralists, clergymen, and reformed inebriates, can never do. To-day these inebriate maniacs appeal for recognition and sympathy from many homes and firesides. They call for help. They ask for bread. We are deaf to their entreaties—we give them stones. In language that can not be mistaken, they tell us of unstable brain-force, of tottering reason, of marked, insidious disease. We call it vice, and treat them as of sound mind and body. They ask for help for the brain, starved, disorganized, and growing feebler. We give them the pledge and prayer, and taunt them as vile, and willful, and wretched sinners. What wonder that the glimmerings of reason and the lights of a higher manhood should disappear in the darkness of total insanity

under such treatment? In the delirium of criminal assault, or the imbecilities of the low drunkard, or the strange acts and changes of character in the so-called moderate drinker, they mutely appeal for aid, and we brutally fine, imprison, and persecute them. This is the spirit and theory which seek to support through temperance efforts, through the church, and political parties, to remove an evil of which they have no comprehension. When all this thunder and roar of temperance reformation shall pass away, the still, small voice of Science will be heard, and the true condition of the inebriate and the nature of his malady will be recognized.

DR. CROTHERS in *Popular Science Monthly*.

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#### MORPHOMANIA IN FRANCE.

M. le Prof. Ball, the celebrated alienist of St. Anne, dedicated a special article in the *Journal de Medicine* to morphomania, which, according to him, is rapidly assuming great proportions in France, especially amongst the gentler sex. The symptoms are very characteristic, but often the patient tries to put the medical attendant off the scent and then some difficulty in the diagnosis is experienced; but if a close observation is made, something unnatural in the conduct of the person will arouse suspicion. For instance, if he is in a meeting, his face will become changed and downcast and he no longer takes interest in what is passing around him, but if he gets an opportunity of absenting himself for a few minutes, he will return quite bright as before, for in that short interval he has given himself an injection. However, there are two sure signs which will betray the patient, no matter how he may try to conceal his habit, and those are to be found in the skin and the urine. The skin will be found to be covered with little dark spots, situated in the center of little indurations, about the size of a large shot. It is needless to add that these indurations are the result of the little wound of the needle, but as these lesions are generally found on the inside of the thighs, the patient refuses to let them be

seen, and in that case examination of the urine will prove of great service. A few drops of tincture of iron are put into the suspected liquid, and, if morphia be presented, a blue tinge will be produced. The prognosis of morphomania is not as fatal as is generally supposed, but there is a danger from the fact that the dose has to be continually increased, and in the end the cachexia becomes so pronounced that the patient falls an easy prey to tuberculosis. As to the treatment, Mr. Ball recommends a brusque suppression of the drug, provided the patient can be well watched, but in private practice he thought that it would be found necessary to proceed gradually.

Preparations of belladonna might be employed to calm the irritation, or cocaine, but this latter remedy might prove to be as bad as the evil it was given to cure.

*Medical and Surgical Reporter.*

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#### REPORT ON THE INFLUENCE OF ALCOHOL AND BEER.

Dr. Bikfalvi reports a series of experiments on digestion in the *Deutsche Medicinal Zeitung*, with the following conclusions :

1st. Alcohol even in small quantities arrests the digestive processes. The digestion of albuminates is arrested more than the transformation of dextrine to grape sugar. Gastric juice with 20 per cent. of alcohol digests six to seven times smaller quantities than the normal secretion. This is explained by the precipitation of pepsin by the alcohol.

2d. Beer does not promote digestion. It appears that this is due not so much to its alcohol as to the presence of large quantities of neutral salts that bind the free acid of the gastric secretion. If a few drops of hydrochloric acid are added this no longer inhibits.

3d. Wine in small quantities appears to promote digestion ; in large quantities its action is that of alcohol.

4th. Black coffee also when taken in small quantities

stimulates the digestive function, large quantities *act* unfavorably.

5th. Moderate smoking does not alter digestion, excessive smoking however is of bad influence, because the tobacco derivative alkaline reaction of nicotine neutralizes the gastric juice.

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### PERIODIC OPIOMANIA.

Dr. Hughes, in a late number of the *Alienist and Neurologist*, writes as follows on this subject :

There is a periodic form of morphia-craving, so much like periodical dipsomania as to entitle it to the term opiomania, which develops in patients of neurotic temperament who have been given morphia or opium to any considerable extent. This shows itself sometimes in persons who have been broken of the opium habit, and these are the most hopeless cases to treat.

This periodic opiomania is characterized by an overwhelming morbid craving for the drug, which comes on like the craving for drink to the periodic drinker, without warning, except a morbid restlessness and sometimes an irritable stomach; which a full dose of morphine a third to half a grain will appease, and if followed by a night of sleep, the craving will be allayed sometimes for a week, sometimes for a month. These cases should be studied more than they are in the light of what we know of the periodic drink craving. They are easily developed by the administration of morphine or opium to neuropaths, in whose ancestry insanity and allied nervous diseases have been numerous.

But this is not the acute neurosis *sui generis* developed by repeated excesses in opium-taking, in the non-hereditarily neuropathic, but rather a less painful and less violent and more chronic and enduring form. From three to six weeks of abstinence or abstinence and substitution combined, ordinarily suffices to cure the acute opium neurosis. The chronic form of the trouble is much more persistent, persisting oftentimes for a life-time, because a dormant morbid

heredity has been awakened into active life not to slumber again till the last sleep of life overtakes the unfortunate sufferer. The true opium neurosis sustains about the same relation to the chronic periodic form of opium neuropathy that alcoholism sustains to dipsomania.

Alcoholism is a morbid condition of the nervous system, developed by repeated alcoholic libations, dipsomania, a latent neuropathic condition, readily excited into activity by the poison. And the poison often develops this disease with surprising rapidity. These are the persons to whom a single drink is often dangerous and astonishes us with its consequences, because the latter are so extraordinarily disproportionate to the time the victim has been given to drink. Such persons become drunkards in a day, as it were; and persons like them become opiomaniacs or periodic opium-takers, or have for the intoxication insatiable desire after a few doses of morphia or opium.

The opium maniac, like the dipsomaniac, is prepared by inherent organic instability to be made so after one or a limited number of toxic impressions. In some instances he is as susceptible, by hereditary instability of psychical nerve elements, as powder or dynamite are to explode, needing only the exciting spark or concussion of a marked opium impression. But true meconeuropathia, or the consequences of prolonged and continuous meconism in non-narcotic doses, so gradually induced that a kind of tolerance to the graver direct toxic effects is established, and the ordinary prompt narcotic effects are resisted by the organism, is, like chronic alcoholism, as contradistinguished from dipsomania, more gradually effected and developed by changes induced in the cerebro-spinal centers, through slow poisoning and nutritional perversion of neural tissue.

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THERE are eleven different specifics on the market for the cure of inebriety, and over fifty different patent methods of reform and cure; and still the army of inebriates keep on undiminished.

## ALCOHOL AND TOBACCO STATISTICS.

The *Boston Advertiser* is responsible for the following :

The increase in the amount of whisky distilled and drunk during the year now ended was 1,600,000 gallons over the amount for 1885, the total consumption of this liquor being 7,700,000 gallons.

Estimating the population of the country at 60,000,000, this gives about one gallon and a pint for each one of us, including women and school children and those of yet younger years.

The consumption of beer amounts up to some 264,000,000 gallons, an increase of more than 1,500,000 from the preceding year, which admits of an allowance of eleven gallons to each inhabitant, or, counting out the children and one-half the adult population as total abstainers, the rest are to be credited with the imbibition of one-half pint daily.

Analyzing these figures further it is seen that while the increase in the total amount of spirits consumed is considerable, individually we are growing more temperate.

For in the years closely preceding, the quantity of whisky drunk in the United States averaged almost six quarts for each inhabitant ; and going back to 1870, the records of the department show a production, under a low tax, that gave nearly two gallons yearly to each man, woman, and child in the country.

The growth of a preference for malt liquors, which these figures show very plainly, the average consumption of beer having increased from seven to eleven gallons within eight years, is doubtless one of the influences that have produced this result.

The use of tobacco is also constantly increasing, except in the form of snuff, the falling off in the consumption of that article reaching nearly two hundred thousand pounds.

In the comparatively novel practice of cigarette smoking, which has, in fact, come into vogue within less than fifteen years, there has been an increase of 25 per cent., the total

number burned being 1,310,000,000 or about twenty-two apiece all around.

Of manufactured tobacco for smoking and chewing, there were 191,000,000 pounds used, averaging about three and one-fourth pounds each, and of cigars 3,500,000,000, an increase of 152,000,000 from last year, or about fifty-nine for every inhabitant.

If, now, a calculation is made of what these large aggregates have cost the consumers, supposing them to have made their purchases at retail, we may reach an approximate imagination of the tax which our minor vices lay upon the collective purse of the average man. Taking the lowest prices — as four cents for a cigar, and ten cents for a gill of whisky, the total will be found to amount to more than \$1,280,000,000 — not so very much less than our National debt — or \$20 each from all who live in our prosperous land.

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### PHYSICAL SOUNDNESS.

The *Philanthropist* is a monthly journal published in New York, devoted to the promotion of social purity and the suppression of vice. It is a valuable paper and is doing grand work. We give the following extract from an article by Dr. Lewis :

By physical soundness, we mean, a life in such consonance with the divine laws expressed in physical being, that strength, health, and long life are the normal results. Much the larger share of human suffering comes through impaired physical life. Weakness and disease make men a burden on society, rather than a help and blessing to it. Weakness and disease lead to poverty ; these three are the prime cause of drunkenness, social impurity, larceny, and kindred evils. Mental imbecility is also promoted through weak and diseased physical life. This promotes crime and increases society's burdens. We can only state these salient facts. Each thoughtful man will apprehend their truth : Hence no man is free from guilt who transmits a single element of physical weakness or disease which he can avoid.

This is doubly true of all tendencies and diseases which impair nerve force. This is so intimately connected with character, mental and moral, that one cannot be touched without direct effect upon the other. The habitual use of stimulants and narcotics destroys nerve force and mental balance. These effects are often more prominent in the second and third generations, than in those who first indulge. Every man who uses alcohol, tobacco, opium, and the like, must transmit to his posterity, physical decay, mental unbalancing, and moral perversity.

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MECONEUROPATHIA ; BY DR. C. H. HUGHES, EDITOR  
OF THE "ALIENIST AND NEUROLOGIST." REPRINT FROM  
THIS JOURNAL.

In this excellent monograph the author draws a line of distinction, between the direct effect in physiological disturbance of chronic opium poisoning, and the remoter sequences to the central neural mechanism, cerebral, spinal, and ganglionic. He places the neural psychical entailments of both alcohol and opium upon the same morbid plane, so to speak.

The author, in a personal note, calls attention to chronic morphia neuropathy in its medico-legal aspects, and hopes to write a work on this subject. He believes that chronic morphia taking is like that of chronic alcoholism. In both cases the impaired volition and modified psychical character, entitles the victim to a most charitable consideration in courts of law, and often legal protection. He thinks the granting of divorces to husbands, on the ground of opium eating on the part of the wife, should be condemned as a crime against the victim of nervous disease, who was in most cases irresponsible.

Opium cases come frequently from some painful affection, either physical or psychical, for which opium has been found of great value, given by the druggist, physician, or husband of the victim. They are literally the agents leading her into



degradation and ruin; then, with the aid of the courts, abandoning her to the "Inferno of Despair."

The author has opened a "rich mine" of facts, and will no doubt develop some most practical truths in his further researches.

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*Stinson & Co.*, the great publishing house of Portland, Me., is one the best places to purchase fine steel plates in the country.

*Inebriism*, a pathological and psychological study, by T. L. Wright, M.D., Bellefontaine, Ohio, has reached its second edition, and we most heartily commend it to all.

*An Epitome of New Remedies*, by Parke, Davis & Co., Detroit, Mich., is a valuable reference work for the office table, giving a short history of all the new and many old drugs and their uses.

*The Electrical Engineer*, published at 115 Nassau St., N. Y. city, is the best journal published in this most fascinating field of research. It is edited by superior experts as well as scientific philosophers.

*Science*, a weekly publication of comments and notes on matters of science and progress, is both ably edited and practically the most valuable periodical that comes to the home of the thinking man.

*New York to the Orient*. By J. M. Emerson. E. R. Pelton & Co., publishers, 1886. This is a new practical record of a European trip by a practical man, and one that will amply repay the time spent in reading it.

*The Homiletic Review* for January and the new year promises a rich treat of the best thought from the ablest clergymen in the country. The subscription is three dollars a year. Funk & Wagnals of New York are the publishers.

*Natural Causes and Supernatural Seemings* is the name of the last work of Dr. Maudsley. It is undoubtedly his best work and one that will live a long time as the best presentation of the scientific side of the mysteries of life.

*The Popular Science Monthly* for January, 1887, D. Appleton & Co., publishers, New York city, begins the new year with a rich feast of scientific facts. A year's subscription to this monthly will bring larger returns than from any other source.

*The Scientific American*, published by Munn & Co., of New York, presents weekly to its readers the best and most reliable records of various improvements in machinery, while the scientific progress of the country can in no way be gleaned so well as by the regular perusal of its pages.

*How to Strengthen the Memory.* By M. L. Holbrook, M.D. Price \$1.00. New York: M. L. Holbrook & Co. This is a very clear, sensible work, describing the natural philosophical methods of strengthening the memory. To all who wish to improve their memories Dr. Holbrook's work will be of great aid, and we commend it cheerfully.

*The Essential Nature of Religion.* By J. Allanson Picton. Price, 15 cents. J. Fitzgerald, Publisher, 108 Chambers St., N. Y. The author of this profoundly philosophical essay holds that in the relation of our personal life to the world about us is found that which insures to religion an adequate scope and a permanent place, under all fairly conceivable resolutions of thought; and that though religion may be called by many names, its essence is recognizable in all the highest activities of human life, even where these have been condemned as irreligious and impious.

*The History of the First Inebriate Asylum in the World*, by its founder, Dr. Turner, is in the press of The Case, Lockwood & Brainard Co., and will be out soon. This will undoubtedly be the most important work on this subject issued, not only from a historical and scientific point of view, but as illustrating the storms of opposition and slow growth which greets every new advance of science. The story of its author, who like all other pioneer benefactors of the race, was denounced and bitterly opposed, is a sad, fascinating record. This work will mark a new era in the inebriate asylum movement.

## Editorial.

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### JOURNAL FOR 1887.

Ten years ago the first number of the Journal appeared. By the few specialists and pioneers in this field it was most warmly welcomed. But it was evident that only in the next century, and by the next generation would its real worth be understood and appreciated. The ten years which have passed, have been marked by struggles, misrepresentations, sneers, and doubts, from both moralists and scientists. But through all this there has been a steady, silent growth of the facts, and recognition of the principles which have been presented in this journal.

The dogma of the disease of inebriety was sharply disputed ten years ago. To-day it is accepted by all advanced students of science. Asylums for the treatment of inebriates were denounced as pretending to treat a disease which did not exist. To-day such statements would reflect on the intelligence or honesty of the author.

Here, as elsewhere, a few men are always doubters. The war is still a failure, religion and history a sham, and scientific advance only a retrograde. To these men inebriety is still vice and wickedness, and all really scientific efforts to solve it a delusion. The JOURNAL OF INEBRIETY has the unique experience of seeing its essays and papers going the rounds of the literary world, credited to every other source but the right one. Whenever its articles are translated into German or French, they are very sure to be re translated into English and be credited to foreign authors. Many very valuable papers which appeared first in its pages, have brought great credit to new and unknown authors, and given permanent place in temperance works and prize essays. Some temperance critics after denouncing us sharply have appropriated as their own entire articles from the JOURNAL with but little

change. Medical and temperance politicians have been fortunate in getting the credit for learned articles that were first published in the JOURNAL under the signature of different authors. Many of the editorials have had a strange itinerate history and appear in many unexpected forms and places. Dr. Mason's statistical papers, and Drs. Parrish, Wright, and Day's philosophic deductions, like the "Wandering Jew," are ever on the march, incessantly appearing here and there, in both new and old dresses and shapes, but never credited or labeled so they can be traced to their real authors. The JOURNAL OF INEBRIETY is not complaining, and has no time to hunt down this parasitical army who feed on its pages. The next century is rapidly nearing, and the army of scientific advance are joining us from all sides. Their aid and encouragement are increasing; voices of cheer and kindly criticism come up from all sides. Over the seas, into the libraries and homes of many of the scientific workers of the world, this journal goes with welcome. Its pages are open for all truth. It represents no one man, asylum, or theory. Its aim is to present the facts, which the largest experience and study indicates to be true to-day. The scientific study of the inebriate and his malady has scarcely begun. Only a few men have landed on the shores of this new continent of psychological research, and are preparing to move inland to discover the country.

The JOURNAL OF INEBRIETY seeks to record these discoveries, and point out the way to understand the laws and forces which control inebriety and the inebriate. Who will join with us in this great work? who will study these poor inebriates in their homes and firesides, and ascertain the physical conditions which made them what they are? who will unite with us in our efforts to solve this problem, on the lines of physical and psychological researches. The JOURNAL OF INEBRIETY has left the stream of experiment and is headed out into the great ocean of discovery! Another ten years is before us; years of constantly increasing growth, of fuller and larger acceptance of the truths we urge.

## PERIODICAL INEBRIETY.

No class of inebriates present more fascinating interest, than those in whom the drink impulse recurs at fixed and stated intervals. Like the paroxysms of intermittent fever, their regular recurrence and distinct free intervals, point to some unknown laws whose uniformity is both mysterious and startling; or, like bodies approaching the sun, their orbit grows smaller, and the free interval of sobriety shorter, until finally they merge. The periodical drinker has become the steady user of spirits, and has passed into the realm of dementia and paralysis. In the following case, the exact recurrence of the drink impulse, and its unchanging history, make it noteworthy.

B. a graduate of Yale College, and a lawyer of great oratorical abilities, became a steady drinker of beer and wine in 1868. In 1874, he was an inebriate, drinking constantly to intoxication. He had two attacks of delirium tremens, lost all position in society, became an outcast and inmate of the lowest places, and was also frequently arrested for drunkenness. His heredity was from a drinking, gambling father, and nervous mother, who became insane finally, and died in an asylum. In 1876, he joined the *Murphy Movement*, and became a lecturer. For a long time he worked with great power and sobriety, then suddenly drank to great excess for a week or more. Then signed the pledge and began again. Three months after, he fell as before, and after a few days became temperate and started again. In 1879, he came under my care for a short time. It was ascertained that this drink paroxysm returned every ninety-one days, rarely ever varying more than a few hours. It came on most unexpectedly, and if he could drink to stupor for two or three days, it would seem to wear away, and in a week die out altogether, if not, it might last ten days, but not longer. In 1884, I saw this case again, and learned from him these very curious facts. He is still in the lecture field, speaking every week from three to five times, for nine or ten months of the

year. He is constantly traveling, and has good health, takes great care to live as regular as possible; never uses any spirits or tobacco, and has no desire or taste for them. Every ninety-one days (no matter where he is, or what he may be doing), a strange, nervous trembling comes over him. This is followed by a great thirst for water, and finally spirits. His mind becomes filled with thoughts of the pleasures of the effects of spirits. Everything suggests this in new and fascinating forms. All his old drink experience will come back with ravishing minuteness. His fear of betrayal of this condition, produces the most intense agony of mind. He becomes pale, and perspires, cannot talk well, breathes with great rapidity. If he can be taken to a room and be alone, he will drink large quantities of water, and vomit freely; then if he can get spirits, or bromide of sodium, and become stupid for a few hours, this feeling will wear away. A high fever and great prostration follows, and in a week or more, he is able to go on with his work. For three years past he has not taken spirits at these times, but keeps by him always large quantities of bromide of sodium. So regular and certain is the return of this drink paroxysm, that he prepares for it in advance, arranging to be with some friends, on or about this time. He is obliged to do this, for fear he will be caught at some hotel or among strangers, and use spirits. He has tried repeatedly (by becoming interested in some work or topic) to forget the time of this drink impulse, and has partially succeeded, but it invariably comes on again. He has been seized on the lecture platform, in the cars, or in the night, wakened from a sound sleep and filled with this drink delirium. He calls these attacks his "mind drunks," and when over, never thinks of them until a day or so before the regular time of approach. Then he is filled with apprehension that they will result in apoplexy and death. He is a most earnest, energetic man, clear, and fully sensible of his condition, reasons well, and seems above the average in culture and intelligence. As a lecturer in the temperance field, he is a man of great power and force.

Recently, I received a letter from him, in which he says that it is twenty years since he stopped the use of spirits, and during all this time, this drink craze has come back regularly every three months. He thinks they are as intense as ever, but not of so long duration. He has been able for several years to pass over them without taking spirits, but he must have bromide or chloral to help him. He now takes better care of his health, works less, takes more rest, and thinks he will finally overcome these paroxysms. The same desire for the effects of spirits follows an intense thirst, as before. He says he "is crazy at these times, and worse than all, he is most painfully conscious of it." What he seeks is stupor to keep down this impulse, and enable him to control himself. In all probability this drink paroxysm will die out, or develop into some form of mania, from the use of spirits again, and from which he may not recover. As long as he retains his usual vigor and power, no change will naturally follow. But should he break down, and his health be permanently impaired, a very uncertain future is before him.

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There is a very striking correspondence in the following : A judge in a court of last resort gave among other reasons for denying a new trial to an inebriate who was convicted of capital crime: that drunkenness had been considered always a vice and wickedness in all nations, and laws had been instituted for its punishment; that all moral teachings, as laid down in the holy writ and common law, based on experience and medical testimony, sustained this view. The drunkard has ever been considered a criminal to be punished.

In 1662 Sir Matthew Hale in condemning two women to death as witches in London gave as his reasons: "That there are such creatures as witches, he made no doubt at all; for, *first*, the scriptures affirmed so much; *secondly*, the wisdom of all nations had provided laws against such persons, which is an argument of their confidence of such crime; *third*, Sir Thomas Brown, a physician, was clearly of the

opinion that such persons were bewitched ; that in Denmark lately there had been a great discovery of witches who used the same way of afflicting persons."

These profound errors may have the sanction of religious and secular teachings, and be accepted by the most learned and intelligent, and only in the next age be recognized and excite profound wonder at their existence.

JUN 27 1888

### MORAL INSANITY IN INEBRIETY.

The inebriate is always morally insane. His conduct and thoughts indicate clearly impairment of the higher brain functions. Brain nutrition and circulation are deranged, and both structural and functional lesions follow. Conditions of anæsthesia of the higher brain centers, and failure to recognize the difference between right and wrong are common. Beginning in selfishness, loss of pride, indifference to honor, truthfulness, and the rights of others, with grossness of thought and act, it finally culminates in a moral palsy that cannot be mistaken. Often the intellectual activity and physical condition seem unchanged. The ordinary duties of life are fulfilled and realized, and no criminal act or word reveals the real condition. The victim has been born with a defective brain, and alcohol with other causes have developed this defect into positive degeneration. Or the brain has suffered from some injury which takes on this form of degeneration. The following brief notes of cases point to a new field of research, that is, so far, practically unknown.

Dr. Hall, professor of Physiology at Vassar College, formerly Physician of the Woman's Reformatory Hospital in Massachusetts, sends us the following :

Case one was a woman who had been imprisoned over a hundred times for inebriety. She began to drink early in life, and was never free from spirits except when in prison. Her husband was dead, her family had grown respected members of society, and had practically disowned her, as



beyond all hope of recovery. She never was known to utter a word which would indicate that she felt the least sorrow or remorse for her conduct. Arguments were useless, she was irresponsive to every appeal to her pride or honor. Finally, she died utterly unconscious of any wrong or moral injury to herself, or others.

The second case was a girl of sixteen, who drank spirits from early life. She declared she would always drink whenever she could get it. She gave no reason or excuse for this course of conduct; neither was she obstinate or obdurate, but simply outside the pale of ordinary motives and reasoning. No further history of this case is given, but a short, troubled life and early death is the common fate of such cases.

Dr. B. sends me the following :

An only son, well educated, of fine, moral character, after three months' service in the late war, came home a moderate drinker. Slowly he developed the very lowest traits of character, became a bar-keeper and steady drinker. Was treacherous, deceitful, and slanderous. He forged notes on his father, and used every means to procure money. All love for his parents, honor, pride, and self-respect, were gone. While he did not commit any criminal act, and seemed to possess a degree of intelligence, he seemed to have no consciousness of duty to others. He was in a semi-intoxicated state most of the time, and never gave any excuse or reason for his course of life. Some years ago I was called in consultation in the case of a merchant, who had been a loving, gentle husband up to the time of failure in business, when he became an inebriate, and drank every day to excess. His character changed, and he became brutal to his wife, using violence on every occasion. He told falsehoods, deceived his friends, and was dishonest and treacherous. He seemed keener and more active in business, but his moral character had changed. He spent his evenings in low brothels and bar-rooms, was very profane in his language, and changed in pride and appearance. The question of his sanity was raised, and a commission decided he was fully sane. In a second examina-

tion, in which I was present, he was affirmed to be insane. Two years later, general paralysis developed, and he is now an inmate of an asylum.

A middle-aged man was placed in my care, who, when under the influence of spirits, engaged in the most extraordinary swindling schemes. He associated with gamblers and the lowest characters, and acted as a receiver for articles that had been stolen. During this time he was not intoxicated, but drank steadily. He treated his family brutally, and neglected his business, that of a druggist. He seemed of fair intelligence, gave no reasons or excuse for his conduct, and seemed to have no conception of honor or duty. He obeyed all the rules, when under observation, but could not be trusted in any respect. He was under treatment four months, and remained free from spirits, but was ever planning schemes of dishonesty, and intensely selfish and untruthful. His former history was that of a proud, kind-hearted man, who was always very generous and honorable in his relations to others. A few months after leaving my care, he was sentenced to State prison for forgery.

A man of twenty-two came under care, for continuous drinking and spending his time in the lowest brothels. He was the only son of a distinguished professional man, and had been brought up in surroundings of great refinement and culture. At puberty he manifested a taste for low company, which steadily increased. He would spend all his spare time with hackmen, and in low saloons. He entered college, and seemed very bright and capable. He was very selfish to his parents and associates, was untruthful, dishonest, and treacherous. He brought his low companions in college, and seemed to take pleasure in involving others in trouble. He was expelled from college, and drank to great excess for a time, then became a steady, moderate drinker. He listened in silence to all rebukes and entreaty, made no apology or gave any reason for his conduct. When urged, said he would do better, but never altered his conduct, or tried to change. He drank with every opportunity, and was without

honor or sense of duty to any one. I testified that he was insane, and he was taken to a private asylum, where the superintendent, after an examination, discharged him as sane. A few weeks later, he was arrested for swindling, and finally went to an insane asylum, and died later.

In a case in which I was consulted, three boys in a family all manifested, in early life, the lowest tastes, with cruelty to animals, and all drank, and were intoxicated from early childhood, with every opportunity. One died at thirteen, from some acute disease following syphilis. The second one drank, had syphilis, and finally was sent to an insane asylum for dementia. The third one is living at home, associating with the coachman, and the lowest company he can find. He drinks every day, and has no sense of honor, or affection for any one. The father was a moderate drinker, and speculator, who died early, leaving a fortune. The mother was a leader of fashion, a proud, spirited, nervous woman, whose mind was much impaired at the singular conduct of her sons.

These cases are sufficient to show that moral insanity is very intimately related to inebriety. The term moral insanity is clinically correct, and describes a diseased state of the higher brain centers, which are called the moral faculties. Of course, other diseased states are associated with it. While the man may reason and exhibit a fair degree of brain vigor, he seems without any power to distinguish between right and wrong, or to recognize any claims of honor or duty. This is a physical condition, either congenital or acquired, whether it can be cured or not, is a problem for the future. There can be no question of the value of physical restraint, and early care and treatment.

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Morpheomania may always be treated by abrupt withdrawal of the drug, except in conditions when such methods are contra-indicated by the vital forces of the patient, or concomitant pathological phenomena. The method should also be abandoned if reactionary collapse result.

## INEBRIETY IN PARIS.

A correspondent sends us the following : "Drunkenness is apparently on the increase in Paris. The number of workmen who ruin themselves by absorbing too much absinthe, and other deleterious mixtures, grows more and more. There is, therefore, abundant room for the operations of an energetic temperance society to repress the ravages caused by 'petit bleu' and the opal colored liquor, which is imbibed by most Parisians in a moderate quantity in order to give them an appetite for dinner. Within the past fortnight several deaths from drunkenness have occurred in the metropolis. In one case a respectable official in one of the public departments was found dead in his bed. In a cupboard near him were several empty bottles which had contained rum. The post-mortem examination disclosed the fact that he had died from the effects of large and frequent doses of undiluted Jamaica. Only yesterday a drunken woman, hitherto an abnormal spectacle in the streets of Paris, set fire to her clothes with a match on entering her room and was burned to death. It is not at all uncommon to meet workmen returning home so utterly intoxicated that they fall down at every step, and are only preserved from breaking their skulls or being run over by vehicles by the providential intervention that watches over the inebriate. A short time since I saw a drunken lamplighter trying to illuminate the shades of evening by lighting a tree with his six-foot pole. A magnanimous policeman, who for a few moments placidly watched the man's effort to pursue his occupation under difficulties, finally went over to him, took the pole, lighted the lamps, and sent the devotee of Bacchus home between two boys."

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HE was Professor of Diseases of the Mind and Nervous System, and wrote me, "Your views of inebriety are extravagant. I have never seen a case of disease pure and simple among inebriates, and I think your journal and the theories it promulgates are beyond the pale of scientific recognition.

Later, he wrote, "My cousin is on trial for murder committed in a state of intoxication. I am convinced he is diseased and irresponsible ; will you send me papers and books that I may be posted on the disease side of these cases." The answer was, "Study your cousin's case, as you would one of general paralysis. Go out in the street and study every inebriate you can ; you will find more facts from this source, than has ever been printed."

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### THE TREATMENT OF INEBRIETY.

The result of all experience hitherto may be summed up in one word — asylums. The patient should be placed where restraint can be used to replace his own weakened will power. His mode of life should be the most placid and uneventful one, compatible with a certain degree of contentment, and he should be under the daily, nay hourly, observation of men skilled in that branch of the profession which relates to inebriety. These indications can only be fulfilled in an asylum, and to such he should go. It is to be hoped that the public will one day see this matter in its true light, and provide shelter for a class which needs medical care and treatment to the full, as much as they who crowd our insane hospitals, and which promises so much better results than those suffering from any other form of mental alienation. As bearing particularly upon this point, and showing the opinion of men who have made a study of the matter, I cannot forbear making the following quotation from a paper by Dr. Crothers, of Hartford, Conn.: "In every town and city of the country there are men and women who are slowly committing suicide by drink ; destroying the peace and happiness of others, breaking up good order and healthy society, and gathering about them influences which always end in misery and ruin. Because such cases do not give strong evidence of mental disorder, they are allowed to go on destroying both themselves and their families. Nothing can be more reprehensible than to stand by and see all this sacrifice of both life and property, and not forcibly stop it. Every ine-

briate should be placed in an asylum, and cared for as an insane man ; if he is incurable, keep him under restraint all his life-time. This is humanity, this is charity, this is economy, and this is the highest civilization of the brotherhood of man." — *Dr. Vittum.*

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#### NEED OF INEBRIATE ASYLUMS.

Dr. Jewell, the Superintendent of the Home for Inebriates, in San Francisco, Cal., in a paper printed by the State Board of Health, makes the following reference to inebriate asylums : " The State should establish asylums for drunkards, under the management of those having great experience, and the courts, and Commissioners of Lunacy, should be authorized to commit chronic drunkards to these asylums, for not less than one year, and in some cases for life. The first commitment should be for one year, during which time the patient should undergo a course of treatment for this malady. At the end of his term he should be released, but if he resumed his former habits of intoxication he should be again committed, for two years. If committed a third time, it should be for three years. The patients in these asylums should be made to reimburse the State for their expenses, either by paying for their keep, or by laboring at some trade or employment, so as not to be an incumbrance on the State. The money for the support of these institutions should come from those benefited by the sale of alcoholic liquors ; and there should be provision made in the law so that a certain amount, say one-fourth, of the patient's earnings should go to the State, one-fourth to be retained for him, and paid to him on discharge, and one-half to his family, if he has any ; if no family, then one-half to the State, and one-half to the patient on discharge. The State, the patient, and his family would benefit greatly by such a course. Crime would decrease, the death-rate would decrease, and human happiness would be greatly increased. Time, restraint, moral in-

fluences, the exercise of strong will power, and constant employment, are the means, with proper medicines and discipline, by which drunkenness is to be cured.”

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THE end of the long trial was reached, the verdict was, “Guilty of murder in the first degree.” The counsel for the defense asked for a stay of sentence, and intimated the injustice of the verdict. The judge denied this, and in his sentence sneered at the medical witnesses, “as so-called experts in drunkenness,” whose testimony was contradicted by two centuries of study and experience, and who sought to get legal recognition of a doctrine that was subversive of all law and order. He thanked the jury for their courage in ignoring this false theory of defense, and warned the prisoner to prepare for the more terrible punishment in the next world. The prisoner was a poor Andersonville soldier, who after two years of hard service on the battle-fields, was starved nine months in this prison. He came home a wreck and an inebriate. For twenty years he drifted up and down the world, drank, and was sentenced to jail repeatedly for this offense. He was alone and had no friends except bar-keepers, and was a poor, broken-down inebriate, with diseased body and brain. In a moment of great provocation he struck a man, who was killed by the blow. Two medical men examined him and swore that he was diseased and irresponsible. They swore that inebriety was a disease, and in this case the prisoner was fully insane. The governor commuted this sentence to imprisonment for life, and the judge labors under the delusion that the cause of justice was subverted, and law and order is in great peril.

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*Demorest's Monthly Magazine* for the new year, has increased attractions, and may be said to be one of the best family and home magazines published. Send the subscription, two dollars for a year's numbers, to the publishers, New York city.

## INEBRIATE JURORS.

A valued correspondent vouches for the following: In a western city an inebriate was on trial for manslaughter. The defense was insanity from alcohol. After a long trial, and deliberation of two days, the jury brought in a verdict of guilty. A new trial was granted, on the grounds that two of the jury were so much intoxicated as not to be able to decide on the verdict. It was alleged that all the jury drank, and had several free fights in the jury-room. At the close of the second trial, one of the jury had an attack of delirium tremens, and rushed for the judge, to whip him. In the third trial, the jury brought in a verdict of guilty, but not responsible. This was not accepted, then they disagreed. The case was then taken into another court, where the plea of guilty was made, and the judge sentenced him for life, with a heavy fine. The defense now asks for a new trial, on the ground of the incompetency of the judge, who, it is claimed, was partially intoxicated when sentencing the prisoner.

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THE inebriate is on trial for murder. The law inquires: Did the prisoner have the power to distinguish between right and wrong? Was the crime committed under an insane delusion? No matter what the answers may be to these inquiries, the law assumes that all drinking is voluntary and under the control of the person, and hence he is to be condemned and punished always. The only defense allowed is that of delirium tremens. The victim is punished. The supposed justice is great injustice. The truth of voluntary control in drinking is a great untruth, which any study will disprove.

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THE great mortality among English medical men contradicts the oft-repeated assertion that education in physiology and the nature of alcohol will prevent men from drinking.



## Clinical Notes and Comments.

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### CHLORAL POISONING.

Dr. Lewis in the *New York Medical Monthly*, writes on the above subject, that alcohol is in no sense an antidote for chloral poisoning, yet persons who take alcohol are less susceptible to chloral poisoning. He mentions a case where a dipsomaniac, under treatment, was given 100 grains to procure sleep, and died soon after. He mentions another case, where an inebriate was given 80 grains, at one time, with no bad effects, and after died from the effects of 20 grains. He concludes that chloral is a dangerous remedy to produce narcotism in inebriates, that it should always be given with great care, and also, that its habitual use is worse than that of opium.

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### OPIUM NEUROSIS

is a central neurotic change brought about by the long-persisting perversion of function and impairment of central nervous nutrition from its persisting presence in the nutrient pabulum of the circulation. The psychosis of opium taking is a blended intoxication and chronic poisoning of the psychical centers of the brain; other symptoms of acute opium poisoning are essentially different, being mainly a profound paralysis of sensation and of the centers of involuntary motion, especially having their origin in the medulla and upper part of the spinal cord—profound narcosis, lowered respiratory movements, etc., while chronic opium poisoning, or meconeuropathia, is characterized by repeated nerve excitations, in which the nerve centers, not being completely overcome, a kind of tolerance is established, with progressively developing abnormal molecular neural changes, which are as repeatedly covered up and

masked by the renewed doses, till some sudden deprivation of the drug or failure to appropriate it, reveals, in full force, the neural mischief which has been gradually done. Opium, like a bank defaulter, both makes and masks the mischief done, which may be kept concealed so long as he stays in the institution. — *Dr. Hughes in "Alienist and Neurologist."*

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### SPECIAL PHASES OF INEBRIETY.

Some inebriates are exceedingly economical during the carouse, and so manage to satisfy their desire for drink through the pockets of friends or fellow-drinkers, and only drink when they are invited. On the other hand, a lavish wastefulness characterizes some, and they are ever ready to treat, not only friends, but any who may be near at hand. These peculiarities are not accidental, but uniform in the individuals possessing them. Some drink only on Saturdays, and oftener after sundown on that day, sleep off the fit, go to church the next day, and are sober the remainder of the week. Some have peculiar days on which they become debauched, and do not indulge at other times. Public holidays, private anniversaries, as of marriage, or the birth of a child, are occasions that are thus celebrated. I have known the proprietor of an extensive mercantile house, who, for eleven months and two weeks of each year, applied himself closely to business, in which he was successful, who, on the same day of the same month in each year, joined himself to a man of low estate, with whom he could not be on terms of social freedom when at home and sober, and occupied two weeks on a fishing excursion. Before the arrival of the appointed day he arranged his business for a fortnight's absence, drew checks to meet the wants of his home and his store, made appointments for the day of his return, and equipped himself to meet his companion, who was to serve as his guide and care-taker. With a boat on the bay, or river, a tent for the shore, and an abundant supply of "creature comforts," they commenced at the appointed time.

Fishing by daylight, and tenting at night were to be continued during the allotted vacation, under the following agreement:

For a dozen consecutive nights, the merchant was to be supplied with whisky in quantities sufficient to produce intoxication, and his companion was to keep sober, in order to protect their property and themselves, and to do all the offices of cook and "maid of all work." The last day and night were to be spent in "sobering up," and getting things in order for a return to the duties of the head of a family, and the head of a mercantile house. At no other time in the year did this gentleman indulge in strong drink, and it was the only specified time when the fisherman was under bonds to keep sober. Before leaving home, an estimate was made of the exact quantities of spirits needed for the whole time, and no more procured; so that the fisherman was obliged to be exact in portioning his rations, and a check was thus placed upon himself.— DR. PARRISH.

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*Inebriety is a disease*, and often a symptom of cerebral disorder. Like other diseases of the brain it may be inherited; may skip over two or three generations and break out in a family that supposes it had long been delivered from its presence. Like other chronic nervous diseases it is very obstinate, and sometimes utterly incurable. Like other chronic brain diseases, it needs both physical and metaphysical medical treatment, medicine for the congested or exhausted brain, as well as rest, relaxation, advice, care, watchfulness, exhortation, and in some cases compulsion. Moral or metaphysical treatment alone will not avail to cure it usually, any more than it will avail to cure epilepsy, or neuralgia, or paralysis, or insanity.— DR. GEORGE M. BEARD.

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Coffee-houses to take the place of bar-rooms are being established in New York, and will no doubt serve a very useful purpose.

The inebriate is always a man with an intemperate and distempered mind. He is thoroughly insincere to himself and every relation of life about him.

*Inebriety* must be studied outside of any preconceived theory of its origin and character. Each case must be examined as something new, and from its classified symptomatology, the real facts will be apparent.

The *Physicians Visiting List for 1887*, by Lindsay & Blakistons of Philadelphia, Pa., has been before the public thirty-five years, and has attained a degree of perfection that commends it to all physicians.

The Reheim's *Chamber of Commerce* reports that over five millions bottles of champagne less were sold in 1886 than in 1885, also ten millions less than in 1882-3. England is the greatest consumer of champagne.

Seventeen per cent. of the insane under treatment in Ohio, are classed as coming from inebriety. Heredity is put down as present in thirty-eight per cent. Of the insane in the professions, physicians are in the largest proportions.

*Destructive manias* in inebriates who are intoxicated, seem to depend on some state of cerebral anæmia. In such cases, both heart disease and severe forms of dyspepsia will be found associated. In some cases, an irregular heart action precedes the mania, which may be foreshadowed for some time.

*Dr. Mays*, of the Stockton Insane Asylum of California, writes: "One-half of the insane owe their derangement to hereditary influence, inheriting an ancestral taint or predisposition. The families of intemperate parents furnish the recruiting ground for insane asylums. These unfortunate children, if not idiots or epileptics, are liable to grow up with querulous, explosive tempers, with feeble powers of self-guidance, weak in temptation, unstable, self-indulgent, vicious, hysterical. They form the bulk of what is known as the defective classes."

The fartherest researches into the nature and character of inebriety, give us only fragmentary views of the whole subject. Like men looking out from a window, we only get narrow and partial conceptions of this great army of neurotics. From the procession in front of us, we can faintly realize the origin and destination of the march.

According to the internal revenue returns for 1883, two hundred and six thousand, nine hundred and forty-four places were licensed in the United States as wholesalers and retailers of malt liquors and spirits, including breweries and rectifiers. In 1884 this number had decreased eight thousand and eight hundred and fourteen from the year before.

An eminent physician, now dead, protested earnestly against the ignorance of explaining morbid mental phenomena by theological terms, and yet fell into the same error in calling all drunkenness a vice and sin. His erroneous observation and reasoning has done much to retard the progress of truth in this direction, and the real aid he gave to science, was neutralized by his defectively biased judgment.

The first Asylum for Inebriates has just been opened near Milan, Italy. It is intended for the better class, who can pay for the best medical care and surroundings. In all the hospitals for insane, wards are set apart for inebriates, and their treatment as partially insane, has been carried on successfully for many years, but this is the first organized effort to treat them in a separate hospital.

According to Mr. Brace of the Children's Aid Society of New York city, the Industrial Schools of that organization are doing much to prevent the growth of a race of inebriates. He says that drunkenness has decreased fifty per cent. in the last ten years, from the police returns, and crime has decreased twelve and a half per cent., all of which can be traced to these efforts to prevent recruiting from the young into these dangerous, defective classes. During the past year, eleven thousand children have been under their care and instruction, and thirty-two hundred have been sent to new homes in the West.

## MEDICINES FOR INEBRIATES.

We have sought to have on our advertising pages only such remedies as we could commend to all our patrons. We take great pleasure in calling attention to the following, believing they will be found of great value and usefulness:

*Coca Cordial*, prepared by Parke, Davis & Co., is very extensively used as a tonic in all cases of nerve debility.

The *Hypo-Phosphates of Fellows* can be relied upon in states of general degeneration and failure of brain and nerve force. It has been used for years in England in large hospitals, as well as private practice.

The *Murdock's Liquid Food* may be given as a nutrient tonic where syphillis or scrofula has complicated the disease. It is largely used in Boston, and is highly commended.

*Lactated Food*, by Wells, Richardson & Co., has been used in opium cases to allay the irritation of the stomach with the best results.

*Peptonized Cod Liver and Milk*, by Reed & Carrick, is the best and latest preparation of oil as a medicinal tonic. In cases of inebriety where profound degeneration is going on, this is unequaled as a remedy.

*Maltine*, with the various iron and vegetable tonics combined, is an indispensable remedy in a great variety of cases. It should be in the stock of all physicians.

The *Anglo Swiss Milk Food*, made by a company of this name in New York, has the endorsement of the leading physicians in this country, and its medicinal value seems to be established beyond question.

*Colden's Liquid Beef Tonic* should be given in gastric disturbances following nerve exhaustion, and in many forms of inebriety it is a good substitute for spirits for a time.

*Lactopeptine* is a standard remedy which every physician should have in his case.

*Horsford's Acid Phosphate* is another remedy that can be used in a great variety of diseases with the best results, and should be always at command.

*Papine* is a de-narcotized opiate, which we have used in insomnia and the delirium from alcoholic excess, getting better results than from any other sedative. In delirium tremens it is highly commended.

THE  
QUARTERLY JOURNAL OF INEBRIETY.

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Vol. IX.

APRIL, 1887.

No. 2.

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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 INVARIABLE TENDENCY OF DRUNKENNESS TO CRIME. — WHENCE COMES IT ?

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BY T. L. WRIGHT, M.D., BELLEFONTAINE, O.,  
*Author of "Inebriism, a Pathological and Psychological Study."*

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I refer to the essential nature of drunkenness as weakening the moral perceptions, and thus favoring the assaults of temptation, whether it comes in the guise of seductive immorality or in the form of flagrant criminality.

With respect to the irrepressible proclivity to wrongdoing which is characteristic of drunkenness, the key to the whole discussion is found in the words: *weakening the moral perceptions*. It is therefore right that some attention should be given to the existence of the fact, as well as to the meaning of it. In addressing the readers of this JOURNAL, I assume some things as granted, upon which, in popular publications, I would think it proper to dilate somewhat.\*

The anæsthetic — the benumbing — the paralyzing influence of alcohol upon the nervous system is distributed impartially over the whole, the universal nervous organism. It is displayed in the structures of ordinary sensibility through

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\* I have discussed the points referred to, in the JOURNAL OF INEBRIETY, July, 1882, and October, 1883, and also at length, in my little book — INEBRIISM. — W.

the more or less complete suspension of common feeling, considerable injuries being but slightly noticed, or not noticed at all. It is seen in the system or centers of the motor capacities through the inco-ordinate and partially suspended motor movements: the sensibility and force of that sub-system of nerves being, in a great measure, destroyed. The lethargic influence of alcohol upon nervous function is seen also in the suppression of acute and vivid intellectual movements; the nervous centers presiding over the rational powers being disabled, repressed, stupefied. "They err in vision, they stumble in judgment," being "swallowed up of wine." The disabling effects of strong drink are likewise observed in the obtunding of the association fibres and centers of the nervous system — out of the perfect freedom and vitality of which, the sense of personal identity, and all ideas of moral responsibility and duty are formed and have their being.

The corruption, and indeed dissolution, of the moral nature through the power of alcohol, are open to observation in the petty and despicable vices of drunkenness, as well as in the astounding baseness and seeming depravity of its more conspicuous outrages.

The very nature of the offenses against law and decency which belongs to drunkenness, often betrays their origin. As a rule it may be said that the shortcomings and crimes of drunkenness are not those of premeditation and malevolent reasoning; are not of choice; are not incited by natural and regular motive: but they owe their existence to simple defect — to the incapacities and irregularities of moral deformation — to impulse, rather than to deliberation and will. These crimes become possible, and indeed inevitable, because the only power really adequate to their repression is physically inoperative. The natural defense against their exhibition and activity — the nervous basis of the moral constitution — is broken down and disabled.

While this condition of nerve-defect may, to a certain degree, eliminate premeditated malice from drunkenness,



that condition is all the more dangerous to society, by reason of its entire independence of mental control. The limit to crime is unbounded. It may extend into the regions of frenzy—knowing no law, and being totally insensible to restraint. It is obvious that, in proportion as the feelings are removed from the restraints and supervision of reason and judgment, they come under the dominion of selfishness, passion, and trust; and these, in drunkenness, often comprise, in themselves, the whole being. The moral feelings having become oblivious, selfishness, passion, and lust assume their place and sway and drive the mind to their own interests.

Hence the offenses and crimes of drunkenness, while not always heinous in the ordinary sense of the term, are apt to exhibit an astonishingly selfish turpitude. They extend all the way from simple untruthfulness to the vilest indecencies, to assaults evincing unspeakable depravity, and very often, also, to the most un pitying truculence and murder.

Remorse is feeble in the drunkard, even when sober; but when actual intoxication is upon him, it is impossible. The more terrible crimes of drunkenness, therefore, resemble the deliberate, but insensate bloodthirstiness of some reptilian monster, in whose physical structure the neurine instruments of the finer sensibilities have never been placed. And the reason of this is plain: the drunken man and the saurian are, for the time being, established in some considerable degree of relationship with each other. The moral sensibilities of the former are stupefied and dormant; while in the latter they have not, and never had, an existence.

In short, all the several portions of the nervous organism are obtunded, paralyzed, repressed by the toxic properties of alcohol when a man is drunk. Not only are the nerve-functions subdued and hindered by a reduced impressibility of the nerve structure, but the strength and tone of the really repressive nervous functions themselves are impaired, so that inhibition is itself inhibited. The mind acts not unlike

a team of balky horses — there is much splashing and plunging, and make-believe, but little actual force or progress.

The nerve tissue being disabled and poisoned, its functions are correspondingly incomplete and irregular. And this state is one of the constituent conditions of drunkenness. The idea that intoxication is the representative of some radically new power or force introduced from without, that it is solely an exposition of the peculiar and superadded properties of alcohol, is an error. Drunkenness is the representation of disabilities imposed upon the entire round of nerve-function by virtue of the abortive impress of alcohol. It is incorrect to say that alcohol invests the mind and disposition with new characteristics, either good or bad, derived wholly from that substance, and which have no actual foundation in human nature. It deranges, and at times destroys the mutual inter-dependence of the several subsidiary nervous organizations which, in their collective capacity, preside over, and formulate human character. It also weakens, and in varying degrees depresses, or even extinguishes them in severalty.

The great law of physical or mental, or moral monstrosity, is defect. Deformities of redundancy may be corrected in the physical body by amputation or excision; and undue excitement of the natural powers of mind and morals is frequently amenable to therapeutical appliances, as well as to the restraints of mental effort and volition. But absence of feature or limb, or deficit in the mental or moral instruments is irremediable, is fatal. Drunkenness, when in full tide and completion, is moral monstrosity.

It is doubtful if the influence of alcohol upon the moral constitution of man is in any degree modified by the civil or the social habits of life. Education, in many ways a powerful conservator of morality, is nearly, if not quite, powerless for good in drunkenness; for the moral capacities, ordinarily obedient to the commands of mental culture, are absent, or in a state of insensibility. A rational view of this subject, as well as observation, teaches that with respect to the refine-

ments of education, drunkenness is entirely independent of them, because unconscious of them. In so far as this point is concerned, alcohol appears to produce the same effects upon the cultivated, as upon the ignorant and vulgar.

But in its specific effects upon *personality*, alcohol unquestionably acts in a disabling manner, in some degree differently, in different individuals. And it is reasonable to suppose that in particular persons it acts more directly on certain sub-systems of the nervous organism, while in others it affects more decidedly other systems. Sometimes, for instance, the disability seems to be confined especially to the movements of the limbs: at other times, the intellectual faculties appear to be the most affected; while again, the moral capacities are mainly impressed and paralyzed. These considerations sufficiently explain the well-marked distinctions that often appear in the leading characteristics of intoxication in different individuals. They also show the reason why drunkenness in the same person exhibits different leading features in separate seasons of excess. In addition, they interpret certain facts which appear most clearly in a protracted period of drunkenness; the most obvious and dangerous moral obliquities, for example, come into view, as a rule, near the end of a debauch, when the moral feelings have been bereft of sensibility, if not, indeed, of existence. But notwithstanding the differences that may appear in the completeness of the anæsthetic state in divers and sundry persons, and notwithstanding its greater oppression at times, on one part of the nervous system than upon another, the leading fact remains, that in every instance of intoxication the entire nervous organism is, to a notable extent, brought under the corrupting and ignominious domination of alcohol.

It evidently requires the active and working powers of the nervous system to bring the intellectual faculties into normal relationship with things exterior to them. The same qualities of nervous freedom and brightness are necessary, in order to rightly contemplate and understand the nature and duties of morality. The anæsthesia of drunkenness pre-

vents a just and natural conception of the moral nature, and of its proper relationships and dependencies. When a man is drunk his moral perceptions are dulled and obscured ; they take place in shadow and darkness. Moral characteristics, as seen clearly and readily by the healthful powers, are unnoticed by the mind whose instruments are pinioned and prostrate through alcohol. The final result is, that drunkenness always so affects the moral perceptions that the natural barriers and antipathies to vice and crime are thrown down ; and the way is smoothed over for the approach and entrance of temptation in every form, and from every direction.

Compunction is impossible in drunkenness, and the inebriate indulges, unrestrained, in a swarm of vices. Amongst these, none is more audacious or contemptible than lying. No matter how "fine a fellow" the drunkard may be, his word is taken with suspicion or protest. Yet, it is not presumed that drunkenness strenuously seeks out falsehood. It does not take much pains to seek anything. The drunken man simply seizes the shortest and easiest way to solve any and every problem presented to him. His moral imbecility is so great that he holds truth in cheap estimation. He is incapacitated from analyzing its nature, for he is incapable of feeling it ; and he is very liable to employ falsehood in all emergencies that will, in his opinion, subserve his interest or contribute to his ease. This is especially the case in things that relate to the gratification of his propensity for intoxication. In pursuit of this object, there is a pretty constant resort to some kind of deceit and misrepresentation.

Only a few days ago a man who is a frequent and furious spasmodic drunkard, and who had recently pledged himself to total abstinence from liquor, called to see his sick mother. Having satisfied his mind that there was not likely to be any sudden crisis or emergency in her case, he informed her that he had very pressing business in two or three of the neighboring towns. He solemnly declared to her that she need not be uneasy about his drinking, as he had not the least desire to indulge in liquor. He started for the depot, and

before reaching it, was well filled with whisky. In two days he returned bloated, shameless, and defiant. His "business" was all a lying pretext. Such men often form their schemes for a season of drunkenness with great elaboration and cunning; beginning their approaches from afar, and never hesitating to employ a mountain of lies in furtherance of their object.

The *chronic* drunkard is apt to become habitually false on all subjects and on all occasions. He is prone to indulge in stories that are silly as well as incredible, and that, too, with great precision of statement, and detail of circumstance. I knew a physician who had for many years tampered with alcohol, and morphia, and chloral. He lived in the capital city of a Western State. On a visit East he busied himself in recounting wonderful stories. He informed some friends that "it was a curious fact that drugs were cheaper in the Western cities than in the Eastern. Take quinine, as an example," said he, "I purchased an ounce out West, and I was surprised to learn that the price was only fifty cents. I told the druggist," he continued, "I would take two ounces at that price, but he replied that if I took a dollar's worth he would make it three ounces for that money"—and much more in the same strain.

This habit seems often to be a kind of automatic representation of the long-existing moral deficiency inseparable from drunkenness. It is the unconscious outcome of prolonged moral hebetude in relation to many essential elements of a useful life, and especially in relation to the cardinal virtue of truthfulness. It is, however, an incident showing the innate tendency of drunkenness to vice and crime.

The news of the day fully illustrates the effects of alcohol in the production of crime. Some man in a responsible position begins to indulge in wine. The next thing to appear is the "strange woman." Then expenses increase, and funds are embezzled; then gambling or forgery are resorted to; and last of all, flight, or punishment, or suicide: but in every instance comes degradation and ruin. All this time alcohol

is paralyzing the moral sensibilities, and deceiving the rational judgment as to the facts and consequences.

And so it is that intemperance always modifies the normal characteristics of human nature. The mind, therefore, being indelibly impressed by the defects imposed upon it by drunkenness, is transported from a position distant from crime, to another position not so distant.

Unquestionably the natural predisposition to criminality is greater in some minds than in others; and in such, the work of alcohol in the production of crime is easy. While the movement *towards* crime always is present under alcoholic influence, yet, the goal of actual criminality is not reached under equal alcoholic impressions—the natural affinity of the human disposition with criminality being unequal in different individuals—being, no doubt, entirely absent in many. But that drunkenness increases the susceptibility to criminal influences where it is already in existence, and creates a susceptibility where it does not naturally exist, must be true from the fact that an obtuse and lethargic moral sense is an invariable and impregnable part of that abnormal condition known as drunkenness. An intoxicated man will commit offences in thought, in speech, and in conduct which, in his sober mind, he would view with shame and indignation. The unvarying tendency of drunkenness is towards crime.

I will indulge in a single general inference. When society, in consideration of money paid into the public treasury, becomes a partner in the dramselling business, it is engaged in weakening the moral perceptions of human kind, and it becomes a party to the crimes of alcohol.

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The expenditures for *Wine, Spirits, and Porter* at the Pennsylvania Hospital for the past year, were \$2,031.95. The bills for medicines, for the same period, were \$1,774.88. The physicians seem to be ardent followers of the Todd and Bennet system of practice.

## INEBRIATES IN INSANE ASYLUMS.

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BY T. W. FISHER, M.D.,

*Superintendent Boston Lunatic Asylum.*

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For many years there have been attempts on the part of superintendents of insane hospitals to secure the passage of a law allowing the commitment of dipsomaniacs to some special institution for their custody and treatment. In England this movement resulted, after years of discussion in Parliament, in the passage of an habitual drunkard's bill, whereby such persons may voluntarily seclude themselves in special institutions for definite periods. The writer has often advocated before legislative committees, and the Board of Health, Lunacy, and Charity, and in a paper on "Insane Drunkards," read before the Massachusetts Medical Society, in 1879, legalizing the commitment of inebriates to special institutions for long periods of from one to three years. He also demonstrated, in defending an action for damages for improper certification of an inebriate, at considerable trouble and expense, that, in the opinion of the Supreme Court of Massachusetts, there is such a disease a dipsomania, and that, in the absence of special institutions, such cases might be committed to hospitals for the insane.

Soon after this decision, if not in consequence of it, renewed efforts were made by the Board of Health, Lunacy, and Charity, to secure the passage of a law on this subject, and in 1885 the following law, not wholly in accord with their recommendation, was passed:

AN ACT CONCERNING HOSPITAL TREATMENT FOR CERTAIN PERSONS SUBJECT TO DIPSOMANIA OR HABITUAL DRUNKENNESS.

*Be it enacted, etc., as follows:*

SECTION I. Whoever is given to or subject to dipsomania, or habitual drunkenness, whether in public or in private, may be committed to one of the

State lunatic hospitals ; *provided, however*, that no such person shall be so committed until satisfactory evidence is furnished to the judge before whom the proceedings for commitment are had that such person is not of bad repute or of bad character, apart from his habits of inebriety.

SEC. 2. The provisions of chapter eighty-seven of the Public Statutes, and of acts amendatory to such chapter, relative to the commitment of an insane person to a lunatic hospital, shall be applicable to, and shall govern the commitment of, any person under this act except that in all proceedings relative to the commitment of any such person it shall be specifically alleged that he is subject to dipsomania or habitual drunkenness, instead of alleging that he is insane.

SEC. 3. All the laws relative to persons committed to lunatic hospitals on ground of insanity shall apply to persons committed thereto under the provisions of this act ; *provided*, that no person so committed shall be discharged therefrom unless it appears probable that he will not continue to be subject to dipsomania or habitual drunkenness, or that his confinement therein is not longer necessary for the safety of the public or for his own welfare.

SEC. 4. This act shall take effect upon its passage. [*Approved June 18, 1885.*]

It will be seen this act does not include this hospital in its provisions ; but it has been construed as applying to it by the committing magistrate. The provision allowing commitment to lunatic hospitals may have been a compromise on the part of the legislature to avoid the expense of establishing a special institution for inebriates. It certainly was not what superintendents had asked for, but what they had always earnestly protested against. They had hoped for a law to relieve them of such inebriates as did, from time to time, get committed to their hospitals on the claim that they were insane ; and a law was passed legalizing the commitment to insane hospitals of habitual drunkards without any inquiry as to their sanity. This law was passed in the face of the fact that all the hospitals were full to overflowing with cases of ordinary insanity, so that hundreds were compelled to sleep in attics and on corridor floors. Under this pressure one superintendent expressed himself as having degenerated into a big policeman, spending his time in trying to keep order and maintain discipline in a crowd of lunatics and inebriates, instead of devoting his time to his proper work of treating insanity.

This law, as it stands, is defective, and liable to abuse in several ways. In the first place, inebriates should be com-



mitted to some special institution and not to a lunatic hospital. They not only take up the room needed by the insane, but after the first few days they are practically sane, and find themselves surrounded by the depressing influences of an insane hospital, and subjected to restraints and regulations primarily adapted to the insane. To be sure, they are better off then when at large, exposed to temptations to drink, and much may be done for them in the way of kind treatment and moral management; but they are out of place, and they often feel it and show it; while many are considerate and give little trouble, sometimes they interfere sadly with the discipline and interrupt the harmony of an asylum ward. They may refuse to associate with the insane, or claim privileges which cannot be granted their insane neighbors, and which if granted them, cause more or less jealousy and hard feeling. In the second place they should be committed for a definite time, either for one, two, or three years. This is necessary, because a long hygienic treatment is required to restore the enfeebled brain to its normal state of health and vigor, and to allow the weakened will to regain ascendancy over the appetite for stimulants. The inebriate's whole constitution needs reconstruction, and this process must not be interrupted by occasional drinking. It is better also for the inebriate to know definitely what he is to look forward to, so as to ensure contentment and repose of mind as far as is possible. The patient should expend his energies in healthful employment and in the attempt at recovery, and not in efforts for his own release. The present law subjects the superintendents to constant importunities for discharge on the part of the inebriate and his friends. Plausible reasons are advanced, ingenious schemes are made use of, and all sorts of influence brought to bear for a patient's discharge when one would have supposed that removal from home for a year would have been a great relief to the inebriate's family and friends.

I have endeavored to conform to the rule here that no habitual drunkard shall be discharged under a year's deten-

tion, as that was the shortest period of commitment ever proposed in the discussion in the Legislature and Parliament. I failed in applying this rule in almost the first case committed. After a two months' residence, this person was allowed to go home on trial, at the personal request of the judge who committed him, to avoid a long and unprofitable rehearing of the whole case on its merits. Fortunately, this patient has so far justified the confidence reposed in him, and has been discharged.

In the third place, the law should allow compulsory labor to be performed by inebriates, within certain limits, and at the discretion of the superintendent, partly to re-imburse the Commonwealth for their support, but more especially as a hygienic measure. Idleness in the wards of a lunatic hospital is as far as possible from the best treatment of inebriety. Varied employment in the open air when possible, for a few hours daily, with similar periods for recreation out of doors is the essential feature of such treatment. The majority of insane persons are unable to work, while most inebriates are. It would be wrong to compel an insane person to work, while inebriates might be induced to work, by promises of reward, deprivation of privileges, and other forms of moral suasion. The opportunities for work in most hospitals are already too limited, and lack in variety, while in an inebriate asylum there would be no objection to the use of tools of any kind.

The law is also liable to abuse in several ways. In the first place, physicians are not unlikely to apply the law to some inebriates who are not of unsound mind. The use of both terms, "dipsomaniac" and "habitual drunkard" tends to create confusion and ambiguity in certifying. Dipsomania, either inherited or acquired, would be a proper cause of commitment. Persons affected with an inherited tendency to that form of impulsive insanity, characterized by an insane desire to drink, are dipsomaniacs by inheritance. These cases are rare; they have a defective or degenerated cerebral organization, which leads them to impulsive acts

through a weakness of the will and excessive energy of the animal instincts. In another more numerous class the brain has been so damaged by inebriety or other causes, such as ill health, blows on the head, sunstroke, etc., as to prevent all possibility of self-control in relation to drink. These are causes of acquired dipsomania. Persons of sound mind who drink habitually from choice are not proper subjects for commitment. They are vicious drunkards, who should be punished rather than treated. These are nice distinctions it is true, but they are real ones, and it is therefore important that physicians should look carefully for the element of unsoundness of mind in the cases they are called on to examine.

There is also some danger that the judges may not sufficiently regard the clause which requires that satisfactory evidence shall be furnished that the inebriate is not a person of bad repute or of bad character apart from his habits of inebriety. Such evidence is not likely to be presented unless demanded, and the facts carefully elicited from reluctant witnesses. It would, indeed, be unfortunate if our insane hospitals should be used as convenient retreats for vicious and disreputable drunkards to recuperate in.

The preceding remarks are based not so much on the actual operation of the new law as upon our past experience with inebriates, generally. From January 1, 1881, to the passage of the new law there had been received, either committed as insane, or as voluntary patients, fourteen dipsomaniacs. Of these, two voluntary cases still remain, one slightly demented, and one who goes out daily in search of employment, and who is about to be discharged; two voluntary cases are at home, and doing fairly well; one is at work in a good position; one is in the house of correction; and one has been committed to another hospital. Of the committed cases, one has been repeatedly sent to Deer Island, and six are at home, and doing well as far as is known. The results in these fourteen cases are certainly more favorable, as regards recovery, than the same number of insane cases would show.

Ten persons have been committed under the new law since June 18, 1885,—seven males and three females. Of these, one was discharged six months ago, and has not relapsed; two have been out on trial, and relapsed; and the rest remain,—three of them being hopelessly demented. These three might have been committed as insane, and they now belong to the numerous class of patients made insane by drink.

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*Report on Classification of Mental Diseases*, as adopted at the Saratoga meeting, by Hon. CLARK BELL, the American delegate, is an admirable grouping and plan of classification which reflects great credit on the committee. It is as follows: 1. Mania — Acute, Chronic, Recurrent, Puerperal. 2. Melancholia — Acute, Chronic, Recurrent, Puerperal. 3. Primary Delusional — Insanity. 4. Dementia — Primary, Secondary, Senile, Organic Tremors, Hemorrhages. 5. General Paralysis of the Insane. 6. Epilepsy. 7. Toxic Insanity (Alcoholism, Morphine, etc.). 8. Congenital Mental — Deficiency, Idiocy, Imbecility, Cretinism.

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The Internal Collector reports an increase of seventeen more distilleries in Georgia, during the last year, and also increased production of spirits. A great increase of licenses granted are also reported, in Vermont, Pennsylvania, Indiana, Michigan, Wisconsin, and Kansas. One hundred and fourteen new distilleries have gone into operation in 1886, over the country.

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*The Annual Report of the New York State Board of Charities* for 1886, show an increase of insane, in the different asylums, of eight hundred and twenty-six during the year. Also an increase of paupers and reformatory classes. This can be traced in some measure to the ruinous policy of "Ring rule" which has existed for a long time.

DEATH IN A TURKISH BATH.

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BY CHARLES H. SHEPARD, M.D., BROOKLYN, N. Y.

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The recent case of death of an inebriate who went to sleep in a Turkish bath, reported by the *London Daily News*, has been the text for much comment and many reflections, based more on imagination than solid facts. There may be danger in sleeping in a temperature of 120°, but it is infinitesimal. Do we hesitate to go to sleep because the night is very hot? By no means. There is, however, great danger in the habit of excessive drinking, whatever the person may do afterward, whether it be going to the Turkish bath or to church, but the bath would be the safest place to go at that time. The habit of the bath is a most laudable one, and is to be encouraged at all times, as it tends to the welfare and betterment of the community — to elevate, and not degrade, man. It is on the side of virtue, and not of vice. Because some may, at times, use it to get relief from their excesses is no more the fault of the bath than is the fact that people will sin during the week and go to church on Sunday to get absolution the fault of the church. People are not made weaker or debilitated by the bath. On the contrary, they are made stronger and more vigorous and more able to use what strength they have. Disease and bad habits most certainly weaken, but the bath never. Let us look a little further and not hastily say, when a man dies, that the last thing he touched killed him. There is too much reasoning from the surface. Is the sun to be blamed for bringing noxious air from undrained swamps? If one takes a Turkish bath to-day, and to-morrow is attacked with rheumatism or other disease, is that the fault of the bath? Emphatically no.

Prof. Draper, in one of his lectures, states that "a sea-

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man will pass from regions where the mercury freezes to the equator, where the temperature is  $130^{\circ}$  in the shade, without serious injury." Could any one be so foolish as, for one moment, to think that, when in the higher temperature, they did not both eat and sleep with impunity, and does not the experience of travelers confirm this, over and over again? Then there is the region of equatorial Africa, where the heat experienced and recorded by Capt. Griffiths was  $156^{\circ}$  in the sun, and  $132^{\circ}$  in the shade. Had they not slept and eaten while there, neither he nor his companions would have survived to tell the tale. As an instance of desert temperature, Humboldt refers to Capt. Lyon, who experienced, for "whole months, the thermometer between  $117^{\circ}$  and  $128^{\circ}$ , in the oasis of Mongouk, Sahara. In the western part of Turkistan, a region of Central Asia, the temperature ranges from  $26^{\circ}$  below zero in winter to  $150^{\circ}$  above in summer; and yet people are born, live, and die there.

Dr. Hammond says: "The place with the highest temperature, within my knowledge, at which a man can sleep with *safety*, not, however, with any degree of comfort, is Fort Yuma, in Arizona. I have known the temperature there to be  $120^{\circ}$  in the shade, and fully as hot at night." . . . .

The mean temperature at Fort Mojave, Arizona, for the months of June, July, and August, in 1870 and 1873, ranged from  $116^{\circ}$  to  $118^{\circ}$ . Of course the extreme was much above that.

If it is a fact that the bath is weakening, how is it that persons, weakened and debilitated by disease, can take one or two baths a day and rapidly recover? Again, how is it that the attendants have worked in the heat of the bath several hours daily for years and not lost a day from sickness? A fact most prominent in relation to these attendants is that they invariably improve in health and strength after commencing that kind of work. Mr. D. Urquhart, to whom modern civilization is indebted for the revival of the ancient Roman, or Turkish bath, as it is now called, states, in the "Manual of the Turkish Bath," that the best shampooing he

ever received was from a man ninety years old, who had been a worker in the bath since he was eight years of age.

The lace-makers of Nottingham, England, carry on their business, day after day, in rooms heated to a temperature of  $120^{\circ}$ . In a report regarding the workers in the Comstock mines, where the temperature varies from  $108^{\circ}$  to  $116^{\circ}$ , and not unfrequently rises to  $123^{\circ}$ , it is stated that the constant enormous activity of their perspiratory functions and the personal cleanliness resulting from their daily baths seem to have abolished among them the disease supposed elsewhere to be characteristic of their avocation. It is admitted by all observers that they are healthier than their wives and children. In some of our naval vessels, particularly of the "Monitor" pattern, the average temperature at which the firemen and coal-heavers worked was  $157^{\circ}$ . The highest recorded temperature was  $181^{\circ}$ .

Prof. Carpenter, in "Human Physiology," says : "Many instances are on record of heat of from  $250^{\circ}$  to  $280^{\circ}$  being endured in dry air for a considerable length of time, even by persons unaccustomed to a particularly high temperature, and persons whose occupations are such as to require it, can sustain a much higher degree of heat, though not, perhaps, for any long period. The workmen of the late Sir F. Chantrey have been accustomed to enter a furnace in which his molds were dried while the floor was red hot and a thermometer in the air stood at  $360^{\circ}$ ; and Chabert, the 'Fire King,' was in the habit of entering an oven whose temperature was from  $400^{\circ}$  to  $600^{\circ}$ ."

The physician who stated that the frequent use of the Turkish bath was killing cannot have had much practical knowledge of the bath, for a long-continued personal acquaintance with its workings has more than disproved such an idea. Since our establishment of the Turkish bath in Brooklyn we have given over three hundred thousand baths, with not a single death, nor even a serious injury to any one from the bath. Many of the ablest and best physicians in the land both use the bath themselves and send their patients fre-

quently to it. This fact is well known to all who keep up with the advancing strides of modern medicine.

The frequent use of the Turkish bath, instead of being killing, is enlivening and helps to prolong life and increase its vigor. A person who is given to excess in drink, and who makes frequent use of the Turkish bath, is therefore more likely to live longer than if he did not so use the bath. The effect of the bath in such cases is to soothe and quiet the morbid craving for drink by reducing the inflamed condition of the mucus membrane and taking the inflammatory materials from the blood. Indeed, the bath has been used with much success in Great Britain as an antidote to the cravings of the drunkard.

The daily use of the bath has been found in many cases of great advantage to persons in ordinary health. By that means they are fortified against disease and their systems toned up and invigorated. Death has come to man in the pulpit, on the ferryboat, at the table. Is it at all wonderful that it should come to one while in the bath, when he has taken the surest course, by dissipation, to bring that condition about? Rest assured, the bath, in and of itself, is not the thing to hasten that time. Over a quarter of a century's study and use of the bath has convinced me, by overwhelming proofs, that it is one of the greatest blessings vouchsafed to man. It has attained its present position in spite of stolid conservatism, and when the laws of hygiene are as well understood as their surpassing importance renders imperative, its triumph will be more conspicuous than that of any other therapeutical agent. When the bath shall have become the frequent practice of the people there will be less sickness and suffering in the land, for the whole community will thereby be placed on a higher plane of health.

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## Abstracts and Reviews.

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### PHYSIOLOGICAL ACTION OF ALCOHOL.

Dujardin-Beaumetz, in a recent lecture on "Beverages in Common Use," speaks of alcohol as follows :

"Alcohol is of itself an irritant, and when applied to mucous membranes, it develops a sensation of heat and burning which is the greater the more concentrated the alcohol. When introduced into the stomach, besides the symptom of irritation, it occasions an exaggeration in the acidity of the gastric juice.

"In the normal state the acidity of Marcellin's gastric juice was represented by 1.3 gms. of hydrochloric acid per litre. During digestion, the acidity rose to 1.7 gms. but as soon as an alcoholic stimulant was introduced the acidity went up to 2.7 gms. and even 4 gms. per litre.

"This is a capital point in the physiology of alcohol as far as its influence on digestion is concerned, and this property is utilized to a certain extent in all countries, and especially in Normandy, where it is a common custom to make a hole, as they call it, in the middle of a meal by drinking a small glass of brandy. In this way the acidity of the gastric juice is augmented, and the stomachal digestion is increased. From this fact there arises an important indication,— to give to patients affected with dyspepsia from want of secretion of gastric juice a small glass of liquor after their meals.

"But it will not do to prolong this action of the alcohols, for little by little the pepsin glands become worn out and cease their functions, to give place to the increased secretion of the mucous glands.

"All our alcoholic dyspeptics go through about the same history. There is first of all, gastric irritation with pyrosis resulting from the exaggerated acidity of the gastric juice,

then these symptoms give place to gastrorrhœa, characterized by the pituitous vomiting and dyspepsia of drunkards. Alcohol when ingested, is absorbed by all parts of the digestive tubes, but especially by the intestines. It is taken up by the radicles of the portal vein and passes into the hepatic circulation, where its presence determines portal periphlebitis, the origin of the cirrhosis of drunkards. Then it enters the general circulation to be eliminated by the lungs and kidneys, whether in the state of unchanged alcohol or in that of acetic acid and aldehyde.

“Many hypotheses have been put forth as to the physiological action of the alcohols. It is one of the most interesting of medico-physiological questions, of which I can only sum up here the leading points. All these hypotheses may be reduced to two. The first is the theory maintained since 1869 by Lallemand, Duroy, and Perrin, which affirm that alcohol is neither transformed nor destroyed in the organism, and that the total quantity being eliminated unchanged, it cannot be considered a food. The other theory is, that alcohol undergoes combustion and transformation in the economy and therefore acts the part of a food. This is the view which I hold. You put together in the circulating blood two chemical bodies, the one alcohol, having a strong affinity for oxygen, the other hæmoglobin, ready to yield up its oxygen under the most feeble influence, that of an inert gas for instance, and you pretend that no exchange takes place between these bodies. Exchanges do take place, and I have demonstrated with my pupil, Jaillet, the transformation *in vitro* of alcohol into acetic acid under the influence of hæmoglobin. I believe, then, fully in the combustion of a part of the alcohol ingested, and this combustion takes place at the expense of the oxygen of the hæmoglobin of the blood corpuscles.

“So, then, to sum up my view as to the physiological action of alcohol, I should say that, when introduced into the economy in non-toxic doses a certain part of the alcohol is

oxidized and is transformed into acetic acid, then alkaline acetates, then into carbonates.

“Alcohol is, then, a food, but a waste-restraining food, which, instead of energizing the combustions, slows them by robbing the blood corpuscles of a certain quantity of oxygen. It is this action on the blood corpuscles which explains to us the antithermic power of the alcohols, and action which attains its maximum of intensity when toxic doses of alcohol are administered. In such toxic cases the alcohol is no longer burned but destroys the globules and dissolves the oxyhaemoglobin. Ordinarily not all the oxygen ingested undergoes combustion, a part unchanged acts directly on the cerebro-spinal axis and there determines phenomena of intoxication of sleep and of vaso-motor modification, varying according to the quantity of alcohol ingested.

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#### MENTAL DYSPEPSIA A CAUSE OF INEBRIETY.

In a recent paper read before the Macon Medical Society, and published in the *Atlanta Medical and Surgical Journal*, Dr. Fuller writes as follows :

“The average American is to a greater or less extent a confirmed dyspeptic. He complains of his stomach as the weakest part of his physical system. It is to him the heel of Achilles, where the arrows of pain and disease inflict the mortal wound. Like the bankrupt treasure of a nation, it not only ceases to afford a generous relief to a thousand legitimate demands, but it becomes a cause of pain, apprehension, and torment. The stomach supplies building material to the architectural edifice of the human body. It supplies material to repair the waste incidental to organic and intellectual life. The nervous tissue must suffer waste in order that the current of thought may flow. Every thought, every logical process, is the product of certain chemical changes in the elements of the nervous tissue, from the condition of organic life to that of dead matter.

“In mental dyspepsia the stomach has ceased to furnish the brain with sufficient material to equal the waste caused by the intellectual effort. The successive steps by which the scholar is unconsciously led down a pathway of physical bankruptcy, having their origin in mental dyspepsia, are important and interesting from a physiological point of view. The relations existing between mental dyspepsia and inebriety are entirely overlooked by the physiological writer and teacher. The nervous tissue is, without exception, the most important of any part of the body. Within the gray cells of this tissue the life force is stored, that mysterious life-principle that awakens into activity all of the phenomena of vitality exhibited by the various organs of the body. Of course this tissue requires a constant supply of building material to compensate the waste that is constantly going on in its substance. Every thought of the brain, every contraction of a muscle, and every secretory or excretory function of an organ requires in the act a certain expenditure of nerve force or energy, and the production of this must necessarily require in turn the supply of nerve food. Now an animal tissue has the habit, like the cannibal, of feeding upon its own substance, relying upon the stomach to replace the amount consumed as rapidly as it takes place.

“From this it will be clearly understood that the labor performed by the nervous tissue is incomparably greater than any other in the human body. Now the amount of building material required by a living tissue to meet the waste resulting from labor is always in proportion to the amount of labor performed. Food is a latent form of vital action, and vital action is the source of labor. Hence whenever it happens that the stomach is not supplied with proper and sufficient food to repair the waste of nervous tissue, almost infinite physiological mischief follows. The nervous tissue falters in its functions, and the wheels and levers in the various dependent organs vibrate with a diminished speed. While the instinct of self-preservation becomes aroused as the starving nervous tissue through the sense of

hunger clamors for food, every other tissue experiencing a deficiency in vital action demands food.

“The victim of this dietetic error is rational conscious of a deficiency. His reason hears the voice of Nature, but her language is unintelligible, or he does not wish to understand. The victim devours with an almost insatiable appetite the fat and muscle-forming varieties of food that chiefly constitute the present popular bill of fare. At last his digestive organs falter in their functions beneath the weight of the useless burden. His nature, intellectual and physical, feels crushed beneath an unsatisfied want, and even staggers and reels under the invisible burden. If the labor he is accustomed to perform is chiefly intellectual, the mischief and disaster to the whole system is doubly increased. For the process of intellection occasions a much greater proportional waste of the elements that compose its substance than is exhibited by the other portions of the nervous tissues in the performance of the purely organic processes.

“At this juncture the condition of the victim, from a physiological point of view, is painful in the extreme, for the stomach, in common with the other organs of the body, experiencing a deficiency in vital energy, besides being crushed beneath a fatal burden, signally fails to fulfill its important office of supplying the waste incidental to vital action, and the blood in consequence becomes still more impoverished in elements requisite to supply the demand of the nervous tissue. The germ of that uncomfortable disease, mental dyspepsia, has taken root. The victim is tortured with a longing and craving that is almost insupportable. He feels depressed, languid, and gloomy. A sense of weariness, which he expresses in the significant word “goneness,” never forsakes him. He toils at his daily task, but he does it with a painful effort. He will not admit to his friends that he is sick, and he becomes ill-natured and indolent. An effort that he once would have made with assurance and delight now assumes proportions from which he recoils with fear and distrust. At last the torture becomes unbearable,

and he calls a physician. Then the crisis has come. Nine times out of ten, to "brace up his system" and to quiet his rebellious nerves, the medical practitioner prescribes a brain stimulant, either alcohol or opium, as the thing indicated as the proper remedy, or frequently combines them in a single prescription. A poison is given to supply the place of concrete, assimilable brain food; under its stimulating effects the patient feels invigorated. But the seeming salutary effect is founded upon the fatal physiological law that brain stimulants temporarily supply the place of brain and nerve food. The dose of the poison from time to time is given more frequently and increased in quantity as the demand arises. The victim finds on experience that during the period of excitement resulting from its stimulating effect he can resume his interrupted labor. But between the periods of excitement his mental and physical torture seems to be doubly aggravated. It may be that his daily toil earns his daily bread. If so, he must work, even if he works under the excitement of a stimulating poison.

"In this manner the appetite for stimulating brain poisons is innocently and unconsciously acquired by the victim of mental dyspepsia. The number of these victims is increasing from year to year in a frightful ratio. After a little thought and reflection all will agree that intellectual activity has increased in our land for the past fifty years; that among a given number of population, four times as many subjects studied and mastered, four times as many opinions promulgated and defended in the place of a single one fifty years ago.

"As a result from the friction incidental to social, professional, commercial, and political life, an ill-fed cerebral tissue is the inevitable: hence the average individual engaged in any occupation or profession requiring continuous and intense intellectual activity is usually broken down physically and intellectually between the ages of forty and fifty years. Now and then these conditions become so extreme that reason is dethroned. We cannot tell how soon

that destroying bolt will descend. Incipient insanity may gradually come on, subdue the strongest will, and cloud the brightest intellect long before the victim dreams of what is coming. How many men and women become old at this age and give up their places for younger ones who are only too soon to follow in their footsteps. This condition to me seems to be a great loss of time; a failure in the end that might have been avoided if the foundation had been fitly laid; but instead, he or she crawls away upon the shelf to die a physical and intellectual wreck.

“The remedy for mental dyspepsia is suggested by its cause. It can be nothing else but natural assimilable brain food joined to an efficient fulfillment of the digestive functions. This food must contain in itself the same chemical elements that enter into the constitution of the nervous tissue. It must be concrete, soluble, with chemical affinities so easily broken as to impose the least possible tax upon the digestive organs. To this we must add an observance of physical laws relating to the functions of digestion and assimilation.”

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#### ACUTE PSYCHOSIS IN OPIUM CASES.

An acute psychosis resulting from opium in the blood in moderate quantities is, I am convinced from long observation and diligent inquiry, associated with inherent central nerve instability, often and most usually associated with the insane temperament, already actively displayed in some member of the family, and only dormant in the individual till aroused by the disturbing influence of the drug, and, like acute insanity, developed by alcoholic intoxication; hence the latest neuropathic tendency becomes an active disease. Here both opium and alcohol become valuable diagnostic signs in our search for a dormant hereditary psychopathic tendency. Alcohol never develops acute mania, nor opium real insanity, unless there is an organic tendency in that

direction. An inherent instability must be there, only awaiting its peculiar train of exciting causes.

The sum of this subject, as thus only preliminarily and too cursorily presented, is this :

1. Single or a few large doses of opium cause an acute narcosis and well-known forms of physiological depression, which we are not here considering.

2. Under gradual habituation to increasing doses, acute, narcotic, ordinary toxic effects are, in great measure, resisted by the organism, and sensory analgesia and psychical exaltation, followed by brain-weariness, somnolentia, and sleep after each repetition of the dose, are the chief ordinary manifestations, with a final more or less impaired function of bowels, liver, and skin, and with certain psychical features. This true chronic meconism or papaverism and its characteristic symptomatology is due to the combined influence of a damaged and a poisoned nervous system.

3. A true acute psychosis is developed in the neuropathically inclined, as insanity is developed by a large drink or two of some strong alcoholic beverage. This is the acute insanity of opium, requiring two factors, hereditary predisposition and a central toxic influence, to induce it.

4. A hereditary instability of nerve element leads some organisms to irresistibly crave stimulants at certain times, generally after ordinary nervous and physical exhaustion, and these are satisfied with alcohol or opium. If they happen to find solace in opium readily, they become meconophagists ; or if alcohol first falls in their way, and the insatiate longings of their unstable nervous organisms find, in some beverage containing it, the agreeable and temporarily satisfying impression their neuropathic organisms crave, their will (mastered by the lower dominant organic feeling) becomes a slave to the tyranny of a bad organism, regardless of consequences, and they enter, like the luckless DeQuincy, into an Iliad of woes.

The mark and impress which it makes upon the central nervous system after the poison is no longer present in the



blood masks or modifies the symptomatic expression of the damaged neural mechanism.

This is the true meconeuropathia, or morbid condition of nervous system engendered by the repeated and long-continued assaults of the toxic enemy on the cerebro-spinal and ganglionic centers, and which comes on shortly after the withdrawal of the drug, and abides with the system long after the drug is taken away, especially in permanent psychical aberration and final dementia.

If we contrast the prominent symptoms of opium present and opium absent in *meconophagism* and *meconopathia* or meconeuropathia, we find in all cases in the former constipation, psychical satisfaction or exaltation, followed by drowsiness and sleep, analgesia, fair tonicity of stomach and skin. In the latter, we find always very loose bowels, requiring medical restraint after the first day. Relaxed and perspiring skin, nausea and vomiting, sensory hyperaesthesia of special senses, hyperalgesia, especially about flexor regions of forearm and about joints of lower extremities (true meconalgias), psychical depression and insomnia, psychical delusions of dread and of approaching calamities.

The opium neurosis is not cured, even when the patient has been weaned from his accustomed drug, but he is often subject to neuropathical symptoms, and a proper subject for continued neurological treatment, requiring treatment for many months after cessation, to prevent a return to the use of the drug that damaged and enslaved. The patient is not safe from neural damage, even though he may never return to the drug, until he fattens some, feeds well habitually, and sleeps much, and can resume his ordinary occupation without nervous fatigue and an inclination to take to opium or other form of stimulation. With this view of this disease, it would be fitting here to protest against the substitution of some other form of stimulation for opium, abandoned or withdrawn, and, when the disease-weakened nervous system has been enslaved by another stimulant narcotic, call that a cure.—*Dr. Hughes in Alienist and Neurologist.*

**SOME FACTS FROM THE LAST INTERNAL  
REVENUE REPORT.**

The number of distilleries registered during the year was 6,422 and the number operated 6,034. Of this latter number 5,075 were fruit distilleries. The total spirit producing capacity of grain and molasses distilleries in operation Sept. 1, last, was 188,747 gallons per day. The producing capacity of similar distilleries operated Sept. 1, 1880, was 282,928 gallons a day. The number of grain distilleries registered during the year was 1,132, of which number 950 were operated, a decrease of 63 in the number registered and an increase of 32 in the number operated, as compared with the previous year. The decrease occurs in the class of distilleries having the smallest capacity for the production of spirits, there having been a falling off of seventy-four in the number of distilleries of this class registered and of five in the number operated. In the larger distilleries there was an increase of eleven in the number registered and an increase of thirty-seven in the number operated. There were nine rum distilleries registered and nine operated, the same number reported for the previous fiscal year. There were 5,101 fruit distilleries registered and 5,075 operated, an increase of 806 in the number registered and eighty-three in the number operated during the previous year.

The quantity of grain used in the production of spirits during the year is an increase of 1,340,129 bushels over the amount used in the preceding fiscal year, and is 2,003,361 bushels less than the average for the last nine years. The number of gallons of spirits produced from grain during the year shows an increase of 7,310,182 gallons over the product of the year ending June 20, 1885, and is 873,605 gallons less than the average product for the last nine years. The quantity of spirits produced and deposited in distillery warehouses during the year is more than the production of the year 1885 by 5,429,017 gallons. The quantity of spirits withdrawn tax paid, from distillery warehouses during the

year is more than the quantity withdrawn from distillery warehouses during the previous fiscal year by 1,447,519 gallons. If the 967,500 gallons of domestic spirits exported and re-imported during the year upon payment of a custom duty equal to the internal revenue tax be added the quantity virtually withdrawn from distilleries was, during the year, 70,064,400 gallons, or 1,592,462 gallons more than during the previous year. The quantity of distilled spirits removed in bond for export during the year was 5,646,656 taxable (proof) gallons, as compared with 10,671,118 gallons withdrawn for export during the previous year, being a net decrease of 5,024,462 gallons.

The falling off in exportation in 1886, as compared with 1885, is due mainly to the decreased withdrawals for export of bourbon and rye whiskies and of alcohol, although there was a decrease as to all kinds of spirits except high wines, as follows: in bourbon whisky, 1,829,179 gallons; rye whisky, 373,641; alcohol, 2,623,607; rum, 143,302; gin, 79; pure, neutral, or cologne spirits, 16,172; in miscellaneous, 40,304.

Although the tax was paid during the last year on more than a million gallons of bourbon and rye whiskies in excess of the quantity on which tax was paid during the preceding year, the production in 1885 was so much greater than the withdrawals as to leave a net balance in warehouse, June 30, 1886, of 4,000,000 gallons greater than was on hand July 1, 1885. The production of all kinds of spirits was also two million gallons greater during the months of July, August, and September, 1886, than during the corresponding months of 1885, while the tax-paid withdrawals were 500,000 gallons less. The bulk of the bourbon and rye whiskies reported in 1886 went to swell the stocks in the warehouses of Bremen, Hamburg, and Bermuda. The tendency since June 30, 1885, the Commissioner says, has been to the present time to increase the stock of bourbon and rye whiskies in distillery warehouses. The largest importation of rye and bourbon whisky are to Bremen and Hamburg, and the largest importations of rum are to Africa.

The production of tobacco shows an increase in manufacture of 10,798,280 pounds; in the number of cigars and cigarettes of 433,507,247; in tobacco exported of 29,369,220 pounds. The number of cigars imported during the fiscal year ending June 20, 1886, was 73,139,078.

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#### INEBRIETY IN PARANOIA.

The following extract is from a paper on *Paranoia*, by Dr. Zenner, before the Academy of Medicine:

“There is one complication of which I wish to speak while still on the subject of diagnosis, and that is alcoholism. Some of these cases, especially when the disease is congenital, become addicted to drink, and thus mask the real disease. I saw a case of this kind very recently: a man who had been sent to the asylum several times as a case of alcoholism, and in each instance detained a few weeks, when he should have been kept there indefinitely. He is thirty-one years of age, has a family taint of insanity, and striking irregularities about the face and head. His mental symptoms appear to date back about six years. He has frequent hallucinations of both vision and hearing. His chief delusion is that the foreman in a shop where he formerly worked is his enemy and trying to injure him. A girl passed his home, and as she worked in the shop with the foreman, he knew the latter sent her there to watch him. The same was true of a man he saw, who only lived in the same neighborhood as the foreman. A number of articles in the daily papers, one about a monster in South Carolina, others about various bits of scandal, which a sound mind could bring into no possible relation with the patient, he knew were written about himself. They were instigated by the foreman, and were intended to convey to a young lady to whom patient was engaged the idea that he was immoral. At another time he believed the foreman prevented him from marrying a lady by the influence of magnetism, and he went to the court in order to have the foreman restrained in this action. He

subsequently shot at and slightly wounded said foreman, and the case gained a medico-legal interest. The prognosis of this disease is usually very unfavorable. The patient's condition may remain at a standstill for a long time, but he very rarely recovers. Very rarely recoveries have been reported after the disease has existed a long time. In women this is most likely to occur at the second climacteric. It is said to occur more frequently where there is no hereditary taint. In old cases the delusions often multiply, and the intelligence becomes correspondingly impaired. The prognosis is much more favorable in the abortive forms of the disease. The treatment should be of a tonic character, every effort being made by diet, medicines, and hygienic regulations, to strengthen the nervous system. Efforts should be made to keep the mind pleasantly employed, and to direct it away from the bodily functions. Patients who conceal their delusions are able to attend to business and associate with others. But when delusions of persecutions are prominent, especially if they be of such character as to threaten others with danger, the patient should be kept under constant surveillance."

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#### DEGENERATION OF THE COLUMNS OF GALL IN AN INEBRIATE.

Dr. Vierordt, in a late number of *Arch. of Psychiatrie*, mentions the following case. A. M., workingman, æt 30, phthisical, had been drinking to excess for years, gastric disturbances in consequence. March, 1884, was suddenly seized with stabbing pains ascending from feet to trunk, periodically weakness and ataxia of lower extremities with anorexia and vomiting, weakness increased up to June, 1884, from that time onward great improvement in this respect. All symptoms returned in October, to which formications in the legs were superadded. Middle of September, patient became bedridden. Venereal infection denied; no chest trouble at the time was received into clinic. January, 1885, examination revealed slight inequality of pupils; light reflex

normal; evidences of pulmonary trouble, testicles small; no objective symptoms of syphilis. Considerable uniform atrophy of all muscles of upper extremities with corresponding diminution of muscular power; toxic condition of muscles about normal; no ataxia and no disturbance of muscular sense; no hyperæsthesias or paræsthesias anywhere; peripheral nerves neither thickened nor painful. Tendon phenomena very weak; muscles sensitive to slightest touch. Lower extremities muscular status about the same as in upper extremities, atrophy more pronounced in lower legs than in thighs; muscular power in keeping with atrophy; legs fall asleep; also formications; no marked sensory disturbances and no hyperæsthesia; muscular sense normal; knee-jerks abolished; cutaneous reflexes fairly preserved; distinct ataxia; Romberg's symptom present. Bladder and rectum normal. Increased excitability of muscles in upper and lower extremities; percussiom of nerves produces contractions in muscles supplied by these nerves; electrical reactions unaltered. All symptoms progressed; occasional variations in amount of paresis ataxia less marked. In the latter stages hyperæsthesia of the skin of lower extremities; knee-jerks remain absent, plantar reflexes normal. No vesical or rectal trouble at any time and no changes in electrical reactions. Patient developed pleuritis with effusion and died April 12th. Dr. Vierordt made a diagnosis of multiple neuritis. The autopsy revealed besides evidences of pulmonary tuberculosis, etc., a degeneration of the column of gall, most marked in the oblongata and cervical spinal cord. In the middle and lower dorsal segments very slight disease of posterior root-zone Lumbar segments entirely normal; in the medulla oblongata the degeneration of columns of gall was complete, peripheral nerves normal. Vierordt looks upon the disease of the columns of gall as a primary degeneration and not secondary to the affection of the posterior root-zones in the lower and middle dorsal segments, but the affection of the posterior roots might have followed upon diseases in the columns of all.

## POST-MORTEM RECORDS OF INEBRIATES.

The following notes of autopsies of inebriates who died at the Boston Lunatic Asylum, taken from the last report, is of much interest, and suggests a new field of study not yet occupied.

*Case 1.* Inebriety with delirium of grandeur and general paresis, ch. leptomeningitis; ext. hydrocephalus; ch. ependymitis; atrophy of the cortex; œdema of brain; *état crible* of white matter and basal ganglion; ch. endarteritis of basal vessels. Microscopic appearance — Vessels of gray matter of convolutions showed effusion beneath adventitia; lamina not contracted. Lungs — double hydrothorax; ch. adhesive pleurisy; gen. visic. emphysema; atelactasis of lung; hypostatic congestion. Fibro-myoma of stomach; fatty infiltration of liver.

*Case 2.* Inebriety with delirium of grandeur; general paresis: epileptic attacks; gross lesions, œdema of pia; atrophy of frontal convolutions. Heart — ch. endarteritis of coronary arteries. Lungs — recent pleurisy with effusion; putrid bronchitis; gangrene of the lungs; senile atrophy of the spleen and kidneys; diphtheritic inflammation, and suppurative prostatitis with calculi, in the bladder.

*Case 3.* Inebriety with general paresis; comatose attacks; œdema of pia; atrophy; ch. ependymitis; *état crible* of white substance. Microscopical appearance — pigmentation of ganglion cells. In the spinal cord pigmentation of cells; numerous corpora; amylacea; sclerosis of posterior columns in lumbar and dorsal regions. Thickening of the pericardium and brown atrophy of the heart, and same of the liver. Interstitial nephritis. Putrid bronchitis; broncho-pneumonia. Gangrene of both lungs.

*Case 4.* Inebriety — suicidal melancholy; œdema and anæmia; myxo-lipoma of valve; ch. pericarditis of heart. Œdema and emphysema of lungs.

*Case 5.* Inebriety — general paralysis; epileptiform at-

tacks; ch. int. hæm; pachymeningitis; œdema of pia; atrophy; ch. ependymitis. Microscopically—ch. meningencephalitis; infiltration of adventitial sheaths; fatty degeneration of the heart, and the same of the kidneys and tubules, ch. adhesion of lungs, pleurisy; acute bronchitis; broncho-pneumonia.

*Case 6.* Inebriety—general paralysis; œdema of the pia; atrophy; ch. ependymitis; *etat crible*. Microscopically—ch. interstitial encephalitis; infiltration of vessel walls; fatty infiltration of wall of the right ventricle of heart. Embolism of pulmonary arters, hemorrhage; congestion of liver, kidney, and spleen; enchymosis of bladder and thrombosis and œdema of the lower right extremity.

*Case 7.* Inebriety—syphilitic; general paralysis. Ch. leptomeningitis and œdema of the pia; multiple epnumata; apoplectic cysts of basal ganglia; ch. ependymitis; chronic adhesions; pleurisy and ephysema of lungs; nodules in mesentaria.

*Case 8.* Inebriety—hallucinations of liquids; delirium of persecution, melancholia; anæmia; ch. adhesions, pleurisy, and chronic tuberculosis in both lungs. Tubercular ulcerations and perforations of the intestines; ch. perisplenitis, and acute purulent peritonitis.

*Case 9.* Inebriety—heredity; hallucinations of hearing and seeing; cataleptic attacks; strange muscular movements; dementia; old tuberculosis: broncho-pneumonia; tuberculous ulcerations in intestines, and miliary tuberculosis of the liver.

*Case 10.* Inebriety—hallucinations of sight; senile dementia; œdema of pia; circumscribed osteo-porosis of calvaria atrophy; also atrophy of cortex under the microscope. Hypertrophy of the heart and insufficiency of the tricuspid; chronic adhesions of the lungs; pleurisy; emphysema; œdema; necrosis and circumscribed gangrene of colon; congestion of the liver, spleen, and kidney, and recent circumscribed peritonitis.



## THE CURE OF INEBRIETY.

[The following extract from a lecture by Dr. Crothers, was read before the Institute of Social Science of New York City.]

*In the cure of inebriety* there is probably more agitation and interest than ever before. The efforts of societies and parties, of the pulpit and rostrum, with the increasing books and papers from the press, have never been more active than to-day. Yet reports show that inebriety is increasing, and that more spirits are made and consumed every year.

All the temperance efforts and legal means for the cure and prevention of inebriety are based on the theory that it is a moral disorder which the victim can control at will, or a wicked habit that he can continue or put away at his own pleasure. This theory of inebriety is theoretical, and embodies the same error which follows every new advance of thought, namely, explaining all human action from some moral or theological standpoint. Thus the phenomenon of insanity was explained as a possession of the Devil, and the victims were supposed to enter into a compact with evil spirits, voluntarily. The remedy was severe punishment. Public attention was occupied for ages in persecuting and punishing the insane and epileptics on this theory of the causation. Law, religion, government, and public sentiment, all failed in the cure and prevention by this means, and these diseases went on unchecked, simply because the real causes were unknown.

Inebriety is regarded in the same way as wickedness, and the same means are urged as a remedy. Over fifty thousand inebriates were sent to jail in 1886, and punished as willful and voluntary drunkards. Armies of moralists and temperance people are pledging and praying the inebriate to stop drinking, and exercise his will, and be temperate and well again.

Yet all such efforts fail, and often tend to increase the very condition which they seek to remedy. They fail because they are based on a false assumption of the causes, and not on any accurate study of the history or real condition of the

patient. A new era is dawning for the inebriate. His diseased condition, and the need of special medical care in special surroundings, is a truth that is spreading slowly and surely in all directions. Not far away in the future inebriety will be regarded as small-pox cases are now in every community. The inebriate will be forced to go into quarantine and be treated for his malady until he recovers. The delusion that he can stop at will because he says so, will pass away. Public sentiment will not permit the victim to grow into chronic stages; the army of moderate and periodic drinkers will be forced to disappear, and the saloons which they have supported will close in obedience to a higher law than any prohibition sentiment.

Public sentiment will realize that every inebriate is not only diseased, but dangerous to society, to himself, and all his surroundings, and demand legal guardianship and restriction of personal liberty until he recovers. When these poor victims realize that society will not tolerate their presence or allow them personal liberty in this state, they will seek help and aid before they reach extreme stages.

This is the teaching of all modern science,—to check the disease at the beginning, to seize the poor waif on the street and the rich man's son, who are just at the beginning of inebriety, and force them into conditions of health and sobriety, to save the one from becoming a prey on society and a burden to the producer and tax-payer, and the other from destroying society and himself and leaving a tide of misery and sorrow that will continue long after. When society shall realize and act on these facts, the great centers of pauperism and criminality will be broken up. This will be accomplished by the establishment of work-house hospitals, where the inebriate can be treated and restrained. Such places must be located in the country, removed from large cities and towns, and conducted on a military basis. They must have all the best appliances and remedial means to build up and restore the debilitated victim. They should be military training hospitals, where all the surroundings are under the exact care of the physician, and every condition of

life is regulated with steady uniformity. Besides the medicinal and hygienic treatment, there should be educational and industrial training, and each one should be employed, both in body and mind, every day. He should be placed in a condition for the best culture and building up of the entire man. Every defect of body and mind should be antagonized and remedied as far as possible. Each case should be an object of study to ascertain the real state and the means to strengthen and improve it. These hospitals should be built and conducted entirely from the license fund or the taxes on the sale of spirits. They should, in a large measure, be self supporting from the labor of the inmates, and independent of the tax-payers. These places would most naturally divide into three distinct grades. The first class of hospitals should be for recent cases, where the inmates can be committed by the courts, or voluntarily commit themselves for one or two years. The second class should receive chronic cases for longer terms of treatment—from one to three years. The third class should be for the incurables, or those who give no reasonable promise of restoration. The time should be from five to ten years and life. The latter class should be thoroughly organized into military habits of life and work, and kept in the best conditions of forced healthy living. Employment and mental occupation should be carried out literally as a stimulus to strengthen the body and mind. Where it was possible the rewards of his labor, beyond a sum to pay for care, should be turned over to his family and friends or held in trust for him. He should be encouraged to healthy work and living by all possible means and surroundings. The semi-chronic cases should be treated substantially the same way, only occupation and training of the mind and body should be more suited to the wants of each case. The amusements should also be of a sanitary character.

The recent cases should have the same exact discipline, filling the mind with new duties and new thoughts, and suited to build up the exhausted, overworked man, as well as the gormand and under-worked idler. All persons should

pay for their care if possible, and be required to render some service which would be credited on their bills. These hospitals should be literally quarantine stations, where the inebriate can be housed and protected and society saved from the losses following his career.

If ten thousand poor chronic inebriates could be taken from New York and placed in such hospitals, and made self supporting, who could estimate the gain to society, to morals, to the tax-payer, and to civilization? This can and will be done in the near future. If ten thousand semi-chronic cases of inebriety could be taken from New York and quarantined two or five years in such military hospitals, and made to pay for their care by labor, who could estimate how many would be returned to health and temperate living again?— who could estimate the relief from sorrow, misery, wretchedness, and losses? This will also be a reality a little farther on. If ten thousand recent cases of inebriety could be taken out of their surroundings in New York and placed in these hospitals, where forced conditions of the highest degree of health and vigor are maintained, a large percentage would recover. The gain to society and the world would be beyond all computation. Now each one of these propositions and the practical working of a military hospital is a reality, based on evidence constantly accumulating. Every prison, penitentiary, or hospital, every asylum or home where inebriates come under care and restraint bring such evidence. They show that such a method of treatment, combining the varied experiences of all these institutions can be made practical and is the only scientific way of solving this problem. To banish the still and saloon does not prevent inebriety or cure the inebriate; it only changes the direction of the drink current. But quarantine the inebriate in a hospital, as one suffering from contagious disease, and the victim is cured, the spread of the disease is prevented, and a knowledge of the causes ascertained, from which the remedies can be known and applied. To punish the inebriate as a criminal cannot cure his inebriety, but it always unfits him for living a temperate, healthy life hereafter. To

attempt a cure by faith and prayer is to depend on false hopes, the failure of which is followed by increased degeneration. To attempt any form of treatment without knowing any other fact except that the victim drinks to excess is always to blunder and fail.

The time has come to recognize the physical conditions which enter into all cases of inebriety, and to apply exact remedies along the line of nature's laws and forces.

The late Dr. Bellows, in an address delivered ten years ago, said: "Inebriates, like criminals and insane, will all be eventually restrained in hospitals, and treated with medical and psychological skill the moment their liberty becomes dangerous to society. The terms of their confinement will be limited only by the possibilities of cure and the conditions of their disorder. Society gains nothing by holding prisoner for an hour any man who is fit to be at large. Liberty and human rights gain nothing by allowing any man to be at large for a moment who is destroying himself, his family, and his neighbors. What we need is what we are fast gaining, namely, a possession of the tests and gauges of the fitness and unfitness, and we shall be able to treat the inebriate successfully the same as in other diseases."

As scientific men the question comes to us, can this great army of five hundred thousand inebriates in this country be the outburst of a vicious element in human nature? If this is so, religion and civilization have failed. If this army of inebriates sprung from physiological and psychological causes, then the problem of cure and prevention is a question for science. If inebriety is a vice and sin, then the Church and State must apply the remedy.

Insanity has been studied for over a century by many able and learned scientists, and yet only a few facts have been established, and preparation made for more exact study. The realm of the unknown has been scarcely penetrated. Inebriety, an infinitely more complex disease, has never been studied. Only a few pioneers are approaching it from a physical standpoint, and their views of necessity must be outlines of laws, forces, and facts, that are yet to be dis-

covered. Some of these outline facts may be summarized as follows:

All accurate study of the inebriate indicates a distinct range of causes, both physiological and psychological, from which inebriety springs.

When the histories of inebriates are compared, they are found to follow a regular line of progress, obeying a certain order of events, from the beginning, development, progress, decline, on to extinction.

This march is governed by conditions and forces of which we have only a faint conception. Heredity, disease, injury, starvation, neglect, are only the general names for some of these forces.

In the cure of inebriety all study of cases points to a physical causation to be removed by physical means.

Work-house hospitals as quarantine stations, where every condition of disease can be treated, give the greatest promise of relief. Here the victim is removed from all exciting causes, and protected from himself and others; and here we can understand some of the causes beyond the saloon, and so-called free will, and deceitful heart.

From this very general review of some of the causes of inebriety, and the means of cure, it is apparent that, like the early Northman, we have only touched on the shores of a vast continent of the unknown, which, not far away in the future, the march of science will disclose.

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THE MORPHINE HABIT: BY DR. B. BALL, OF THE PARIS FACULTY OF MEDICINE; J. Fitzgerald, publisher, 108 Chambers St., New York. Price 15 cents, post-free.

This work contains three lectures on Morphiomania, which were delivered at the clinic of Mental Diseases. In the first lecture, which discussed the effects of the abuse of morphia, the following distinction is made: "It is first necessary to distinguish between morphinism and morphia-mania. By morphinism must be understood the sum of the effects produced by prolonged abuse of morphine. Morphia-

mania is with respect to opium what dipsomania is with respect to alcohol. There is morphiamania when the person feels the irresistible need of taking morphine. It is thus an independent disease, having its own characteristics; but just as dipsomania leads to alcoholism, so morphiamania leads inevitably to morphinism. There is, however, a very great difference. Dipsomania is an intermittent neurosis; the longing for drink does not exist continually in the dipsomaniac, and his disease is almost absolutely incurable, as are the greater number of nervous diseases in which the attacks occur at intervals. Morphiamania is, on the other hand, a continuous neurosis; those suffering from it have constant need of their stimulant, and for this very reason it is curable, and often is cured. Hence it is that confirmed drunkards, who are drunk every day of their lives, may be cured; the dipsomaniac, never."

One of the reasons given for the first use of morphine "is that it allays physical pain, mental suffering, and moral neuralgia." The latter term is new and suggestive.

The second lecture treats of the "effects of abstinence from morphia." The various symptoms are detailed, and the *Mania Lectuaria* is described at length. Of the cases where other stimulants are taken, he remarks: "The morphiamaniac often takes other excitants in addition to his favorite drug. Some take coffee, and this practice is approved by Zambaco. The greater number combine with morphine the use of chloroform, of chloral, and, above all, of alcoholic liquors. Many morphiamaniacs are at the same time habitual drunkards. Patients of this class are most liable to experience serious trouble as the result of abstinence; collapse is with them more frequent; they present much more often the phenomena of delirium tremens. Their organization is seriously impaired, and their nervous system radically disordered; in such cases the efforts of the physician are absolutely fruitless

The third lecture discusses the diagnosis, prognosis, and treatment, concluding that morphiamania is a curable affection; "it is more curable than dipsomania, but is none the

less a powerful enemy to combat. We must be armed against it with all the means which science furnishes, and never make the slightest concession to the whims of the patient. We must never forget that the habitual duplicity of these patients continually tends to lead the physician into error."

Four lectures by this author fill up the rest of the volume, on the following topics: Borderland of Insanity, Cerebral Dualism, Prolonged Dreams, Insanity in Twins.

The author has evidently not studied of morphiomania as thoroughly as our American experts, but he has presented some very suggestive and interesting details, that are positive contributions to the literature of this subject.

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*The Twenty-Third Annual Report of the Washingtonian Home of Chicago, Ill., for 1886*, is of more than usual interest. Eight hundred and sixty-seven inmates were admitted during the year. The average number was over seventy-three, and the average time of treatment was about twenty-eight days. Of the forms of inebriety, eight hundred and fifty-five were put down as periodical inebriates, and only one hundred and one as constant inebriates. Only five of this aggregate number were due to heredity, and all the rest acquired this disorder or habit. Sixty had delirium tremens, and only sixteen were insane. One hundred and eighty-seven had had delirium tremens. The physician's report is equally startling in unusual statistical figures. Thus, six hundred and forty-seven are put down as moderate alcoholism, and one hundred and eighty-seven as persistent alcoholism; insane, thirteen. Under the head of complications of the nervous system, only thirteen in nine hundred and thirty-three had nervous prostration; one had neuralgia, and one general debility. Of the liver troubles, in all these cases, one had hepatitis, one congestion of the liver, and one cirrhosis. Of the kidneys, only one had inflammation of the kidneys; three had dyspepsia. Twenty-three of the persons under treatment were not under the physician's care in the hospital. To the average student of inebriety the number of periodic inebriates who have no heredity and the great freedom from complicating diseases completely upsets all previous notions and studies of this disorder.



*Science and Crime: and other Essays.* By Andrew Wilson, F. L. S. J. Fitzgerald, publisher, 108 Chambers St., New York. Price, fifteen cents, post free. This pleasant little volume comprises seven chapters on as many different subjects of popular scientific interest. The leading essay, "Science and Crime," shows what effective aids science is able to render to the legal Nemesis in tracking the criminal. The other essays bear the titles of "The Earliest Known Life-Relic," "Skates and Rays," "About Kangaroos," "Leaves," "Giants," "The Polity of a Pond." The book will serve to entertain the mind pleurably, as well as profitably, during an hour of leisure.

The *Swiss Cross*, a monthly magazine of the Agassiz Association, is devoted to the spread of science among all classes. It is an admirable journal and deserves a wide patronage.—N. D. C. HODGES, publisher, 47 Lafayette Place, New York city.

The *Therapeutical Drinking of Hot Water*, by Dr. Ephraim Cutter of New York, is a very suggestive little volume.

*The Popular Science Monthly* has suffered in the loss of its most distinguished founder, Dr. Guamans. But as in all other great enterprises of the world, the Journal goes on with increasing value, a grand monument to the genius of its founder.

*The Homiletic Review*, by Funk & Wagnalls of New York city, grows better every month and will well repay the time spent in reading it.

*The Electrical Engineer* of New York city, comes every month crowded with new and most interesting facts, which are almost of necessity essential to every thinking man.

*Science* is a weekly New York journal, which comments very fairly on all matters of science and progress, and is reliable in all its teachings.

*The Scientific American* has become the great weekly journal of mechanists, and all who are watching the new inventions of the age. Munn & Co., New York city, are the publishers.

## Editorial.

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### SIXTY-SEVEN YEARS AGO.

In May, 1830, a report was made by a special committee of the Connecticut State Medical Society at their annual meeting, which is of rare historic interest. This committee consisting of Dr. Todd (then superintendent of the Hartford Insane Retreat), Drs. Cogswell, Woodward, Sumner, and Gridley, had evidently been appointed the year before "to inquire whether it is expedient and practicable to establish an institution for the reformation of intemperate persons."

This report was probably written by Dr. Todd, and the following free extracts show a remarkable conception of inebriety and its treatment. The report opens with a statement that inebriety is a misfortune, and associated with disease of body or mind. That the victim is without strength and resolution to recover. "Their disease excites no sympathy; their sufferings call forth no pity; their consciences and friends reproach them; their resolutions fail them; and promises of reformation are made only to be broken." Ignorance of parents and facility for getting spirits are mentioned as causes. The contagion of inebriety is outlined in the following: "It often happens that inebriates are possessed of uncommon vivacity and fascinating address, which render them interesting, and in proportion as they are interesting, they became dangerous associates. One individual of this character has been often known to seduce an extensive circle of unsuspecting companions into inebriety, from which it was difficult if not impossible to reclaim them."

The danger of legal treatment in fine and imprisonment was recognized in the following. "By the existing laws of the State a person guilty of inebriety may be sent to a work-house for punishment. There he is looked upon as a crimi-

nal ; his associates are criminals, some of them guilty of heinous offenses ; and instead of being reclaimed he is usually made worse. Being associated with companions who have lost all self-respect and all regard for the opinions of others, he is by their companionship prepared for the commission of gross crimes, and consequently returns a more dangerous member of the community. This is no picture of imaginary evil, but a statement which every day's observation proves to be literally true. Whenever an attempt has been made to effect a reformation of an intemperate person through the agency of legal penalties he has become more degraded and more desperate."

Temperance societies are mentioned as having produced "a most desirable change in the opinions and practices of others, but they do not brighten the prospects of permanent restoration in the inebriate."

"There never was a time when greater and more successful efforts were made to prevent the extension of this vice, and we are compelled to believe there never was so faint a prospect of the drunkard's forsaking his companions or his cup. In support of this statement the records of courts and hospitals are referred to, and a question is asked, Shall inebriates be permitted to pursue their unhappy career without an effort made to restrain or correct them? shall they be subjected to penal discipline, which has proved so positively injurious and ultimately detrimental to society?"

The philosophic method of first investigating the nature and character of inebriety, before attempting its cure, is referred to as the true scientific way of solving the problem. The first use of alcohol to remove lassitude and dejection, and its continued use, bringing on disease of both function and structure, are mentioned at some length. Also the folly of attempting restoration of the physical system by moral means. From this the conclusion is reached that institutions for inebriates are absolutely necessary for their treatment and cure. The following are a summary of the ends accomplished by such institutions : "Where they shall be

subjected to salutary discipline and needful restraint." "Where they shall have no access to intoxicating liquors." "Where they shall be constantly and usefully employed." "Where they shall not be contaminated by evil associates, and where they shall have no opportunity of exerting an unfavorable influence upon others." "Where they shall receive medical aid to restore their debilitated constitutions; to relieve the sufferings occasioned by past habits, and to eradicate the strong but artificial propensity, which they have acquired for indulgence in the use of inebriating drink." "Where they shall receive the benefit of moral precepts, correct examples, and such instruction and preparation for the performance of those long-neglected duties, which they owe to others and themselves." "Where in short, by an enlightened system of physical and moral treatment, they may be reformed and restored to their families and society."

The authors make a financial argument showing what it costs to care for the inebriate and paupers who spring directly from this source, and the direct gain to the taxpayers and to society by the establishment of an asylum for inebriates.

The following describes the superintendent who would be successful in such an asylum. "In him must be found a combination of rare and excellent qualities which will secure the affection as well as the respect of those who are to be reformed by his exertions. He must himself be a pattern of industry and temperance in order to induce others to practice temperance, and pursue industriously whatever they may be required to perform. In him dignity must be combined with cheerfulness, energy with mildness, and firmness with forbearance. His moral character and his moral precepts must be of that elevated standard which will secure the confidence of the public as well as those who are committed to his charge."

This report closes with a reference to the changes of the law needed to hold these cases at least one year, and the practical nature of this movement. A series of resolutions

were adopted on the acceptance of this report, fully endorsing it, also providing a committee to form an association for the establishment of an asylum. A committee of correspondence was appointed consisting of two of the most eminent physicians in each county of the State.

Thus ended an effort which indicated a remarkably clear view of this subject. Over half a century has passed, and these facts are still unrecognized by the masses. The birth of great truths is long and laborious. Pioneers point them out far in advance. The mass of the profession follow on slowly, dragging up public sentiment to recognize the great facts. In another century the inebriate and his malady will be recognized practically by all.

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#### CEREBRAL PNEUMONIA IN INEBRIETY.

A large per cent. of all inebriates die from pneumonia. Cerebral symptoms and complications are common in these cases, and are described by the term, cerebral pneumonia. The symptoms in such cases vary widely, depending on the causes, also brain susceptibility and exhaustion. The effect of high fever and increased heart action on degenerate brain and nerve centers in inebriates is manifest in symptoms that often mask the pneumonia, requiring a careful examination to determine meningeal inflammation or meningeal irritation or pneumonia.

Thus, in one case, an inebriate suffered from chill and pain of the lungs. The next day he was delirious, and died a few days later of supposed acute meningitis. The autopsy revealed the pneumonia. In another case, after a short period of exhaustion and dull pain, profound depression and melancholy came on. Except a rapid pulse and high temperature, no other symptom of note was present. He died a week after the attack, and the post mortem indicated pneumonia. In a third case, after a chill and fever of two days, the patient suddenly became delirious and remained so until

death, within a week. Pneumonia was found, though unsuspected during his illness.

Magnus Huss long ago pointed out two varieties of pneumonia appearing in inebriates that are even now overlooked. The first form appeared in those who used alcohol to great excess, and all the symptoms came on suddenly. Gastric derangements and a feeling of faintness, with enervation and loss of sleep, are the first symptoms. Often a chill is the first mark of any disturbance. From this point two different conditions may come on, one of great muscular and mental activity. The face will seem to swell and the eyes glisten and flash, the hands and arms tremble, and the patient talk incessantly, often stammering. Delusions that are first transient, then permanent, appear. Often this state closely resembles delirium tremens, only it quickly merges into extreme exhaustion and death. In some cases, the trembling delirium begins as soon as the chill subsides; in others it comes on slowly, but seldom lasts over three or four days. No complaint of pain is made, and no cough is apparent. The second condition of this disease will first appear in a sudden change of expression, sunken eyes, and great apathy of mind, high fever, rapid pulse, and a rapidly increasing exhaustion. Both body and mind seem struck with paralysis, and except a chill and hectic flush in the evening, no prominent symptoms are noticed.

In the second variety of cerebral pneumonia, an adynamic condition develops at once. Insomnia, or drowsiness, and mild delusions appear at first. Trembling of the hands and legs and stammering speech follow; then picking at imaginary objects, whispering to imaginary persons, and finally death. No chill or cough are noticed, only high temperature and pulse.

Another form has been described, in which delirium of anxiety to do something is the first symptom. The person will go to bed with exhaustion, and have this confused and changing delirium which ends in death in a few days. He looks bad, will not eat, has high pulse and temperature, and

rolls and tosses in bed. The delirium may concern his business or family interests, and may last for two or three days, during which he will walk about, then suddenly he will go to bed, and soon after die.

These are only general symptoms, which appear among those who are greatly enervated. Almost endless varieties of symptoms will appear in those who have had syphilis, head injuries from heat and traumatism, nerve and spinal injuries, and lesions of the heart, liver, and stomach.

One practical fact should never be forgotten. Whenever inebriates exhibit cerebral changes or great exhaustion, the lungs should always be examined. A rapid pulse and high temperature should suggest the same examination. Delirium tremens, or great depression, melancholy, change of face, insomnia, stupor, and other symptoms point to inflammation of the lungs, as both a primary and secondary cause. Complications with malaria, cirrhosis of the liver, abscess in both the liver and lungs, or gangrene, are all factors to be considered in cerebral pneumonia. If the case appears as one of delirium tremens, the question of alcohol in the treatment will be prominent. How far it can be given, and how far it will aggravate or relieve conditions of disease present are most important problems to be settled from the symptoms of each case.

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#### THE COLONIAL AND INTERNATIONAL CONGRESS ON INEBRIETY.

This Congress, organized last year, will hold a session in London, England, Wednesday, July 6, 1887. The meetings will be held at Westminster Town Hall, and consist of three sessions. The morning session at 10.30 A. M., and the afternoon at 2 P. M., followed by a public dinner at 6.30 P. M. The next day a lunch and meeting will be had at the Dalrymple Home for Inebriates, under the auspices of Canon Duckworth and committee. Dr. Norman Kerr will preside, sustained by a list of the most distinguished physicians and

others as vice-presidents. Among the persons who will read papers from this country are the following: Drs. Parrish Davis, Mason, Mann, Crothers, and Clark Bell, Esq. Among the vice-presidents from this country, are Drs. Day, Blanchard, Matison, Wright, and Hughes. This is the first congress devoted to the study of inebriety ever held, of an international character. The list of vice-presidents embracing names of the most distinguished men in Europe, which we published in the last number, shows that at last the subject of inebriety is coming to the front as a scientific topic. The scientific world is prepared for it, and from this and future gatherings we shall anticipate the best results.

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#### ADVISING SUICIDE TO INEBRIATES.

It is not generally known that advice to commit suicide is an offense, and punishable by law. If it can be proved that the suicide was the direct result of the counsel of another, the crime is a misdemeanor. The relatives of the suicide may have a civil action for damages, the penalty of which is both fine and imprisonment. Under certain circumstances the charge would be accessory to the act, and would be manslaughter in the first degree. In a case of an inebriate who committed suicide lately, where the insurance was contested, the following facts appeared. The victim had just recovered from a protracted drink paroxysm and applied to his guardian for help. The guardian, after scolding him severely, advised him to go and drown himself. This he did within an hour after the advice was given. The probability is, that he acted on this advice and would not have done so had it not been given. An inebriate under my care went home, and after a severe paroxysm of drink, came to his brother begging to be sent back. In anger his brother advised that he go and shoot himself. He went away and drank freely that afternoon, and committed suicide in the evening by shooting.



These cases are by no means uncommon, and follow most naturally from the dangerous theories of the vice of inebriety.

The inebriate's mind is always very susceptible to suicidal impulses. The despair at his failure to control himself, and the degeneration of both brain and nerve centers, with impaired vigor, encourage morbid impulses of any form, and more particularly if suggested from without. A word or look, or the slightest suggestion to such men in this state, may explode or give direction to diseased brain force, that will develop homicidal or suicidal maniacs. The same caution should be observed with inebriates, as that exercised among the insane. The appearance of sanity and control should never be accepted as conclusive, or relied upon. The advice to end inebriety by suicide should be severely punished in all circles and under all conditions.

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#### CAPACITY OF JURORS.

An inebriate shot a stranger while intoxicated. On the trial for murder, the defense was insanity and irresponsibility at the time. A number of medical experts testified, and were crossexamined on the nature and character of insanity. Hypothetical cases involving the mental state, and possible mental action, at the time of the murder, were presented, and answered in all degrees of confusion. Statements, exceptions, and qualifications of insanity and responsibility were made by each expert. Different views of different authors and different conclusions of the facts were cited freely.

The most profound questions of the nature and action of the mind, were handled with reckless familiarity. Both counsel and judge commented with increasing confusion on these questions, and the jury went out to agree upon the true facts of the case. Three farmers, one horse trader, four merchants, two mechanics, and two clerks, set down to determine the degree of sanity and insanity of the victim. With the training which comes from these separate avoca-

tions they are called to determine questions of mind and body, mental health and disease, and the judicial obligations and relations. All questions which the philosophers and experts of ages have failed to solve. In two hours these great questions are decided. The prisoner was of sound mind at the time of the murder, hence was guilty.

In the sentence to death the judge comments on the fair trial and impartial judgment of the jury. Later the man is hung and justice is supposed to be appeased, and others deterred from similar crimes. A century hence these farcical efforts to administer justice will be matters of wonder and ridicule. Inebriety or insanity is not a mere nomonial condition, which can be determined from the limited observation of twelve non-experts, before whom a mass of conflicting testimony by opposing counsel are presented. No inebriate or insane person should ever be tried for crime before a jury. His case should be determined by experts after a long exhaustive study and inquiry.

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#### AGED INEBRIATE.

In the *Boston Courier* for September, 1825, occurs this paragraph: "Donald McDonald, who claimed to be one hundred and three years of age, was brought before the court, charged with being a common drunkard, of which he had been convicted once before. Donald stated that he had been in various battles of the Revolution, and sailed with Paul Jones, and was at the taking of Quebec. He was found guilty and sentenced to the House of Correction for three months."

The following notice in the *Boston Patriot* of 1829, indicated that "Donald" was still living and uncured: "Donald McDonald, the Scotchman, who has numbered upwards of 110 years, was sent to the House of Industry on Saturday of last week in a state of intoxication. He had been suffered to go at large but four days previous, and during two of them was seen about our streets, a drunken brawler."

## Clinical Notes and Comments.

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### ALCOHOL IN TONICS AND BITTERS.

The analyst of the Massachusetts State Board of Health has lately made a report of the examination of forty-seven samples of patent *tonics* and bitters which are sold on the market as medicines; many of them are claimed to be temperance drinks and free from alcohol. In all of them alcohol was found, showing that this was the real agent and basis of the medicines. The following is the name of the medicine and the per cent. of alcohol by volume found in each one:

*Tonics.*—Carter's Physical Extract, Georgetown, Mass., 22 per cent.; Hooker's Wigwam Tonic, Haverill, Mass., 20.7 per cent.; Hoofland's German Tonic, Philadelphia, 29.3 per cent.; Hop Tonic, Grand Rapids, 7 per cent.; Howe's Arabian Tonic, New York, 13.2 per cent.; Jackson's Golden Seal Tonic, Boston, 19.6 per cent.; Liebig Company's Coca Beef Tonic, New York, 23.2 per cent.; Parker's Tonic, New York (advertised as without stimulants), 42.6 per cent.; Schenck's Sea Weed Tonic, Philadelphia, 19.5 per cent.

*Bitters.*—Atwood's Quinine Tonic Bitters, Boston, 29.2 per cent.; Atwood's Jaundice Bitters, Portland, 22.3 per cent.; Baxter's Mandrake Bitters, Burlington, 16.5 per cent.; Baker's Stomach Bitters, New York, 42.6 per cent.; Brown's Iron Bitters, Baltimore, 19.7 per cent.; Burdock Blood Bitters, Buffalo, 25.2 per cent.; Carter's Scotch Bitters, Georgetown, 17.6 per cent.; Colton's Bitters, Westfield, 27.1 per cent.; Drake's Plantation Bitters, New York, 33.2 per cent.; Flink's Quaker's Bitters, Boston, 21.4 per cent.; Goodhue's Bitters, Boston, 16.1 per cent.; Hartshorn's Bitters, Boston, 22.2 per cent.; Hoofland's German Bitters, Philadelphia, claimed to be free from all alcohol, 25.6 per cent.; Hop Bitters, Rochester, 12 per cent.; Hostetter's Stomach Bitters, Pittsburgh,

44.3 per cent. ; Sulphur Bitters, Boston, contains no sulphur, 20.5 per cent. ; Langley's Bitters, Boston, 18.1 per cent. ; Mexican Tonic Bitters, Boston, 22.4 per cent. ; Porter's Stomach Bitters, New York, 27.9 per cent. ; Bush's Bitters, New York, 35 per cent. ; Sherry Wine Bitters, Wakefield, 47.5 per cent. ; Cinchonia Bitters, Providence, 13.1 per cent. ; German Bitters, Concord, 21.5 per cent. ; Strengthening Bitters, New Bedford, 29 per cent. ; Old Continental Bitters, Lynn, 11.4 per cent. ; Walker's Vinegar Bitters, New York, 6.1 per cent. ; Warner's Safe Tonic Bitters, Rochester, 35.7 per cent. ; Warner's Billious Bitters, Boston, 21.5 per cent. ; Wheeler's Tonic Sherry Wine Bitters, Boston, 18.8 per cent. ; Wheat Bitters, New York, 13.6 per cent. ; Faith Whitcom's Nerve Bitters, Boston, 20.3 per cent. ; Williams' Vegetable Jaundice Bitters, Lowell, 18.5 per cent.

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#### INFLUENCE OF ALCOHOL IN NURSING.

Dr. Decaisne, in *La Temperance*, calls attention to the great mortality of infants who nurse women that use spirits. A number of cases are cited which have been reported by physicians in Paris, where previously healthy children became restless, nervous, and finally died of convulsions. It was ascertained that the nurses used spirits freely. In some cases, extreme indigestion was first noted, this soon passed into enteritis and death ; in others the nervous symptoms were more prominent, and convulsive phenomena followed. Several cases were mentioned where the stupor, and finally the death of infants, were due to the opium taking by the nurses. He gives several instances which came under his care, where the convulsive symptoms and marasmus of previously healthy children, were found to come from the beer and wine-drinking nurses. When these nurses were discharged, and healthy, temperate women put in their place, these symptoms of disease in the children passed away. He condemns the practice of many nursing women, taking beer or any form of alcohol to keep up their strength. He warns

all mothers to watch the habits of nurses, and on no account permit them to use any form of alcohol or opium. He calls attention to the fact, that many obscure diseases of infants may be traced to this source. In all cases he asserts that alcohol; in nursing women, increases the urinary secretions, and diminishes the carbonic acid; also the alimentation and assimilation, and both the quality and quantity of milk. He also believes that both alcohol and opium are directly transmitted through the mother's milk.

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#### DRUGGIST'S FRAUDS.

The St. Louis *Medical and Surgical Journal* calls attention to the substitution by druggists of poor inferior drug compounds, for those called for by physicians. In the West, where "Bromidia" is used extensively, druggists often make up this preparation from drugs and sell it as the original Bromidia. Horsford's Acid Phosphate, Park Davis' Coca Cordial, Fellows' Hypophosphites, and many others are frequently substituted by the druggist to the great damage of all. Reputable pharmacists owe it to themselves to expose these vultures and drive them from the trade. In doing so they should have the aid and countenance of every physician. In the meantime, let every physician not content himself with shunning the shops of those whom he detects in the nefarious habit of substitution, but boldly denounce them, and warn his patients against carrying prescriptions to them. Concerted action of this sort will soon purge the trade of the offending members.

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The Baltimore Academy of Medicine has lately discussed the use of alcohol as an anæsthetic. Drs. Van Bibber and Ashley related some very striking cases where its anæsthetic effect was more favorable than that of chloroform. In labor and puerperal eclampsia, it had been used with great efficiency.

## MURDERS BY INEBRIATES.

A correspondent sends us the following: "During the year 1886, there were eighteen hundred and seventy-four murders reported by telegraph in the United States and Canada. Three hundred and ninety-six were caused in part or entirely by spirits. Six hundred were put down as coming from quarrels. Of this number at least half were provoked or grew out of states of intoxication. Of four hundred cases ascribed to jealousy, one-third started from drink. Nearly two hundred cases were put down as from unknown causes. Here, also, a large per cent. might be traced to spirits as the real cause."

From these and other statistics he concludes that at least twelve hundred murders occur every year which are due to inebriety.

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## DELIRIUM TREMENS.

Dr. Reed, in the *Massachusetts Medical Journal*, writes as follows: "Formerly it was a universal and it is a common custom to regard this disease as the characteristic event in the nervous life of drunkards, but now it is known to bear but small importance in comparison with the long train of chronic nervous symptoms which make up the picture of chronic alcoholism. Formerly it was supposed that delirium tremens was the inevitable result of temporary abstinence after habits of drinking. The system lost its accustomed stimulus. Both these ideas were quite wrong. Delirium may never occur—never does occur—in the vast majority even of excessive drunkards, and its outbreak is not caused by abstinence, but the abstinence is a symptom of the outbreak; moreover, many patients do not abstain, but drink on into the heights of delirium. All one can say is that in a certain (not large) percentage of people who drink heavily the course of chronic symptoms occasionally culminates in an attack of delirium tremens. Now, the important thing to remember is, that all the alarming train of symptoms

would (barring accidents) subside spontaneously in about three days from the outbreak of the more acute symptoms, or perhaps a week from the first occurrence of total insomnia and spectral illusions, the average delirium tremens patient will get his first sleep, and from that moment will rapidly convalesce, provided he has been kept entirely from alcohol and has been fairly fed, and provided that no violent attempts have been made to narcotize him with opium. However, it is not necessary nowadays to let the attack run so long a course; for in the bromides and hydrate of chloral we possess remedies which we may safely give with boldness to procure sleep, whereas opium was never safe when given boldly."

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#### EYE SYMPTOMS IN INEBRIATES.

In one case the *eyes* are intensely red when the patient is under the influence of spirits. These states only last a short time and go off quickly. A state of mild inflammation goes on that often clears up quickly. The *eyes seem* to be paralyzed and fixed, the muscles are rigid, the eyes protruding and seemingly incapable of turning from one side to the other. In *other cases* the eyes have a rocking, oscillating motion, as if in a state of quivering and trembling. In *some cases* they are drawn together, squinting, as if the light was unpleasant and would be shut off. In *other cases* the eyes are dilated and stand out from the head. In others they flash or are dull and heavy, or change suddenly from one state to the other. In *other cases* one eye is turned up and the other down. Astigmatism is often seen. Palsy of one or more muscles may come on any time.

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The number of persons arrested in England and Wales as drunk and disorderly for the six years past were as follows: 1880, 172,859; 1881, 171,481; 1882, 189,697; 1883, 192,907; 1884, 198,274; 1885, 183,221. This shows a regular increase up to 1884, then a decline.

**ALCOHOL AS A REMEDY FOR CHILDREN.**

*The Journal of the American Medical Association* gives some extracts from Prof. Deunne's paper on the above subject, in a report of the Jenner Hospital for children at Berne, Switzerland. He believes alcohol very dangerous in all diseases of children, and should never be used as an antipyretic. He has seen two cases of children who had cirrhosis of the liver, where alcohol had been taken for a long time, and was used for dietetic purposes. In other cases a marked cessation, or even a retrogression, in mental development was noticed where alcohol was used. Five cases developed epilepsy from the abuse of drink, in his observation. In seventy-one cases of epileptics in children, he was able to trace twenty-one to parents who had used spirits to excess. Alcohol was always a prominent factor in causing night terrors and chorea in children. He thinks alcohol in many cases of children will prove injurious, and give rise to severe diseases of the nervous system. He doubts the value of alcohol as a food or dietetic remedy, and says it should never be given.

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**MORPHINISM IN ACUTE DISEASE.**

M. Richardière lately read a paper on this subject, before the Paris Société Medico-Pratique, in which he mentioned at length some of the unrecognized influences which complicated acute diseases in morphia causes. Delirium is common in all acute diseases that appear in morphiomanias. Delirium tremens will start up often from some profound shock to the organism. Pneumonia will be ushered in and followed all along by delirium. Spasmodic coughing and varied extreme nerve symptoms will come and go. When the morphia is withdrawn, many very serious symptoms appear, and at times take on such an alarming aspect as to require a return to the use of morphia. Gastritis, pleurisy, rheumatic affections of the joints, and other diseases may



appear on the removal of the morphia. These and other diseases may appear more or less marked while the morphia is used.

The caution he gives is to watch all such cases carefully, and be ready to return to the morphia, where it has been withdrawn, or to recognize the influence of morphia when these cases appear.

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### COCAINE DOSAGE AND COCAINE ADDICTION.

Dr. Mattison, the well known specialist of Brooklyn, N. Y., has lately read an exhaustive paper on this subject, before the King's County Medical Society, and which has been published in the *Medical Register*.

The object of this paper is to show the dangerous and fatal effects from the ignorant and incautious use of cocaine, and also to indicate that the statements of Drs. Hammond and Bosworth of New York concerning the harmless character of cocaine, are contradicted by all clinical experience, so far.

Notes and records of fifty cases of cocaine poisoning are detailed at some length. The principal symptoms seem to have been in all these cases the sudden prostration and collapse, with violent headache, vertigo, nausea, delirium, vomiting, and unconsciousness. In many cases mania and delirium, with motor paralysis, were prominent. The question of cocaine inebriety which has been denied, is answered as follows: "I venture to assert there are more cases of cocaine taking in this country to-day, less than three years since its arrival, than of chloral, after a period of more than six times as long." The doctor announces that this paper is only a preliminary to a more extensive study of cocaine inebriety. This we shall look forward to with great interest, and expect from his great energy and wide-spread studies an exhaustive summary of the entire subject.

The following are the conclusions of this paper: "Cocaine may be toxic, sometimes deadly, in large doses. It may give rise to dangerous or even fatal symptoms in doses

usually deemed safe. The danger near and remote is greatest when given under the skin. It may produce a diseased condition, in which the will is prostrate and the patient powerless — a true toxic neurosis, more marked and less hopeful than that from alcohol or opium.”

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If education in physiology and the nature of alcohol would prevent men from becoming inebriates, we should expect physicians to be the most temperate of men. In England inebriety among medical men is very common. In this country it is a source of great mortality among physicians, either directly or indirectly. It is asserted that medical men are more often inebriates than any other professional class. If this is true, there can be but little hope in temperance instruction in the school-room.

The mental effect of punishment where the labor is monotonous, uninteresting, and devoid of all activity of mind, is depressing, irritating, and finally debasing to the mental faculties. Where the mind is acute and hypersensitive, acute melancholy and degenerative changes come on. But where it is coarser and already palsied and degenerative, the effect is to harden and increase the debasement and debility.

Dr. Lauze writes in the *Le Medical Progress* of Paris, France, that the continuous use of alcohol produces constant cerebral congestion and degeneration of the layer of brain-cells closest in contact with the vessels of the pia mater. General paralysis is the most common result, and is particularly a disease of a worn-out brain forced into abnormal activity, and driven beyond the point of exhaustion.

A leading daily has a very prominent advertisement of a brand of “Hand Made, Sour Mash Bourbon Whisky.” In large head lines occurs the following terribly literal statement: “Is death to malaria, chills and fever, typhoid fever, indigestion, dyspepsia, surgical fevers, blood poisoning, consump-

tion, sleeplessness, and dissimilation of food." As usual, several distinguished chemists certify that it is good for family uses.

*Fournier* maintains that the poison of syphilis is increased to great virulence by inebriety, bringing on cutaneous lesions, and producing severe symptoms, tertiary in character, early in the secondary stage, creating special types of malignant eruption, involving large areas of skin surface, causing more frequent outbreaks of the syphilides, depressing the system, and finally predisposing to early nervous manifestations, causing deposits in the brain and spinal marrow.—*Medical Record*.

*The Doctor*, a paper devoted entirely to personal medical news and gossip, first appeared in December last, and has been seen twice a month ever since. Every observation proves that this paper fills a great void in the medical heart, of wanting to know something personal of his neighbor and his neighbor's doings. The genial editor, Mr. Wells, is an astronomer, and his pages are full of discoveries of great *Stars, Planets, and Comets*, and their movements, in the medical heavens. Send two dollars to the editor's address, 20 Astor Place, New York City, and get this semi-monthly *Doctor*, filled to the brim with facts and fancies concerning the great unwritten work of physicians.

The English report of the commissioners of lunacy for the year ending 1885, indicate that twenty-one and nine-tenths per cent. of all the insane were made so by alcoholic spirits. The whole number of the insane were 79,704. It is evident from the list of causes, that an equally large proportion of cases, due to inebriety, were put down to other causes. Dr. Brown's statement that fully fifty per cent. of all insanity were due to excess of spirits, seems to be confirmed from these figures.

*Dr. Formad*, in his recent analysis of the anatomical lesions of two hundred and fifty inebriates, shows that cirrhosis is not a common condition of the liver in these cases.

He found only six cases in two hundred and fifty autopsies, and these were all in the chronic and worst class of inebriates. The old view that every inebriate had cirrhosis, and that cirrhotic liver was always an indication of severe drinking, must be given up. Dr. Formad also found that cyanitic induration of the kidney, and chronic gastritis with mammillation of the stomach, was present in nearly every case.

*The report of the Committee on provision for Idiotic and Feeble-minded persons* read by Dr. Kerlin at the Conference of Charities and Correction, has the following among other conclusions: "That in thirty-four per cent. of idiocy, there should be the family history of alcoholism, with cases of epilepsy, nervous disease, and crime. In the same inheritance is an argument for the restraint of alcoholic inebriety." This is confirmed by Dr. Beech of England, who reports from 38 to 40 per cent. of all idiocy caused by alcoholism. The German Conference for the Care of Idiots, declared inebriety was the principal cause of idiocy.

The inebriate, of all men in every community, needs protection. While they are not technically insane, they are without mental power of control, and subject to contingencies and influences which they are powerless to resist. They become the prey of their own diseased fancies, and the wills of those who wish to use them for some selfish end. They often possess a mental constitution so fragile and even tottering that the least strain carries them over into the domain of insanity. Their history clearly points out their feebleness, and the need of help and protection, not of jails or prisons, but of hospitals and homes.

Every one who examines the Turkish Bath as a remedy for inebriety and nervous diseases, is astonished at its value, and that it is not better known and more generally used. An inebriate physician wrote me, that after the drink paroxysm he suffers acutely from gastritis, most intolerable thirst, and inability to retain anything on his stomach. He has never found any relief from remedies at these times. He finally

used the Turkish bath, and the relief was rapid and permanent. From that time he has used these baths in gastritis from all causes, and has found them very valuable. Dr. Shepard's Turkish baths on Brooklyn Heights, are no doubt the most scientific and complete in this country, and should be tried in such cases.

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Dr. Baudug speaks of Maltine as follows: "My very successful experience with Maltine makes me feel it a duty to the profession to point out some of the principal features of merit this very valuable preparation possesses.

It contains *three* most nutritive and digestive agents, rich as they are in phosphates, diastase, and albuminoids. Hence, at a glance, it is apparent that, for constructive metamorphosis of the brain and nervous system at large, this preparation must prove most efficacious. The large proportion of brain and bone-producing food it contains, therefore, makes it of incalculable benefit in many forms of wasting and asthenic disease. The large proportion of diastase and other albuminoids present in its composition gives it both digestive and nutritive value. Its digestive properties, in fact, enhance its nutritive or tissue-forming capacity.

"In a word, in nearly all cases of general debility, wasting or atrophic affections, and in nearly all varieties of indigestion, Maltine is a therapeutic auxiliary, the most valuable we have as yet encountered, and of which we can conscientiously say we do not tire, being daily more and more convinced of its advantages. With the long and very extensive practical experience we have had of its value, we would be at an infinite loss to replace it in our daily practice now that our confidence in its real merits has been so fully established."

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It appears to me that the "Acid Phosphate," originally prescribed by Prof. Horsford of Cambridge, U. S. A., is not so well known in this country as its merits deserve. A glance at the formula will, however, readily convince one of

its value in suitable cases. Each fluid drachm gives, on analysis,  $5\frac{1}{2}$  grains of free phosphoric acid, and nearly four grains of phosphate of lime, magnesia, iron, and potash. The following are a few brief notes of some of the cases in which I have prescribed it with complete success.

Mr. G., aged 69, consulted me November, 1885, for eczema on the arms, legs, palms of the hands, and trunk. The patient complained of much debility and nervous exhaustion, and he was a man who had led a very busy business life with much worry. In December, 1885, I prescribed Horsford's acid tonic with much good effect, and in February, 1886, I heard that he was quite well.—*Dr. Starlin, London Medical Press.*

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We mentioned in the last issue of the JOURNAL some of the remedies we could cheerfully endorse. We repeat it, with some of the reasons why each one may be good.

*Murdock Liquid Food* is employed with excellent results in anæmia and non-assimilation of food.

The *Anglo-Swiss Milk Food* of New York is particularly a farinaceous food for invalids.

*Colden's Liquid Beef Tonic* has taken high rank for conditions of nerve exhaustion following the use of alcohol.

*Peptonized Cod Liver Oil and Milk*, by Reed & Carnrick, should always be given as an oil tonic and stimulant.

*Lactated Food* is fast becoming a standard remedy in all forms of inebriety.

*Fellowes' Hypophosphates* is unequaled as a remedy in all forms of nerve and brain degeneration.

*Lactopeptine* should be in the case of every physician. Its uses are as varied and valuable as quinine or salts.

*Horsford's Acid Phosphates* is equally valuable and useful in a widespread class of cases.

The *Bromidia* has come into very general use, despite all competition.

*Cold Cordial* has an ever-increasing reputation, and is the safest form of any cold preparation to give.

THE  
QUARTERLY JOURNAL OF INEBRIETY.

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Vol. IX.

JULY, 1887.

No. 3.

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This Journal will not be responsible for the opinions of contributors, unless indorsed by the Association.

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INTERNATIONAL CONGRESS OF INEBRIETY—  
OPENING ADDRESS ON THE DISEASE  
AND TREATMENT OF INEBRIETY.

BY THE PRESIDENT, NORMAN KERR, F.R.S., M.D.

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Dr. Kerr, after welcoming the members, said :

The past half century has exhibited no more striking phenomenon than the rise and progress of the great Temperance reformation, the jubilee of which was celebrated all over the world a year or two ago. The early abstaining heroes, the memorable men of Preston, and the other brave souls who, some fifty years ago, amid the scorn, the contempt, and the ridicule of the learned, the religious, and the fashionable, founded that grand reform of which total abstinence and prohibition are to-day the practical outcome, had for their aim two great ends—the rescue of the intemperate and the prevention of intemperance.

The undaunted Temperance pioneers thoroughly understood the material character of the intoxicating principle, and its physiological influence on the body and brain of man. In a word, our nephalistic ancestors had a clear conception of the genesis of inebriety, and had their nephalian progeny all shown as intelligent a comprehension of the subject, there would have been little occasion for the assembly to-day of a

Colonial and International Congress for the consideration of the remedial and legislative needs of the habitual drunkard.

Of recent years, however, there has in some quarters set in a bad fashion of stigmatizing early temperance advocacy as "low," and of boasting of the so-called "higher platform" of the modern temperance crusader. The true doctrine was taught by the founders of teetotalism, and the pretentious "higher platform" is simply the exclusion of one-half of the truth (the physical aspect) concerning intemperance.

The earliest teaching was that intoxicating liquors are dangerous articles, that there are multitudes of persons so susceptible to the narcotic influence of the witching poison that, whatever their accomplishments or their station, if they drink at all they drink to drunkenness; that the confirmed inebriate is a diseased individual, undergoing the tortures of a living death, manifesting symptoms characteristic of the operation of an irritant narcotic poison. Some of our latter-day enthusiasts deny that inebriety is ever a disease, insist that the fault always lies with the drunkard, never in the drink; that only the evil-disposed and fools fall victims to alcoholic excess.

Need I add that the former well-informed friend of the inebriate recognizes the physical phase of narcotic indulgence, the arduous and protracted character of the struggle of the habitual drunkard for emancipation from his tyrannous task-master; while the latter ill-informed visionary indignantly denies that there is any physical element in the matter, asserting that drunkenness is nothing but a wanton immorality, a willful sin, and complacently declaring that moral and religious influences are alone of service in the reformation and cure of the inebriate.

The illustrious forerunners of Temperance, Erasmus Darwin, two centuries ago, and Benjamin Rush, a century ago, besides other far-seeing and profound thinkers long before, knew and taught the truth. It is not the vicious, the ill-disposed, or the poor who alone swell the great army of the drunken. The most guileless spirits, the purest



minds, the warmest hearts, the most unselfish souls, the loftiest understandings, and the clearest heads have gone down before the irresistible power of the Bacchic tyrant.

Swells the refrain of ten thousand parrot voices, "Men become drunkards because they drink." If ever it were true, in the language of Tennyson,

"That a lie which is half a truth is ever the blackest of lies,  
That a lie which is all a lie can be met and fought with outright,  
But a lie which is part a truth is a harder matter to fight,"

it is here. Men become drunkards through drinking, it is true. That is, drinking is the means by which they attain to a state of intoxication. But the majority of those who drink do not become drunkards. Only a certain proportion drink to excess. Drinking, though a cause, is not the sole cause of drunkenness. It is, in our country, and in some other countries, the principal means by which drunkenness is arrived at. In other lands, to some extent even among ourselves, opium or some other narcotic anæsthetic is the intoxicating agent.

The act of drunkenness should not be confounded with the disease of inebriety. There may be a succession of drunken acts, yet no diseased condition underlying these. On the other hand, where there may have been no actual drunkenness, or even limited drinking, the individual may have been the inheritor of so strong an inebriate predisposition as to have been unable to taste an intoxicant without drinking to excess.

Inebriety may be defined as a disease of the nervous system allied to insanity, characterized by an almost overpowering impulse to, or craving for, the oblivion of narcotism. It is, in reality, an intoxication mania.

The causes of inebriety lie deeper than the mere inebriating substance; and until we unravel the etiology and pathology of the disease, until we fully comprehend the philosophy of intemperance, though we even succeed in expelling alcoholic intoxicants from within our borders, the remote causes of inebriety will continue to operate, pleasure seeking

mankind will strive to appease its craving for narcotism by some other inebriant, such as opium, or chloral, or ether, or, as is already being furtively used, chloroform.

The disease of inebriety assumes varied forms. Inebriates may be classed as periodical and constant. The occasional drunkard does not generally labor under the disease, so need not be regarded here. The periodic attacks may be quotidian, tertian, quartan — once a week, once a fortnight, once a month, once every two or three months, or they may occur irregularly. Functional disturbance is the most common cause of periodic outbreaks. There are other periodicities, such as the periodicity of climate, of season, of occupation, and of occasion.

The indulgence of the inebriate may be social or solitary. The majority drink freely only when in "good company," but a considerable minority are secret drinkers.

The particular form which inebriety may take may be determined by the complicating affection. Thus we have the inebriety of insanity, of syphilis, of sunstroke, and of injury (traumatic inebriety).

The form may correspond to the particular inebriant used. In this way we have alcoholomania, opiomania, morphinomania, chloralomania, etheromania, chlorodynamia, chloroformomania.

Alcoholic inebriety is not confined to ardent spirits, though strenuous efforts are being made to show that beer is harmless, while spirit is injurious, and to establish a difference in kind between the action of fermented wines and spirituous liquors. At the Dalrymple Home nearly 10 per cent. of the cases treated have been examples of beer and wine inebriety. The difference is in degree, not in kind. All intoxicating drinks are poisonous. The lightest beers and the finest fermented wines are as truly, though not so strongly, intoxicating as are the coarsest and cheapest spirituous drinks.

The real question to which an accurate reply should be sought is, "Why do men fly to narcotics?" If we can ascer-

tain this, we will be in a position to understand the alarming nature and extent of the inebriety which is so prevalent among us.

Fashion ; the habits in which they have been brought up from their childhood ; custom, which, with its hoary head and blanched locks, has made the intoxicating cup seem natural and familiar ; tradition, which has shed so venerable and benign an aspect on drinking ; poesy, which has wreathed around the intoxicating bowl garlands of surpassing beauty ; piety, which has blessed and sanctified the inebriating cup, account for probably the great majority of attempts on the part of individuals to drink moderately. The greater part of these, fortunately, though many injure their physical system and shorten their life by what may more truly be called "intemperate" than "moderate" drinking, have never become "drunkards" in the ordinary acceptance of the term, *i. e.*, they have never lost complete self-control. All who are slain by alcohol are not inebriates. Many who have been killed by it have never once been what is denominated "drunk," in the whole course of their lives.

But, though the majority of drinkers stop short of habitual or periodical intemperance, there is a vast array of men and women — and, alas, of children — who, from various predisposing causes, are so handicapped in the race for "moderation," that, strive as they may, they are unable to attain to it. They set out on their alcoholic career with an utter abhorrence of excess, and with a resolute determination never to exceed, never to come under the grinding yoke of strong drink. They have been educated from infancy in the art of drinking. Infants in arms, they have imbibed the intoxicating draught, it may be, from the maternal bosom. As children they have been accustomed to see fermented wine on the social board, to witness their parents and visitors partaking of it, as a matter of course, without any apparent ill effect ; they have been treated to a sip, then half-a-glass, then a glass of some comparatively light, pleasant wine or beer, as an integral part of their daily diet. In adolescence or manhood

they bound forth on the path of life with a buoyant step, quaffing the alluring and enlivening cup, thinking no evil and fearing no harm. Oftener, and yet more often do they, all unconscious of peril, resort to the narcotic for the pleasurable though fleeting sensation which follows, till, bye-and-bye, before they feel the chain even tightening, they are firmly bound by the gilded fetters of an acquired appetite for intoxicating agents. With many such the habit has been so confirmed, the brain and nerve centers, if not the body, have been so affected by alcohol, that a veritable diseased condition has been established which renders exceedingly difficult the cure of what was once perhaps only a social indulgence, in which pre-disease state the entire abandonment of intoxicants would have been comparatively easy.

Whatever the difference of opinion as to the precise character of the drinking habit in the first instance, the latter stage is admitted by nearly all to be an unmistakable stage of actual disease.

Causes may be considered as predisposing and exciting. An exciting cause provokes the inebriate paroxysm in a constitution predisposed to inebriety, while the same excitant has no effect in stimulating a person who has not this predisposition to excessive narcotic indulgence.

What are the causes which have hindered so many from steadfastness in "moderate" or rather "limited drinking"?

Above and beyond all other predisposing causes stands heredity.

This heredity may be regarded as twofold. There is the direct alcoholic inheritance. That drunkards beget drunkards is an axiom dating from very early times. There are also large numbers of children born with an inherited and extremely delicate susceptibility to the narcotizing action of alcoholic intoxicants, whose parents were not in the habit of getting drunk, but drank regularly and freely, physiologically intemperate, though considered by the world to be models of sobriety.

There is also the indirect inheritance of alcohol. Under

this category are ranged individuals who have no special proclivity to excess, who have no direct though latent proneness to inebriety, but who are weighted from their birth by a controlling power too feeble to stay the advances of alcohol within their very being. Alcohol, if it gain an entrance into such constitutions by however tiny an inlet, slowly yet steadily widens the aperture by increasing in volume, as the dykes built to resist the encroaches of the ocean, till all the defenses are swept away by the overpowering and overwhelming flood. In no inconsiderable proportion of cases this defective power of control is the product of alcoholic indulgence on the part of one or both parents.

I have seen the alcoholic habit in the parent bear diverse fruit in the persons of the offspring, one sister being nervous, excitable, and inebriate, a second consumptive, a third insane; one brother an epileptic and a periodic inebriate, the second in an asylum, the third a victim to chronic inebriety. In another instance where all the four children have become habitual drunkards the grandfather had also been addicted to excess.

The heredity is sometimes crossed. The daughters of a drinking father, and the sons of a drinking mother may be the only children affected with the inebriate taint.

The heredity may be either insane or inebriate. As inebriate parents not unseldom beget insane offspring, so from insane parentage we sometimes get inebriate children. The heredity may be of some other type. Any transmitted disease or effect of disease which increases nervous susceptibility, unduly exhausts nerve strength, and weakens control, may bear a nervine crop, in the form of asthma in one child, hysteria in another, epilepsy in another, idiocy in another, and inebriety in another.

A considerable predisposing cause is the effect on the system of accident or disease—traumatic inebriety. Blows or falls on the head and sunstroke, are typical examples of this class of causes.

Injudicious diet and bad hygienic conditions, by their de-

pressing influence on the nervous system, predispose not a little to inebriety. Thus it is that the improvement of dwellings for the poor is so valuable an aid in true Temperance effort.

The influence of sex, age, religion, climate, race, education, pecuniary circumstances, occupation, marital relations, temperament, and associated habits, are all worthy of inquiry. The terrible increase of female inebriety in England of late years is a fact of serious import to the future of the British race, as yet little recognized, and less understood. The health, sobriety, and morality of the coming generation, are deeply involved.

Intoxicating drinks themselves, by their toxic effect on body and brain, markedly predispose to inebriety, by degeneration of tissue, by perversion of function, by brain disturbance, by dulling of the moral sense, and by paralysis of will, all of which unhealthful conditions may be handed down.

What are the causes which excite to inebriety? Some form of nerve shock takes the lead. The shock may be caused by sudden and appalling bereavement, financial ruin, worry, unhappy marriage, disappointed affection, desertion, or sudden and unexpected good fortune. Accidents and disease excite as well as predispose. I have known, for example, sober men and women precipitated, as it were, into drunken excess, immediately after sustaining some obscure brain injury, and in convalescence from enteric fever. Some occupations, such as liquor trafficking, sedentary employment, and daily newspaper work, are more exciting to Intemperance than others, being more productive of nerve exhaustion. Climate exerts an influence. I have seen an Italian who led an abstemious life at home, suddenly break out here into inebriate habits. The state of the atmosphere, and the direction of the wind, have a marked effect on some inebriates. Functional derangement is an influential factor. So is idleness. Overwork, overstrain, sociability, and intoxicants, themselves all excite to an outbreak.

Age must not be left out of consideration, the inebriate

climacteric ranging generally between thirty-five and forty-five. Unhappily, of recent days, tender years have not secured exemption. Children of eight, six, and even four years, have had attacks of *delirium tremens*, while even younger little ones have exhibited a mania for intoxicating beer, wine, and ardent spirits. I have heard children who had been rendered insensible by an accident, on recovering consciousness, ask for gin, or some other similar drink.

The pathology of inebriety is a most interesting study, and reveals the fact of diseased conditions of brain and nerve centers, antecedent to both constant and periodic inebriety.

The importance of a knowledge of the causation of inebriety, consists in the basis which this affords for judicious treatment. When we have discerned the unhealthy condition preceding an attack of disease, we are in a favorable position to prevent a recurrence by remedying the prior morbid state.

Philanthropists and quacks—the former from the highest feelings of benevolence, the latter from the lowest motives of the pocket—have eagerly sought for some charmed elixir, some de-narcotizing talisman, which would cure drunkenness and restrain the drunkard from even tasting an intoxicant again. The magic potions have been in number without end. Each in succession has been proclaimed as a perfect cure. But all the pretensions advanced on behalf of them have been found baseless, from the curious alcoholic extract of frog, to the “bark cure,” which latter was believed by good Christian people among us to have miraculously cured thousands of the worst drunkards in an American city. The nostrum had in reality cured no one there, but has caused many a reformed inebriate to relapse into his previous drinking habits. Verily, John Bull should, by the transformation of a letter, be called “John Gull”!

Others, again, in the fervor of their rage against the consumption of the flesh of slaughtered animals as food, have solemnly declared that the cause of drunkenness is the eating

of beef, that we are mainly indebted for our inebriety to the devouring of pork pies, sausages, and the fleshpots of Egypt generally, and that abstinence from fish, flesh, and fowl would destroy the crave for narcotics. A knowledge of the true nature of inebriety and of the facts, would dispel this astounding delusion. Whole races—who would not taste animal food if they were put to death for their refusal—will get as thoroughly and as often drunk as you choose to supply them with the wherewithal.

There are certain indications of sound treatment. The first is the withdrawal of the narcotic poison, so that the toxic process may cease. This can be immediate with alcohol, ether, chloroform, and chloral, but generally should be gradual with opium and morphia. The second indication is the removal, if possible, of the exciting cause. The third consists in the reparation of the physical damage wrought by inebriety, the remedying of the pre-inebriate morbid condition, and the strengthening of the moral control.

In all these curative measures medical treatment is called for. As is the treatment of insanity, the physical disease should be dealt with, moral and religious influences having their appropriate sphere of action. The bodily unsoundness must be set right, while the concerns of the mind, the conscience, and the spirit are not overlooked.

The disease should be dealt with in its early and more curable stage, as the more chronic it becomes the more difficult is the cure. As skilled advice is not usually invoked until the disease is in an advanced stage,—the clergyman, the lawyer, and every irregular and amateur practitioner having been consulted before the medical man,—in most cases removal from the former inebriate associations affords the best hope of benefit. Sometimes, though rarely, this may be secured by a voyage in a teetotal ship, or by residence with an abstaining family; but as a rule the only resource is to try a residence in a Home for Inebriates. This should be of at least twelve months' duration. As many such establishments are really homes for the confirming or train-



ing, and not for the cure of inebriety, it is imperative that the most scrupulous care be taken to see that the institution is genuine, and does not allow the presence of intoxicants.

The results of the treatment at the Dalrymple Home for Gentlemen at Rickmansworth are most gratifying. There have been 103 admissions and 85 discharges. Of the patients who have been treated in that Home (which is the only retreat for males with a disinterested proprietary, and at the same time licensed under the Habitual Drunkards Act), more than one-half have been restored to their friends, and have been enabled to again fulfill their duties in life. A like experience has rewarded the treatment at other genuine homes in this country and abroad. So that it may fairly be claimed that one-third of discharged male inebriates have been cured. The record is not quite so favorable in the case of females.

In America and in many of our Canadian and Australian colonies there is excellent legislation for the compulsory committal of inebriates to authorized homes for care and treatment; but in the United Kingdom a lively jealousy of interference with the liberty of the subject has prevented us from being favored with a similar provision. The British Legislature is so enamored of freedom that it has declined to emancipate the drunkard's hapless wife and starving children from their slavery, or by effective temporary seclusion, to give the broken-down, volitionless inebriate his only human hope of deliverance from a worse than Egyptian bondage. Involuntary internment in a genuine retreat for inebriates would be the freeing of many an abject serf, for such might truly, with the poet, say of themselves:

“Our freedom chained; quite wingless our desire;  
In sense dark-prisoned all that ought to soar!  
Prone to the center; crawling in the dust;  
Dismounted every great and glorious aim;  
Embruted every faculty Divine.”

Our Habitual Drunkards Act, which will expire in two years, unless renewed, empowers an inebriate, in the presence

of two justices, to sign away his liberty for any period not exceeding twelve months. As there is no licensed accommodation for patients under £2 2s. per week, there is therefore no provision whatever under the Act for the poor, or for persons of limited means. In America, and in our colonial possessions, it is far otherwise. There the State of the inebriate can be held liable for the cost of his maintenance; and when no funds are forthcoming, he is treated for a time at the public charge.

There is a residuum of inebriates in whom the disease has become so confirmed that they are apparently incurable. They are not amenable to treatment, and, therefore, have to be discharged from homes for inebriates, as their retention would interfere with the treatment of the other more hopeful cases. For this residual chronic, insusceptible class, provision should be made for compulsory and permanent constraint. It would be true economy for the State to provide for all these classes of inebriates, who for criminal and police expenditure necessitate an enormous annual outlay.

The Medico-Legal Relations of Inebriety are of deep interest. In some countries crime committed during insanity from drink is not visited with heavier penalties than if the insanity were from other causes, and, therefore, exempts from responsibility. In America, France, and England full responsibility is, however, exacted. In America the severity of the law is in practice mitigated in capital cases by the choice of degrees in criminality. The result of our present jurisprudence is that men and women have been sometimes severely punished for deeds done when the doers were undoubtedly beyond control, and even unconscious of their violence. Our existing jurisprudence was built up when we had little knowledge of the physical phases of inebriety, and a mixed commission of legal and medical experts might be able now to somewhat modify, in the interests of justice, our criminal procedure with reference to the diseased inebriate.

To the great Republic of the West the world is indebted

for the dawn of a new era of hope for the habitual inebriate, who has been too long the scorn, as well as the reproach, of modern civilization. In the victorious freeing march of the beneficent Temperance reform, not a few human captives have been rescued from a living death, not a few human slaves have been restored to abstaining liberty and life. With a fuller knowledge of the causes and conditions of inebriety, which we trust the labors of this Congress and similar efforts will afford, we may confidently look forward to a more successful, because a more intelligent warfare, against intemperance, to the more effective protection of those who have to come after us from the sorrows and the evils of narcotic excess, to the more hopeful treatment of a dire and dreadful disease.

A general recognition of the diseased state of the inebriate may not be realized in our day; full justice may not be accorded to his physical infirmities in our time. But our duty is clear. Our mission is to proclaim the truth. Strong in the righteousness of our cause, let us be content to sow the seeds of knowledge. Let us, each one of us, in our heart of hearts, say with the grand old Quaker poet of America:

“I have not seen, I may not see,  
My hopes for man take form in fact.  
But God will give the victory  
In due time. In that faith I act.”

The following Address to Her Majesty Queen Victoria was then adopted, and the President was authorized to sign it on behalf of the Congress:

*“To Her Most Gracious Majesty Victoria,  
Queen of Great Britain and Ireland.*

“WE, the members of the Colonial and International Congress on Inebriety, assembled at London this sixth day of July, eighteen hundred and eighty-seven, under the auspices of the Society for the Study of Inebriety, respectfully tender our homage and congratulations to your Majesty on your Majesty’s long and beneficent reign.

“We desire to record our thankfulness to Almighty God for those graces and virtues and that ever-living interest in the material and moral well-being of the people over whom your Majesty rules, which have touched their hearts, and have won the devotion and affection, not only of your Majesty’s loyal subjects, but of all the nations of the earth.

“While we beg to acknowledge our gratitude for the deep interest which your Majesty has taken in the sobriety of the British people, we humbly submit to your Majesty’s consideration the pitiful case of the subjects of the truly terrible disease of inebriety, who from unhealthful conditions have fallen victims to alcoholic excess, and have thereby been so enfeebled in will that they are, without remedial moral and legislative treatment, unable to resist the power of intoxicants.

“We fervently pray that your Majesty may be long favored by the Almighty with health and happiness, and long spared to reign over your Majesty’s devoted subjects, as well as to afford your Majesty’s royal encouragement to every judicious movement for the welfare and the improvement of mankind.

NORMAN KERR, M.D., F.L.S., *President.*”

The President then resigned the chair to Dr. Cameron, M.P., who presided at the morning sitting.

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There were sixteen hundred and twenty-six persons of both sexes in the insane hospitals of Pennsylvania for 1886. Of this number only two were dipsomaniacs, eight were opium cases, one of cocaine inebriety. One hundred and twenty-three are put down to intemperance.

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In many cases the inebriety of the children have been traced to the social and business disturbances of the parents at the time of conception.

ALCOHOL ON THE HEART.\*

BY DR. B. W. RICHARDSON, F.R.S.

Dr. Richardson said that his observations had taught him that although the primary action of alcohol was upon the nervous system, the first organ which bore witness to the action was the heart. This is not peculiar, because the heart is always the first witness to the fact of nervous disturbance. When the sphygnophone is applied, the mere act of the patient listening to the sounds disturbs the heart and alters the pulsation. The effect of odors and of strange sights is the same.

The distinguished Dr. Wilson Phillip showed, originally, and Dr. Richardson has since confirmed it, that if the surface of the brain of an animal be simply exposed to the action of alcohol the motion of the heart is influenced, and the disturbance is so rapid that it looks as if there were a direct impression from the brain to the heart.

Dr. Richardson then demonstrated from pulse readings what were the dangers that occurred in the circulation through an acute course of alcohol leading up to complete intoxication. These changes were written from the pulse of those affected by alcohol, and they showed a deviation from the standard in every stage. After a complete intoxication up to the fourth degree, the pulse would recover its tone if it were left to gain its natural condition, but it was quite three days before the return to health was declared.

In the inebriate the heart was never allowed to declare itself naturally. Once put off the natural lines, and if continued off, then it will, in time, become so fixedly unnatural that intervals of relief from the disturbing agent extending over eighteen to thirty-six months were often required before the circulation re-assumed the *rôle* of health.

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\* An address delivered before the International Congress of Inebriety,  
VOL. IX.—20

To what extent the heart is disturbed in the inebriate was a point which Dr. Richardson next demonstrated from pulse readings. He showed: (1) the reading of a natural pulse; (2) the reading of a pulse of an inebriate at his best; (3) the pulse of the same man after he was what he called "elevated," or supported by a full measure of alcohol; (4) the pulse of the same man during the period of depression following upon the alcoholic indulgence.

These readings showed the continued and continuous variation and irregularity of action of the heart. Among all the stages of the life of this man, the character of the changes exhibited being as varied as his words and actions, his circulation was at the best feeble and uncertain, *watery*. Under the alcohol it was sharp and vehement, but easily depressed; under depression it was simply, as the old writers well expressed it, "rotten." It showed no regular outlines. While, then, it may be true, and, no doubt, is true, that alcohol acts primarily on the heart, its mode of action is through the circulation by a third movement back again upon the brain, the volition, the emotion, and the reason.

So soon as these changes, therefore, become permanent or habitual, they produce that confirmed disease and habit of body which we call inebriety, the center of which is in the heart and circulation. At first, the heart of the inebriate is made tense and full by alcohol. This, under continuance, extends to permanent enlargement of dilatation with stretching of the valves, especially the semilunars, and distention of the arterial system throughout, leading to loss of elasticity. As a further change, there is modification of structure, both cardiac and vascular; a feeble, large heart, dilated, rigid arteries, distended and bulging veins. The corporeal mechanism is, in short, changed altogether. As an accompaniment of these changes of structure there is a change of disposition of will, of nature.

There are many who are not, strictly speaking, accepted as inebriates, but who are really so, in a minor degree, against their own admission or belief. They are inebriates

of the minor key. They tell the physician nothing more than the fact that they know and feel the "sustaining" power of alcohol. They feel, they affirm that they cannot live without it, and when abstainers assure them that the sense of the requirement is an idea, and no more, they reject the statement as either ignorant, unsatisfactory, or even cruel. This sense of want, in fact, divides the moderately inebriate from the truly temperate. The nonsense, if the want is the true sense of the danger, this fact they who do not feel the want know quite well, and they who do feel it know partly, their better judgment leading them to it as the first step towards positive inebriety. In confirmed inebriates the state of the circulation is supposed by the sufferer to be actually natural. It is strange to say, but it is correct, that the confirmed inebriate forgets what it is to be a natural man. He is in a distinct and unnatural sphere, like a man who has been cast amongst savages and made to acquire, by habit, their habits, tastes, and tongue. With the circulation so modified, the heart so feeble, the arteries so imperfect, as in the confirmed case from which the pulse reading was made, there could be nothing but uncertainty of physical and of mental manifestations.

From these reflections on the changes of the heart and circulation under inebriety, Dr. Richardson surveyed the question of treatment. Here two facts presented themselves,—firstly, that with the heart and circulation of the pathological inebriate state there can be no rapid or immediate change, that is physically impossible; secondly, that so long as alcohol is permitted to enter the inebriate body there can be no chance of successful restoration of the natural state.

There were, therefore, on pure physiological lines of argument, setting all sentiment on one side, only two elements of cure for the inebriate, minor or major—namely, time and total abstinence from alcohol. It is not simply that the evil spirit must be cast out, it must be kept out until the body it has perverted comes back to its own natural state, and has, so to speak, been born again.

For what may be classified as the minor forms of inebriation, two years, at least, of abstinence are necessary in the adult, fully-developed sufferer ; for the major form, two to six years are necessary in order to insure a restoration from the disablement that has been developed and sustained into permanent habit of disease.

Up to this present time nothing more has been discovered as a cure for inebriety, and this discovery is of much value. But we need not suppose that science has exhausted all her other resources. In plain truth, she has but just begun to see her way. Let those practitioners of medicine who are called upon to treat the inebriate sick get into their mind's eye the exact condition of the circulatory organs of those who are under their care ; the large, feeble heart, the arteries, like an india rubber ring that, from long use, has lost its grip over a book or parcel of letters which it has held together, inelastic and ready at any moment to give way, the veins or rivers of life distended and unresistant, and he will fairly grasp the difficulties which lie before him from their core. Then he will be in a condition quietly to study out how this crippled state may be helped so that time for recovery may be shortened and recovery itself be made more complete.

He (Dr. Richardson) had no doubt that some aid would come from this study. But one thing at a time, and the first thing was a clear and absolute definition of the physical nature of the evil that had to be met and relieved in the disease of inebriety, which, in however many forms presented, was one disease with variety of phenomena, dependent on a common causation and a common cause.

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Where rheumatism is associated with inebriety, often sensory hallucinations or melancholy will appear. Where the use of spirits is continuous for a long time, general paralysis may be expected. Dementia will follow in periodic inebriety where the drink craze is severe. Hereditary disposition to inebriety may be surmised when the drink craze is sudden and of long duration.



OBSERVATIONS ON INEBRIETY.\*

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BY REV. J. W. HORSLEY, M.A., OXON,  
*Late and last Chaplain of H. M. Prison, Clerkenwell.*

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As chaplain of H. M. Prison, Clerkenwell, to which there were in a single year 20,000 admissions, the questions connected with the subject of inebriety inevitably came prominently and perpetually before me, especially as my friends were almost exclusively those on remand or awaiting trial. In an ordinary prison half of the inmates would, by a moderate computation, owe their position directly, and an additional one-fourth indirectly, to intemperance, but at Clerkenwell many had not had time to get sober by the time I saw them; many were entering upon, and many recovering from, *delirium tremens*, and many were plainly dipsomaniacs, and even then and there suffering from the drink crave, whether in its circumstantial or periodic form. I proceed to give some observations as succinctly as possible under a few distinct heads.

1. *Inebriety and Crime.*—My estimate of seventy-five per cent. as the proportion of crime attributable directly or indirectly to intemperance is a moderate one, for other observers and experts give a higher figure. From the evidence given before the Lords' Committee on Intemperance, I find that the mean of the estimate given by chief constables of counties is higher. So is that of the governors and chaplains of gaols. Our metropolitan magistrates, as far as I have heard from them or read their utterances, would take a higher figure. When I obtained a return of all the charges at a court for a week, I found that of 154 no less than 124 were for drunkenness. Frequently I would find that out of any twelve on my daily lists of newly received

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\* Read before the International Congress of Inebriety.

prisoners ten or eleven, invariably nine, were drink-caused cases. Getting a return of the cases for a week in another prison, I found that of 216 convicted prisoners 187 were convicted for drunkenness or offenses arising therefrom. The Swansea Stipendiary told the Lords' Committee that three-fourths of crime, or a great deal more, is the result of drinking; Mr. J. Jervis that three-fourths of crime in Portsmouth is attributable to drink; and the Crown Solicitor for Ireland that three-fourths of all the crimes prosecuted by indictment in Ireland (and a portion of the summary cases) are so caused, directly or indirectly. Take, therefore, whatever class of experts we may, they either confirm or go beyond my estimate.

2. *Inebriety and the Law.* — A committee of the House of Commons, in 1872, reported "that there is entire concurrence of all the witnesses in the absolute inadequacy of existing laws to check drunkenness, whether casual or otherwise; rendering it desirable that fresh legislation on the subject should take place, and that the laws should be made more simple, uniform, and stringent." And again, "that small fines and short imprisonments are proved to be utterly useless." The matter, however, seems to have run the usual parliamentary course of much evidence, some debate, no action. I have dealt with the question at length in my "Jottings from Jail" (Fisher Unwin). Suffice it here to say that I obtained answers from the governors and chaplains of all English and Welsh prisons to certain questions, and it was almost unanimously asserted that the present system of imprisonment for drunkenness was not to an appreciable extent curative, many being hardly sober when discharged, and confined not so long as the natural consequences of a debauch might keep them to their own homes. If the idea of retributive or punitive justice enters into the normal sentences of three or seven days, they are but mockeries and shams; if the curative or reformatory idea is supposed to be co-existent, the present system is simply unkind to the person supposed to be affected by it. And, moreover, there is

not only the absence of benefit, but probably the presence of harm, not merely moral from the low estimation of the evil which must come from the slight punishments or checks, but also physical, as short sentences on the lowest scale of diet tend rather to increase intemperance, and sharpen rather than allay the appetite or craving for alcohol. Secondly, it was almost unanimously answered that the fact that the period of a month, which is the maximum that can be inflicted for the offense of being drunk and disorderly, was obviously insufficient for reformation and deterrence, while, morally and physically, benefit would certainly accrue to the majority of habitual drunkards by an increase of the maximum punishment and the adoption of a progressive system of penalties. "Why can't the magistrate give me time in prison to get straight," was a typical and reasonable complaint of a prisoner. Let an habitual drunkard come in for the usual short term sodden, inflamed, and shaky, and in a not much better state will he or she be discharged; but let them have received a longer sentence for some concomitant offense, *e. g.*, an assault, and they seem on exit some years younger, and even their weight having not unfrequently increased.

3. *Inebriety and Immediate Abstinence.*— A prison official is in a better position than any one else to see whether or not there is truth or wisdom in the idea, carefully promoted by not a few doctors, and eagerly caught at and preached by their patients, that an habitual drinker, or even an habitual drunkard, must be "let down by degrees." An ordinary perusal of the papers would prepare one to believe the fact that at any moment our prisons must contain thousands of living contradictions of this common and popular fallacy. Years of drinking may have preceded the momentary crime that brings on a man many years of penal servitude; another may be hardly sober when admitted for his three or six months for an assault committed when drunk, and yet at once his drink is stopped, except in a few cases of incipient *delirium tremens*, when (in some prisons, not all) a little

alcohol is given, until the fit has passed. Why, even in cases of prisoners who have been opium-eaters or chloral-drinkers, and have a far stronger and more abiding crave than that the dipsomaniac knows, there is no "letting down by degrees"; while the simple drunkard, who ventured to quote the wisdom of his quondam associates, or even of his doctor, as an argument for receiving some proportion of what had been his daily poison, would probably find himself by no means let down by degrees by the warder to whom he addressed his request. "It is impossible for me to give it up," has often been said to me by those who have, unfortunately for themselves, been externs from a prison point of view. "How would you manage if you were run in?" I would answer. "At any rate I can't give it up at once." "Again, how would it be if you were run in?" I remember a clever doctor who was under my care for three months before he was hung, saying to me, before he admitted his guilt, "this imprisonment is a blessing to me, for I could not, or would not, cure myself of the morphia habit, and now through prison I am free." I commonly noticed that the inconvenience from the sudden cessation of a narcotic, remained twice as long as that arising from the loss of alcohol, but frequently the latter would be dissipated in a week, and the former in a fortnight. Dr. B. W. Richardson, when first studying alcohol, sensibly enquired of all our prison doctors what evil effects they observed from the sudden and total disuse of alcohol. One word sufficed for the answer—"None."

4. *Inebriety and Suicide.*—No one in the world, I presume, has had the opportunity and necessity of studying the phenomena of suicide as much as has been my lot. I have had 27 on one day under my care for attempting suicide; 61 in a single month remanded for this offense; 395 in a year; while, as one memorial of ten years spent in Clerkenwell Prison, I have full notes of 3,101 cases. Intemperance was almost usually the cause. When I specially tabulated 300 consecutive cases I found 172 were due to drunkenness, and

in 145 of this number no other cause could be found as contributory. "Crime is æstival," is a well-known canon, and suicide presents no exception to the rule, because drinking is, for several reasons, more common in summer than winter. Even of 46 consecutive cases of attempts at suicide on the part of boys and girls, I find ten were directly caused by intemperance. An hereditary tendency to suicide was to be observed in but a few cases, but where suicidal mania was evidenced by repeated attempts I only call to mind one instance in which intemperance was not a contributory cause of the attempt, and even here I see the girl, who attempted her life to my knowledge twenty-eight times in two years, was once in that period sentenced to a month for being drunk and disorderly. With the majority the idea of suicide never was entertained, and was even abhorrent, except when in liquor.

5. *Inebriety and Infant Mortality.*—Infanticide is the most common form of murder, and alcoholic infanticide accounts for the majority of cases of slaughtered innocents. Three hundred inquests in London, and more than half that number in Liverpool, are held annually on babes that are overlain, and most of these are found to have been slain on Saturday night, when the alcoholized mother is unable to hear or feel the cry or the struggle of the infant, if that be not already narcotized by the alcoholized milk from her breast. I have had five women in prison at once for infanticide, and only one was sober at the time of the child's death. Others die by drinking the gin left about by the mother. Others have no fair chance of life and health in view of the laws of heredity and the physical influence of the mother's habits and state. Hardly a week passes without some horrid act of child murder committed by those who, when sober, may be as affectionate and careful as any. The mortality amongst the infants of the intemperate probably accounts for more deaths than all other causes of preventible mortality put together. After much observation and record of cases it seems to me that 64 per cent. would be a moderate estimate of the

death-rate in the first year after birth of such ill-fated children. I select some typical cases out of my note-books: (a) A man aged fifty has two children alive out of thirteen, and says, "I am one of the worst drunkards in the world; my wife don't drink so regular, but very hard when she goes about it." (b) Man, fifty-three, has had eleven public houses, and wishes he had never known the trade; his wife died of alcoholic phthisis, and he usually has twenty glasses of beer per diem; has had nine children, of whom one survives and is a paralytic. (c) Man, thirty, in prison for a drunken assault on his wife, who also drinks; one of seven children lives. (d) Woman, forty-one, has a drunken husband; she claims to be temperate for the last two years only; of eighteen children fourteen are dead and one in an asylum. (e) Man, thirty-six, a drunkard; seven of eight children died in infancy. (f) Woman, forty-two, imprisoned for drunkenness; her husband also drinks much; two of ten children survive. (g) Woman, fifty-two, stole when drunk; husband gets drunk every Saturday; has seven children alive out of nineteen. (h) Woman, thirty-eight, both parents drink, and all their nine children are dead. (i) Woman, forty-four, husband died of paralysis of the brain from what she calls "a gay life"; she drinks hard, and has been several times in prison; one of her twelve children is alive. (j) Woman, thirty-one, twelve years immoral, a hard drinker, and occasional thief; has had nine children, "All dead, thank God,"—to which ejaculation, when one weighs the forces of heredity, environment, and example, one is tempted to respond, "Amen!" (k) Man, fifty-four, an old soldier; murdered his wife, who was an habitual drunkard; has had nine children, still-born. (l) Woman, forty, charged with neglecting her children; drunk when apprehended, has been drinking since her first child; three of thirteen are alive. These cases, taken out of a multitude, give 114 children out of 136 who have pre-deceased their parents, many being still-born, and many dying early in infancy. Is this either inevitable or inexplicable?

*Inebriety and Sex.*—Prison experience clearly affirms the

great increase in late years of female intemperance ; the great difference between the fashions and habits of intemperance in the male and in the female ; the greater susceptibility of females to the contraction of the habit or disease ; and the infinitely greater difficulty there is in curing a female dipsomaniac or even habitual drinker.

As to the first point, it is from the increase of drunkenness among women that we find the proportion of male to female prisoners not seven to one, as it used to be, but three to one at the outside. In the apprehensions for simple drunkenness in London, the women were, in 1878, just 1751 behind the men, in 1879 only 530, and in 1880 only 470. In some London police divisions, as Westminster, St. James', Lambeth, and notably Marylebone, there have been more women than men apprehended for being either drunk, or drunk and disorderly. In 1880, in London, 7,431 females were apprehended on the latter charge ; in 1882 there were 8,927. But the most important and most saddening thing is to scrutinize the records of those who have been over ten times convicted, and are chiefly habitual drunkards. In this category in 1884, taking the figures for England and Wales, there were 5,188 males, and 9,451 females. Looking at it in another way, we see that the men are only 10 per cent. of the total commitments of already convicted offenders, but the women are 31.6 per cent. Looking back over a series of years, we see that the men in this incurable class have varied only from 8.2 per cent. to 10.1 per cent., whereas the women begin 27.3, and steadily increase up to 33.2 per cent. Taking seven years to see if there be an increase amongst the women, we find that in 1878 they numbered 5,673, and in the succeeding years 5,800, 6,773, 7,496, 8,946, 9,316, and 9,451. This increasing preponderance of women, who have caught up, outstripped, nearly doubled the men in this special class, is almost entirely due to the distinctive character and the increase of female intemperance, and the absence of any effort on the part of the State to deal rightly with the disease.

With regard to the fashions and habits of female drinkers

we notice that they chiefly consume spirits ; often drink earlier in the day, and more continuously through the day than men ; that *delirium tremens* is not so common, but the dipsomaniacal craving more common in their sex ; that they are almost usually solitary drinkers, where the male's drinking will be circumstantial and partly originated, and partly increased, by companionship ; and that, for various reasons, they, more than men, conceal and even deny the fact of their drinking, though when on the brink of an alcoholic death.

Thirdly, there is no doubt of the peculiar susceptibility of women to contract habits of intemperance at the times of pregnancy, lactation, and middle age, even apart from the criminal, if it be not ignorant, advice given them by midwives and some doctors. Nor, again, of the connection between dipsomania and a disordered state of the uterus. A restoration to purity of life is frequently the cause of astonishing progress in combatting the dipsomania of long standing.

Lastly, there is simply no comparison between the difficulty of curing the male and the female dipsomaniac. I only remember one instance in prison of the drink crave surviving in a man after six months of abstinence in prison, but with women I have known of its existence and periodic potency after two years, or even more, of abstinence in a penitentiary. When asked if I have known of female drunkards being cured, I can only say that I have known some cases. Engrossing occupation and strong religious sentiment will usually cure the male, especially when conjoined with the use of physical and medicinal aids ; but innumerable instances prove that these same causes most frequently do not produce the same effect in the female. In the male some external temptation usually causes the relapse ; in the female self is the tempter.

6. *Inebriety and Heredity.*—No evidence from prison is needed to prove the hereditary character of intemperance and dipsomania. It is the acquired habit more than the natural characteristic that is most surely transmitted. At one time there were in separate cells for being drunk and



disorderly a grandmother, a mother, and a daughter, the latter having a baby girl at the breast. What chance had the baby of escaping the scourge her progenitors twined and applied. "I was born in prison while my mother was doing a month for drink," said a prisoner to me, "and I expect to die in prison." Another man was only thirty-three, but had two terms of penal servitude, and shorter punishments; when free he was a great drinker, and came of a drunken family, his mother having drowned herself when in drink, and of four uncles one poisoned himself, one hung himself, and one got twenty years for murdering his wife. A mere lad was in for a drunken assault; his father and mother were drunkards, and separated, and he and his brother (who also drinks) were the survivors of eight children their parents damned into the world. I might multiply cases *ad infinitum*, but the point is admitted.

In conclusion, I would merely express my thankfulness for the attention this Congress, and the Society which summons it, will cause to be drawn to the phenomena of inebriety, and especially to the physical side of the matter, which must ever be kept in view by those whose professions or inclinations lead them to dwell chiefly on religion or on law as palliatives or remedies.

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The march of civilization is always followed by a rear-guard of inebriates and insane. They are the unfit, the worn-out, the incompetents to bear the strains of intense and rapidly-changing environments, conditions of living, of work and thought. This rear-guard is a perpetual menace and obstacle neutralizing and shadowing the results of all progress and advance in the great evolutionary race-march of the age.

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Where the father is nervous, irascible, and changeable, and the mother of feeble judgment and under the influence of her emotions altogether, the children will become inebriates from the slightest exposure.

## HOMICIDAL AND SUICIDAL INEBRIETY.\*

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BY SURGEON-MAJOR ROBERT PRINGLE, M.D.,

*H. M.'s Bengal Army.*

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The prevalence, alas ! of inebriety, with its consequences, affecting the safety both of the individual and the public, has lately led to the passing of an act known as the Habitual Drunkards Act, 1879, yet those who have studied the subject most, have felt that the legal powers necessary to deal with inebriety in its various phases must be increased if the public is to be protected from some of these phases of inebriety, at present absolutely unknown to the public, and as yet not sufficiently studied by the profession. As, however, all legal help to be of any practical value must have for its basis a careful study of the diseased condition, known as inebriety, which, now that heredity and environment are bearing the harvest, which was to be expected, has reached a prevalence calling for further legislative action and powers, it has occurred to me that a discussion at this Colonial and International Congress, on what appears to me a unique instance of the diseased condition under notice, founded on careful observation and study of the case, and supported by a full confession of the crime and the previous history, and symptoms might be of benefit not only to the sufferers themselves, but to the public at large. I have accepted the offer of the President to read a brief paper on the case, looking to the subsequent discussion to draw out further light on the subject, and thus to attract the attention of the profession, and through them the legislature to an unknown, or at least little studied danger in our midst, not to the individual alone, but to the innocent, unprepared, indeed, unsuspecting public, by whom he may be surrounded, when laboring under

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\* Read before International Congress of Inebriety.

this mental derangement due to this diseased cerebral condition. With this preface, or rather apology, I enter on the subject of this communication.

I have for long felt that suicide and homicide, the result of alcoholic stimulation, are but phases of a cerebral condition, which may lie dormant or inactive through life, or if only lighted into action by some specific inherent power in alcohol, may exhibit themselves in every phase of these two great final symptoms, murder and suicide—from the slight attempt at suicide or the angry blow of the partially inebriate, to the complete and rapid attainment of self-destruction, and the perpetration of the foulest murder, or the most carefully and deliberately plotted scheme for murder designed and carried out with a skill and forethought more in keeping with the impulse and instinct of one who had made murder a profession, rather than the sudden unexpected and uncontrollable development of a latent force in the brain of a well educated, God-fearingly brought-up young man, described by his superior officer at the trial for murder as the smartest man in the regiment when sober, and the most foul-mouthed and insubordinate when drunk. And I repeat, it is only because we possess in the confession of one who stated that on two previous occasions, when he indulged very freely, he was on one of them prevented by the merest accident from murdering a comrade, and on the other from taking his own life, that it seems to me we have a light thrown on the subject, which we will do well to discuss, more especially since, as far as my knowledge goes, a similar case, illustrated by a similar confession, has not previously been brought before the profession. I use the term alcoholic stimulation advisedly, because I am quite satisfied from the observations and experience of thirty years' service in India, that there is such a condition as narcotic stimulation, which will produce homicidal or suicidal tendencies, and that certain narcotics, such as the various preparations of Indian hemp, when indulged in to excess in certain cases do certainly produce these results, and what is called "running a molk" is really the

homicidal or suicidal development of narcotic stimulation, acting on certain diseased cerebral conditions.

Now, the points to be ascertained in the diseased condition under notice are the following: 1st. What are the symptoms, if any, which would point to the latent presence of this diseased cerebral condition; and 2d, the best means of restraining or curing them.

With reference to the first point, the confession of the prisoner under consideration clearly lays down the fact of this poor man knowing that he was a victim to this diseased cerebral condition, which might be lighted into activity by any excessive indulgence in alcohol; for after suffering from two attacks of this derangement, one homicidal and the other suicidal, he came to a Temperance meeting I was holding in his regiment, and there and then signed the total abstinence pledge (for in the Soldiers' Total Abstinence Association in India, of the executive committee of which I was at the time, and continued so till I left India, chairman, there is no double basis), and he told me himself, in the condemned cell, before he made the confession which he subsequently did, that had he been true to that pledge he would not have been in that cell. The premonitory symptoms of such a condition existing can, I fear, only be ascertained by an excessive indulgence in alcohol lighting up an action, its intensity being in proportion to the quantity consumed. Thus, for instance, a few glasses may tend to the hasty blow of the partial inebriate, and a few more to the foul murder of a kind and compassionate host, as given in the case recorded in India, the details of the perpetration of which are I think unequalled, even in the tales of horror associated with what the Bible in Prov. iv, 17, describes as the "wine of violence."

As regards the second point, viz., the restraining or preventing of the development of this latent homicidal or suicidal tendency, there can be no doubt this poor victim of this diseased cerebral condition felt, that there was only one means of restraining or preventing the outburst of this latent

force, and that was in total abstinence from alcohol in any shape and at all times. How true and successful this decision was, was amply proved by his rapid promotion following his mode of performing his military duties when sober; and the consequences rapidly following the failure to maintain this mode of restraint and prevention, also sadly proves what alone was the proper treatment in his case. For obvious reasons I withhold the name of this young man, and the details of where the occurrence took place, but the man being a soldier the facts elicited at the trial are of course carefully recorded, and are available for any one who would like to study them in detail. In my opinion some of the most remarkable points in the case are the manner this soldier went about the murder of his comrade, which took place in the center of a crowded cantonment, in a barrack filled with his sleeping comrades, after four-and twenty hours of heavy drinking, which, as he told me, took all his savings, after all this it would appear that he planned and carried out the deliberate murder of a comrade, against whom he personally had no grudge whatever, but of whom some soldier had thoughtlessly said, "It would be well if 'his peg was vacant,'" or some similar slang barrack expression. The man who had spent a whole day in drinking from canteen to canteen, and goes to his bed, as he told me, with a private supply, rises in the dead of night, and commits the murder in such a manner as to bring the guilt upon him only in a chain of circumstantial evidence, but not a vestige of visible evidence. No human eye saw the deed done, and, but for the fullest confession of his guilt, this man would have been executed on circumstantial evidence alone. There was nothing about this poor man to show that his antecedents were such as to account for his being able to plan so careful, yet deliberate, a murder; on the contrary, as I said before, he was a member of a God-fearing family, piously brought up, and his exemplary behavior, while in confinement, and under trial, and subsequent to his sentence being passed, I know, for I saw him repeatedly, made such an impression on his heathen and

Mahomedan guard and jailor, that the latter was touched to pity for him, and said to me, "The Government let their youths get as much liquor as they can drink, and, when mad with it they commit murder, it hangs them for it." Never was a truer and sadder charge brought against any government. Uncomplainingly this poor man underwent treatment during his confinement in a large central prison, which was a disgrace to the English Government, not a regimental polo pony in the station but was better treated in its master's stable, or the polo-ground, than was this victim of a vicious canteen system, suffering from a latent and little known or understood disease, who was confined in a barred cell, with a palm-leaf thatch hurdle to keep out the cold, in the height of winter, in a station where ice is made by exposure to the midnight air of water in special vessels—and the poor fellow subject to dysentery—guarded by natives, and ultimately chained to a post like a mad elephant, forsaken apparently by his countrymen, the Chaplain and the Army Scripture Reader, and a comrade or two beside myself, alone seeing him. As for the rest of his countrymen, too many, alas, as I had cause to learn, knowing nothing of this latent diseased cerebral condition, considered him a drunken good-for-nothing soldier, unfit to have his life prolonged into a life-long punishment. Notwithstanding all this, the full confession of his crime, and the admission that he alone was to blame for it all, followed by the spirit of his last words on the scaffold, illustrate and encourage the hope that even in such a dark history, it is possible that, by God's mercy, there may be light at its close.

And now, what practical lessons are to be learnt from this sad history?

1st. That it is possible for a human brain to carry on its functions without any discernible defect, or fault, and yet to be liable to an outburst of homicidal and suicidal mania, such as I have described, and this more than once, and—

2d. That entire removal of the exciting cause effectually keeps this diseased condition in a latent state, though it had

been twice lighted up before. I have collected a number of cases bearing on this diseased condition, but would only point to three, two of which occurred in India within the last six months, one in the case of a railway employé, who, when drunk, was reprovéd for something he had said or done, and rapidly following each other committed both homicide and suicide, and the other of a poor, wandering, Eurasian "loafer," who, because he was checked for his behavior, after having had some drink, by his kind host who had given him shelter and food, nursing his wrath, took advantage of his benefactor being asleep, and foully murdered him, with a brutality which was perfectly diabolical. The third case is reported in the *Times*, of the 3d June, and the remarks of the presiding magistrate are worthy of note. Mr. De Rutzen is reported to have said he should send the case for trial, adding — "These cases would never happen if persons were not allowed to remain in public houses until they became drunk. The wonder to him was that there were not more of such cases." The Mahomedan jailor in India, and the English magistrate in London, place their fingers on the plots in the liquor traffic system in both countries, but both, I fancy, were ignorant of the true physiologically diseased cerebral condition to which the acts were due. If all cases of attempted murder, whether followed or not by attempted suicide, were carefully inquired into, I am sure, in the majority of cases, a previous history, like that illustrated in the confession under discussion, would be elicited, and, if so, and the public are to be protected from an unknown, dangerous inebriate at large in their midst, some extra legislative power, as regards restraint and treatment, will have to be granted, that cases similiar to that of the poor man we are considering, may be prevented from causelessly, yet secretly, and deliberately taking the life of an innocent and harmless man "only doing his duty," as was the case of the non-commissioned officer, who lost his life owing to the thoughtless remark of one who had been justly reprovéd for some breach of military discipline.

Since the preceding was written a most remarkable case of murder has been reported from India, for the details of which, and the judgments of the officers acting as sessions judge, and the final Court of Appeal, I am indebted to the *Pioneer Mail* of the 11th May, 1887. The judgment of the sessions judge (owing to the defective character of the medical evidence), appears to have lost sight of the real cause of the murder, but that of the final Court of Appeal, viz., that of Sir Lepel Griffin, acting as such, is a model of clearness, and logical reasoning. He dismisses the medical evidence in terms which the profession would do well to lay to heart, and this society may feel not only fully justifies its formation, but shows a marked necessity for its increased activity, such as probably has not been thought of before, and for this cause I give a long quotation from the judgment. When I entered the service of the late "H. E. I. C.," in 1854, a course of study of insanity, with clinical lectures on the cases, was made obligatory on all candidates for admission into the service; and well do I remember the valuable lessons learnt at the Morningside Lunatic Asylum, from that most careful and accurate observer, the late Dr. Skae. Indeed the lessons there learnt led me to study insanity most carefully, as met with in India; and on one occasion this study was the means of enabling me to obtain the immediate release of a sane man, who had been put into the lunatic cells as a dangerous lunatic, whereas he was a most sane individual, resisting a most deliberate plot to plunder him. But to return to Sir Lepel Griffin's remarks and judgment, in which he places the following on record regarding the medical evidence in the case: "We have no history of his family, and cannot say whether he had any constitutional predisposition to madness, either hereditary or congenital. We are not informed (and here I think the evidence of the regimental surgeon is deficient and unscientific) of the previous history of the *sowar* (trooper), what were his habits, whether addicted to intoxicating liquors or drugs, whether he had at any time previous to his reception into hospital received any



severe physical injury, or shock, or whether he was of such debauched habits as are most commonly the direct predisposing causes of mental disease. It is possible that the medical officer, who is a young man, has not specially studied mental pathology, and it is unlikely that in his position he could have had much experience in the treatment of cerebral disease, and, seeing that the whole case turns on the mental condition of Musar Ali, I think we might have expected a more careful and scientific analysis of his symptoms."

Sir Lepel Griffin confirmed the sentence of death passed by the lower court, attaching no weight whatever to the plea of "spiritual delusions" advanced in palliation of the charge.

I offer no apology for the long quotation, from which it is clear Sir Lepel Griffin traces the true cause of the murder, not to "spiritual delusions," a most dangerous theory in a country not wanting in fanatics, but to some diseased cerebral condition, inherited or produced by indulgence in narcotics, rendering the victim subject to impulses and passion, which, but for the indulgence might have lain dormant, or it may be unknown, and the stimulant narcotic drugs often taken in India to nerve the would-be hero for some grand deeds of daring are not unfrequently resorted to for baser purposes; and who can tell, with the knowledge acquired from previous experience, for murder, the outcome of religious fanaticism. When this latter takes place, the perpetrator of it, to acquire a lasting fame, may plead spiritual or Divine commands as his authority, himself and his relatives carefully concealing all that would lead the authorities to suspect the deed to be the result of narcotic indulgence; as by this time, the natives in India, and particularly those in cantonments, know that any crime, such as murder, committed by a European soldier, under the influence of drink, is viewed and punished as deliberate murder, and no allowance made for the condition into which his own acts brought him. In the case in question there were evidences of narcotic indulgence in some of the prisoner's acts recorded in evidence.

My introduction to field service in India, in 1855, was seeing my commanding officer shot dead in front of me, the second bullet passing over my head, and when the murderer was apprehended, and told his musket was loaded, he coolly remarked, it was for the lieutenant of the company, Mowbray Thompson, who subsequently escaped from the massacre at Cawnpore, and added, he intended to load again and shoot the Doctor Sahib (myself). When asked what harm I had done him, his remark was, "He is an Englishman, and that is enough." This was in February, 1855, and the remark, no doubt, was one of those little clouds of the then coming mutiny; in his case the product of thought acting on a narcotically diseased brain, which had received from whispers or eavesdropping vague impressions of the approaching rising, on which, no doubt, he had been pondering; and a slight reproof, and trifling punishment, from which he was released before its expiration, was the light to the train; and the result — an explosion which assumed the phase of murder, limited mercifully to one individual, though intended to include every European officer with the detachment.

Now that narcotic indulgence is, alas! far from uncommon in this country, these cases may be of importance, where heredity and environment have produced in Britain the mental conditions, which it is much to be feared are present in India, to a far greater extent than the authorities are aware of, or the medical profession sufficiently alive to. In conclusion, it would almost seem that the would-be want of responsibility attached to murder and outrage on the plea advanced in a case this day (June 19th), viz., that it was done "under the influence of drink," has reached such an extent that, as the London magistrate, already quoted, points out, it is time some legal protection was granted to the public from the consequences of those allowed to become drunk in the public houses of this land. The victim pays for his crime with his life, but the true cause pointed out by Mr. De Rutzen remains unchecked, indeed, unnoticed.

AN INQUIRY CONCERNING THE INFLUENCE  
OF ALCOHOL ON MIND AND MORALS.

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

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The two great principles, Good and Evil, which under various names and personifications have claimed the attention of the world in all times and in all countries, and the history of whose conflicts is the history of mankind, are not simple, indivisible elements. They consist of parts. They are composed of divisions and subdivisions. It may be said that flowing into them from all directions are tributary streams of good or of evil; some, small and apparently trivial, others, mighty, impetuous, irresistible, swelling the tide of the whole, and giving volume, power, influence, and dominion to the grand total.

One of the mightiest contributors to the power of evil is alcohol. Through drunkenness, or rather through the deeds of prevailing inebriation, alcohol augments the momentum of crime, and deepens its flood; while through its habitual or chronic influence upon the nervous basis of intellectual and moral projection, without, of necessity, the complication of actual drunkenness, alcohol affixes and perpetuates criminality upon generation after generation.

The elementary and essential conditions which cause and constitute inebriation are some of them of such a nature that they exert powers which, in the end, are more destructive and far reaching than any possible demonstration of mere drunkenness itself. To rightly comprehend those pernicious and invariable constituents of the drunken state which are so potent for evil, it is necessary to analyze them as they appear in the man actually drunk.

The most striking as well as important effect of alcohol upon the nervous system is paralysis. When taken into the

human system in a quantity sufficient to produce the slightest indication of intoxication, it paralyzes to some extent or other the entire nervous organism. When the quantity of alcohol consumed is considerable, the impediments in nervous function are exhibited in many ways. Some notice of the invasion or inception of the paralytic onset may prove interesting as well as profitable.

When a quantity of alcohol is received in the stomach (after the initial nervous shock, which soon passes off), the first notable appearance will be an occasional slipping or sliding of the feet upon the pavement when walking. In the slight motor paralysis then present the foot is not raised quite as high as it is in the usual and undisturbed state of the nervous energies. The consequence is, that any trifling irregularity in the pathway will intercept the moving foot, and a slipping or sliding of the sole of the shoe upon the pavement will be perceptible every few steps that are taken. There are other very delicate motor disturbances that are observable at the beginning of inebriation from alcohol, but they may be omitted from notice at present.

Careful attention will likewise detect at this conjuncture a weakness and levity in the operations of the intellectual faculties, auguring partial paralysis of their nervous bases. This change does not, of course, always appear in the same identical way, although it is generally very obvious in some direction or other. The inebriate perhaps, instead of preserving a dignified and unobtrusive demeanor, such as may be natural to him, will feel impelled to assume the characteristics of assertive geniality. He will seem to be impressed with the idea that he must make a hit in personal magnetism and goodfellowship. He will probably express his feelings in some attempted witticisms, born of his own internal incongruities, and without legitimate parentage or natural association. He must, forsooth, without provocation or solicitation, perpetrate some pun, some joke, some little pleasantry, before he parts with any familiar interlocutor.

Many of the so-called "flights of eloquence" in oratorical

efforts, likewise betray the dwarfing influence of alcohol upon the intellectual faculties. In their more pretentious passages, the baseness of their origin may often be surmised through their *outré* and unexpected associations and suggestions. But when analyzed, they are perceived invariably to consist of the merest fustian. Undoubtedly the thoughtless world is often deeply moved by this kind of speech; but the movement is in ways that lead to tears and woe, not peace and contentment. Alcohol is a bad counselor.

The disabilities attending the operation of the moral powers, consequent upon the primal impediments thrown in the way of nerve function by alcohol, are possibly less conspicuous than those attending the motor and intellectual movements; but they are none the less real. In the first slight impressions of incipient paralysis the lines of restraint in reference to the moral duties are somewhat relaxed. The soul is not held in its careful and exalted position in respect to the moral responsibilities incumbent upon it. This is especially evident in the indefinite and lax liberality of sentiment displayed by it in relation to follies, indiscretions, and even vices, wheresoever they may appear. And indeed, for this proffered charity in behalf of wrong-doing, the inebriate mind is prone to assume unto itself great store of credit, as though worthy of praise for a broad and enlightened sympathy with the weaknesses of poor human nature.

There is nothing disagreeable to the drunkard in the condition of incipient intoxication. Quite the reverse. It is a happy state, as of one having been relieved of the cares of life; such, for example, as the acute and rigid feeling of accountability, which a truthful report from a healthful nervous function always impresses upon individuality.

But the present inquiry is chiefly concerning intoxication when fully established. In complete inebriation there is evident incoördination of the motor functions. It is through the unwilling displays of motor incapacity that the drunken state is first perceived. The characteristics of the motor disabilities in drunkenness very accurately measure the usual

extent of co-existing intellectual and moral incoherence. The latter may be examined through the former. The actual, but imperfectly seen, may be illustrated by the obtrusiveness of what is plainly visible to all.

When the reeling gait, the rolling eye, the indistinct articulation, the distorted countenance of a man thoroughly drunk are seen, the complete subjugation of his motor capacities is readily admitted. Unlike most agents having control over nerve function, as, for example, strychnia, prussic acid, and many others, alcohol exerts its pernicious influence upon the universal nervous organism. And yet while the abject condition of the motor functions evinces the paralysis, to some extent, of the motor centers of the nervous system, it is observable that the disabilities of the nerve centers are not equally complete, even under apparently equal conditions of alcoholism. Sometimes a man is very drunk in his legs and his motor functions in general, and yet is not equally overcome intellectually. And this demonstrates the truth that there is no natural affinity, no special tendency, of alcohol towards one portion of the nervous centers more than to another. Seen in differing relationships, its guilty influence is perceived to be impartial, universal. The paralysis of the centers and systems of common sensation (anæsthesia) is also of varying degrees of intensity in different seasons of equal intoxication, as well as in different individuals. The consequence is, that the perceptive functions are unequal in acuteness and reliability in drunkenness. The coördination nerve centers likewise display evidences of similar irregularities in nerve capacity when they are under the impress of alcohol. The ideas and conceptions of responsibilities, rights, duties, and the like, are repressed and obscured; and the moral nature of the inebriate is greatly impeded in its movements, if it is not entirely extinguished.

One of the immediate effects of this general disturbance in nervous function is, the new and unnatural relationship which the several nervous sub-systems assume towards each other. Instead of harmony, there is distortion in their

mutual interdependence; and the elements of thought—sensation, perception, association, suggestion, memory, and so on—are forced into strange and absurd situations and attitudes. The expression of ideas, born of such parentage, shows them to be of fantastic origin. Thoughts and phrases are surprising, uncommon, *bizarre*. The looker-on is astonished. For, while the enunciation of the ideas of drunkenness shows that they are *possible*, yet they are not composed of the common elements of thought, naturally allied. The consequence is, that these wonderful and inexplicable phenomena of the mind are frequently viewed as the exponents of exalted mental brilliancy and power, while, in fact, they are infallible evidences of mental debility, discordance, *rot*. This is the specious brightness, without force, with which alcohol invests the human mind.

Is a mind under the influence of alcohol capable of self-control? To answer this question it will be well to observe the effects of habitual alcoholism on the mind, as compared with other habitual states into which the mind may fall. And a mere statement of certain well-known facts will, I think, be sufficient to determine the answer. The healthful mind always improves with opportunity. Habitually active in any direction, its aptitude, its skill, strength, and quickness increase in its particular species of movement. As a man works at a trade, he improves until he ceases to be a bungler, and becomes an expert. And the same is true of professional life; and indeed of all the various kinds of mental, moral, and physical activity of a legitimate nature. When the alert and unpoisoned mind finds itself in a wrong place, and surrounded by undesirable circumstances, it not only extricates itself from difficulty through its own efforts, but it prepares, by premeditation, a way of escape in future embarrassments; and it possesses and exercises the power to give execution to its plans. The drunkard, likewise, humiliated and endangered, fully determines never again, while intoxicated, to be guilty of his old line of follies and delinquencies. What is the outcome? Every season of complete inebriation

is characterized by substantially the same phenomena. There is no practical change, certainly no improvement in conduct. Be it the first or the last season of intoxication — from young manhood to old age — similar periods in the debauch are attended by like manifestations. In the early stage of drinking, the fun, the foolishness, and the extravagance are the same ; while later on, there come in view the same vile ideas, the same cursing rigmarole, the same threats ; in short, the same mental and moral baseness that have always distinguished corresponding seasons of alcoholic excess. And thus it is throughout the drunkard's life. The drunken mind never improves, nor changes ; it cannot. Alcohol possesses undivided sway over the faculties of drunken men. Humanity is not capable of asserting itself while alcohol is in possession of its instrumentalities. Alcohol never strengthens nor brightens nervous function.

When drunkenness has passed off the mind resumes its natural state and equilibrium ; such is the usual mental movement in the ordinary recurrences of drunkenness and sobriety. But in course of time the use of alcoholic drinks becomes habitual. Now the habitual disuse of function will at length render function impossible. Absence of function will not only produce incapacity to act, but will occasion actual atrophy of structure. It will, in the course of generations, eventuate in the absorption of entire organs ; or rather, in their non-development. This is observable in the eyeless fishes inhabiting subterranean waters, as well as in many other examples. In a parallel way the alternations of latency with activity of moral function, that characterizes the recent drunkard, give place to a steady and enduring incapacity of nerve in the chronic inebriate. The habit of untruthfulness, always present in the drunken state, ceases to be intermittent. It is fixed, in the form of a constitutional moral incapacity and unreliability. The moral constitution of the chronic inebriate has at length taken a final position ; and the approximation of the family strain towards criminality has taken the first irrevocable step. The new constitution in progeny begins where the old one ends, in the progenitor.



Heredity hands down the hateful deformation. And thus the progress of alcoholism through two or three generations fully develops the criminal constitution.

To use an expressive phrase, alcohol always "gets there." It may develop the criminal constitution in other ways than that just indicated. Sometimes it operates through physical injury to certain nerve centers by means of hypertrophy and pressure of adjoining tissue; as through hyperplasia of the connective tissue. Or, it may act by mere automatism—that is, through the unconscious representation of the moral deficiencies inseparable from long continued drunken courses.

The chronic inebriate, then, transmits a moral constitution of lower grade and coarser grain than his own primitive and normal constitution. His constitutional proclivity to lying—so surely the outcome of alcoholic habits—in its natural affiliation with nearly every species of vice and immorality, readily reappears in his posterity in the guise of the swindler, the gambler, the traitor, the false friend, the insidious enemy; while other and more brutal criminal predispositions appear in their due time, and in their proper generation.

Consciousness, according to Wundt, while a unit, is also a unification of parts—of perception, representation, idea, feeling, and volition. But if these elements of consciousness are imperfect, as through the disabilities imposed by alcohol, the resulting state of consciousness will be correspondingly imperfect. Consciousness, while the principal basis of conduct, is not an infallible rule of right and fact. It is evident that a state of the nervous organism, wherein the entire round of the nervous centers is paralyzed in various degrees, the nervous functions which are unified in consciousness, must give to that mental trait an imperfect and misleading character. The consciousness of drunkenness is of necessity misdirecting, and the conduct of drunkenness must be largely irrational and vicious. No matter how honest and sober a man may be, he is a bad witness respecting facts that come under his observation when intoxicated.

## Abstracts and Reviews.

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### ARSENICAL AND ALCOHOLIC POISONING.

Drs. Cushing and Prince lately presented a case before the Massachusetts Medical Society that is of medico-legal interest. The patient was a chronic inebriate, who became paralyzed. An analysis of the vomitus and excretions showed arsenic in poisonous quantities; it was evident he had been given arsenic for some unknown disease. The question came up, Was the paralysis due to alcohol or arsenic, the latter given for criminal purposes? Dr. Prince found a typical case of alcoholic paralysis, such as loss of sensation, with hyperæsthesia, pain, and atrophy, with reactions of degeneration, and characteristic delirium. The characteristic symptoms of arsenical poisoning were also present in all their details. It appeared that he was at the house of a friend who had persuaded him to invest large quantities of money in a patent medicine he was interested in, and was under treatment of a quack doctor, and alternated from there to a house of ill-fame. The circumstances of the case indicated an effort to take his life by arsenic, and the intervention of paralysis, either due to the arsenic alone or to the alcohol he had taken, the latter producing multiple neuritis. This case excites much interest, and may come into court, when a differential diagnosis between these two forms of paralysis will be studied.

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### CURABILITY OF INEBRIETY.

The following extract from a paper read before the English Society for the Cure of Inebriety, "On the Prevailing Indifference to Inebriety," by Mr. Trevor, Secretary of the Church of England Temperance Society, indicates an ad-

vance of half a century over the American Temperance Society's work :

“Numberless institutions are spread over the country, thank God! for the general treatment of disease, such as hospitals, infirmaries, and the like, while there are also admirable institutions for the treatment of diseases of a special character, — consumption, cancer, fevers, diseases of women and children, and of bones and special organs; but for the treatment of the poor diseased inebriate there are about sixteen recognized retreats or organized establishments only, as far as I have been able to gather, all the results of private enterprise, and in nearly all of which detention is voluntary, which experience shows is next door to useless if a permanent cure is wished for or expected. Let me ask you to note this significant fact, which is surely a terrible sign of the direction in which the stream of inebriety is now running, and fraught with so much disaster to the whole community, viz., that out of these sixteen inebriate retreats, all but two (both licensed under the Habitual Drunkards Act) are for females alone; and I may add a remark I once heard made, that the applications for admission to these retreats for females were always very far in advance of their possible accommodation. Thus it may be truly said, to the everlasting reproach of this Christian country, that the only refuge open to the penitent dipsomaniac or the habitual drunkard who cannot pay for his detention in one of these private homes, is the ward either of a work-house, a goal, or a lunatic asylum, and not there even until he has qualified himself for entrance and reception by becoming either an absolute friendless pauper, a disgraced criminal, or a mindless lunatic. The necessity for such retreats or homes for the cure of inebriety is not only absolute and urgent, but it seems to be a paramount duty, especially on the part of a nation calling itself Christian. But the value of them is beyond all contradiction. There is doubtless still room for much improvement in their method and management, but the results are, on the whole, most satisfactory and encour-

aging. Doubt is often cast upon the permanency of the cure of inebriety; but there is surely the same uncertainty as to the permanent cure of all other diseases and evils. And yet, I hear no objection to the attempts which are made on all sides, with very strong hopes of success, to reform the criminal, to restore the insane, to repair the damaged body, to bind up the broken-hearted, and recover the fallen. Then why should such exception be taken to the permanency of the cure of the inebriate? But the results of medical and Christian experience show beyond all question that inebriety may be cured as effectually and reliably as any other of the many ills which flesh is heir to, hampered though its treatment is by many complications. At any rate it has been said authoritatively that one out of three men who have been under anything like proper treatment in an inebriate asylum has been saved,—a result for which, I think, we may well thank God and take courage.”

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#### INEBRIETY IN MINNESOTA.

A few years ago this State built a fine building for the exclusive treatment of inebriates. Before it was put into practical operation, the medical treatment of inebriety was denounced so bitterly that the building was changed to an insane asylum, with an inebriate ward. From the last report only four inebriates were under treatment, while nearly four hundred insane (who of necessity are largely incurables) occupy the fine buildings. This is the same blunder which has been made many times before. These four hundred insane should be scattered round in small homes, and farm hospitals. Many of them are incurables, and all that can be done is to house and protect them. While the inebriate is to a large degree curable, and can be made self-supporting. It is this neglect and failure to care for the inebriate that keeps the insane asylums full. When inebriety is regarded as a disease and is treated in hospitals, the State will be doing a charitable work that will be felt in all circles and societies.

The *Medical Record* has eclipsed all their rivals in offering to send free to every medical journal proof slips of all the papers to be read at the International Congress at Washington in September next.

The *Demorest Monthly* is a most excellent, pure-toned, healthy, bracing journal. It is also progressive, and should be read by every family in the land.

The *Science Journal* comes each week with a rich freight of new and most fascinating matter.

The *Scientific American* keeps abreast of the restless march of science, always giving the latest news from the "front of this field."

The *Homiletic Review*, published by Funk & Wagnalls, has some very entertaining and instructive papers in the July and August numbers.

The *Electrical Engineer* of New York city grows in value every month. The new lands of electrical force are opening wider every day, creating new interests, which this journal most aptly describes.

The June, July, and August numbers of the *Popular Science Monthly* may each be called a separate library of the best thought and latest researches of science. This monthly has become an essential to every library in all conditions of life.

*The Rise of Universities.* By S. S. Laurie, LL.D. Published by J. Fitzgerald, 4 East 24th street, New York. Price, post free, thirty cents.

*Notes on Earthquakes*, with fourteen Miscellaneous Essays. By Richard A. Proctor. Price, fifteen cents, post free. J. Fitzgerald, publisher, 24 East 4th street, New York.

*The Formation of Vegetable Mould through the Action of Earth-Worms.* By Charles Darwin. J. Fitzgerald, publisher, 24 East 4th street, New York. Price, post free, thirty cents.

These three works should have a place in the library of every thinker and student. They place the best thought of the day in the reach of all persons.

*The Nursing and Care of the Nervous and Insane.* By C. R. Mills, M.D., Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic. J. B. Lippincott & Co., publishers, Philadelphia, Pa., 1887.

This is a capital little book, full of hints and suggestions of great value to both the nurse and physician. The author understands clearly what a nurse should and should not know in the care of mental disease, and has a concise, happy way of expressing it. This book is unique in both the matter and the manner of presenting the subject, and we advise our readers to possess it as a really valuable aid to the often very confusing field of practical treatment of this class. A physician should know what a good nurse is and what is required, and this work supplies the facts in this field.

*Nervous Diseases and Their Diagnosis: a Treatise upon the Phenomena Produced by Diseases of the Nervous System, with Especial Reference to the Recognition of Their Causes.* By H. C. Wood, M.D., LL.D., member of National Academy of Sciences, Philadelphia, Pa. J. B. Lippincott & Co., 1887; pp. 500. Price \$4.00.

This work is especially devoted to the phenomena of nervous diseases and their recognition from the symptomatic and diagnostic side. The following paragraph from the introduction gives a good idea of the plan of work: "When a case offers itself for examination the physician must needs travel from the symptoms back to the lesion, and not from the lesion to the symptoms. He does not say this man has a clot in the brain, therefore he has hemiplegia; but he begins with the paralysis, and passes from it by a process of induction to the lesion. Hitherto, the authors of textbooks have traveled from the lesion to the symptoms. The present treatise is an attempt to follow the route which the practitioner must pass over daily." The author starts with the different forms of paralysis, passing from motor to sensory symptoms, and ending with the lesions of consciousness and intellection. The faults and omissions of the work are so few compared with its merits and the suggestive, practical interest which it creates in these subjects that it may be justly called the best practical work on this subject published. The author is clearly a thoughtful and thorough student, also an excellent teacher, knowing exactly what is needed and how to present it in its most attractive way. We have published some extracts from its pages elsewhere, and heartily commend this work to our readers.

## Editorial.

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### INTERNATIONAL MEDICAL CONGRESS ON INEBRIETY.

The first International Medical Congress for the Study of Inebriety, which convened in London, July 5th and 6th, marked the beginning of a new era in the history of this subject. The exercises began July 5th with a special reception to Dr. T. D. Crothers with other American and foreign delegates. Among them were Drs. Parrish, Wright, Thwing, and Mr. Schemerhorn of America, Dr. Mœllier of Brussels, and Dr. Koch of Holland, and others.

The following is the official record of this occasion :

On the afternoon of Tuesday last, an influential and representative company assembled in the rooms of the Medical Society of London, on the invitation of President and Council of the Society for the Study of Inebriety, at a reception to Dr. T. D. Crothers, Hartford, Conn., U. S. A., Secretary to the American Association for the Cure of Inebriates, and editor of the *QUARTERLY JOURNAL OF INEBRIETY*. Among the audience were members of the medical profession, visitors to the Congress on Inebriety, and leading temperance workers. After a service of tea and coffee, the chair was taken by the president, Dr. Norman Kerr, who said that for the marked advance of the recognition of inebriety as a true disease calling for treatment like other diseases, for the establishment of special homes for the purpose, as in insanity, and for legislation to protect the inebriate against himself, the world was indebted largely to American physicians, several of whom were with them that day. He (the chairman) rejoiced at the presence of so many abstainers and prohibitionists, as the physical aspect of intemperance ought never to be forgotten. Alcoholic in-

toxicants were always poisonous, and no moral or religious influences could modify the action of a material chemical poison. They all hoped for amended and improved legislative measures for the effective cure and control of the diseased inebriate (poor as well as the rich). A year and a half ago they had welcomed the president of the American Association, Dr. Parrish, and now they had the pleasure to welcome his active colleague, Dr. Crothers. Dr. Kerr concluded by proposing the following resolution: "That this Congress of British, Colonial, and foreign members, comprising members of the legislature, ministers of religion, physicians, lawyers, philanthropists, abstainers and non-abstainers, prohibitionists, and other friends of the habitual drunkard, convened by the Society for the Study of Inebriety, offers a hearty welcome to Dr. T. D. Crothers, Hartford, Conn., U. S. A., secretary of the American Association for the Cure of Inebriety and editor of the *QUARTERLY JOURNAL OF INEBRIETY*.

"That this Congress tenders its hearty congratulations to Dr. Crothers and his American colleagues for the excellent work done by their association and journal in enlightening the profession and the public on the physical aspect of inebriety; and trusts that through the united efforts of all who are interested in temperance and legislation the time will soon arrive when the diseased state of the inebriate will be generally acknowledged, and when effective measures will be passed by the legislators of every country for the judicious care and treatment of all inebriates willing to be treated in special homes, and for the compulsory seclusion in such institutions of inebriates unwilling of their own accord to put themselves under restraint."

The resolution having been seconded by Dr. G. B. Clark, M. P., was carried by acclamation, after which Dr. Crothers delivered a brief address, in which he reviewed the history of the movement in America. Dr. Joseph Parrish of America, afterwards read a short paper on the subject of "Is there a Climacteric Period in Inebriety?" Dr. T. L. Wright, also



of America, read a short paper, in which he spoke of the morbid force of the drunkard's convictions. He said that a sober person in the witness-box testifying to events that had occurred when he was intoxicated was less reliable than an intoxicated person testifying to events that had occurred when he was sober. Dr. Thwing, Dr. Koch, Dr. Bridgewater (Harrow), and Sergeant-Major Haskett afterwards spoke, the last-named gentleman dwelling upon the difficulty of placing destitute inebriates in positions where they would be properly cared for. The chairman remarked that the present condition of the law was accountable for that difficulty. He thought it was a national disgrace that there are no places for the treatment of male inebriates unable to pay. Female inebriety was increasing enormously.

The regular session of the Congress began the next day, the 6th, at 10 A.M., at Westminster Town Hall. Dr. Cameron, M.P., vice-president, as chairman, opened the exercises with a short address on the importance of a medical study of inebriety, then introduced the president, Dr. Norman Kerr, who delivered an address on *Inebriety; a Disease Requiring Medical, Moral, and Legislative Treatment*. This was a most suggestive and graphic presentation of the disease of inebriety, and its treatment in special hospitals.

*Inebriety in Austria* was the title of the next paper, by Chevalier Max Proskowetz de Proskow-Marstorff. The author stated that in Austria inebriety was increasing everywhere on a dangerous scale. The consumption of alcohol was 6.7 litres a head in a population of 39,000,000; but in some districts 15½ litres was the average (4½ litres go to a gallon). In all Austro-Hungary there was an increase of nearly 4,000,000 florins in the cost for alcohol in 1884-85 over 1883-84. In 1885 there were 195,665 different places (stations, ginshops, and subordinate retails) where liquors were sold. Dr. Julius Wolff had shown that the proportion of liquor stations to the inhabitants varied from 1 for every 173 to 1 for 1,181. In districts where the most spirits were used there were fewer fit recruits. Of 2,742 homicides and

murders in Austria in 1876-80, 978 were by drunken persons ; in Bohemia, 103 out of 435 ; and in Moravia, 74 out of 242. Austrian inebriety was increasing in county and in towns. 33.41 per cent. of the insane in the Vienna asylum were from alcoholism, or seven times more than ten years ago. Alcoholism and inebriety had spread more rapidly since spirits had been made from molasses, potatoes, sweet turnip, Indian corn, etc. Inebriety was also causing graver diseases. The Austrian Inebriety Society has asked the Parliament to establish homes for inebriates. By the Austrian Penal Code (1852) accidental intoxication exempted from criminal responsibility ; but it was an aggravation if the person knew from experience that he was very emotional when intoxicated. Inveterate drunkenness was a misdemeanor in craftsmen working on roofs or with materials easily inflammable. Austrian workmen generally took spirits to breakfast. Introducers of spirits into factories were severely punished. In the Tyrol, C. Payer says that two-thirds of the people are inebriates, including women. At the request of the Inebriety Society, the common Imperial Minister of War had requested commanders of troops and garrisons to insure the sale by settlers of tea and coffee at low prices. The Chevalier Proskowetz de Proskow-Marstorff had asked Parliament to teach the intoxicating nature of alcohol in schools. The Austrian Inebriety Society was founded on January 17, 1884, and had done good work by collecting statistics, publishing pamphlets and proceedings, chemically examining spirits, and promoting tea-cars and coffee-rooms.

The following are short abstracts of several papers which were read :

*The Physical Aspect of Inebriety*, by N. S. Davis, M.D., Chicago, President International Medical Congress. The conflict between the vice view and the disease view of inebriety is the result of a misapprehension of terms. Inebriety is inherited as cancer or consumption is inherited, but no one is born with a cancer or a tuberculous lung. Some are

born with such a physical organization as embodies a liability to cancerous growth and tuberculous development. In the same way the drinking parent begets a child with a degenerated type of organization, rendering the latter liable to inebriety, as to convulsions or imbecility. Therefore, if such a congenitally weak child drinks at all, he cannot resist the narcotic power of alcohol. Inebriety is a disease, inasmuch as it is a departure from health, persisting, in certain cases, after the immediate act of drunkenness is over. While inebriety is primarily the result of voluntary drinking in most cases, there being some self-control in the early stages, if persisted in from year to year until permanent tissue changes are established, the inebriate is no longer able to exercise self-control. He should then not be held responsible for his acts, but should be recognized, legally and morally, as in a similar category to the insane, and appropriate asylums should be provided, where he should be compelled to reside till forced abstinence and medical treatment effected a cure.

*Legislation for Inebriety*, by Dr. Petithan, Liège. Alcoholism in Belgium has augmented with frightful rapidity, and calls for immediate and thorough action. England and the Netherlands, these two classic countries of progress and liberty, and France had adopted repressive measures. Belgium ought not to lag behind. At present, the alcoholized man, unless in extreme insanity or violence, is not dealt with. He is not responsible, being under the power of alcohol, and yet he has the control of his family, the administration of his affairs, and he is a juryman. He cannot be interdicted unless he is mad, yet he has lost his will, is no longer free, and no more responsible. This newly-discovered disease—inebriety—ought to be recognized by the law. The inebriate should be liable to interdiction, not only by his family, but by a public officer. This can be done now only in the event of fury or imbecility, but it can be done in a lucid interval. The alcoholized man, when his diseased state is medically and legally recognized, ought to be interdicted. When he is interdicted, there ought to be power to shut him up in a

special home, where he should be treated and obliged to work according to his strength.

*Asylums for Inebriates in Sweden*, by Axel Dickson. In Sweden there are two such asylums. One is at Bic, under medical superintendence, where the charges can be afforded by only the economically independent. The other is for working people, at Törnäs, the charges varying from £11 to £22 per annum. The patients have to work on the farm, in the dairy stables, and elsewhere on the premises. One year's residence is required. No intoxicants are allowed. The farm has been open for only six months. Already there have been seven patients, some of whom are hopeful cases.

*German Law on Inebriety*, by Professor Binz, Bonn. Prof. Binz stated that, by the German Penal Code, § 261, No. 5, whoever surrenders himself to drinking so as to fall into a condition in which, through the interposition of the court, foreign help must be resorted to for his support or for the support of those whom he is in duty bound to maintain, is punished with imprisonment. On a repetition of the offense, imprisonment can be arranged in a work-house for a longer time. The closing hours of drink places are usually 10 o'clock P. M. in the country and 11 P. M. in towns.

*Inebriety in Belgium*, by Dr. Moeller. The author traced the history of the movement for legislation for inebriates in Belgium, particularizing the labors of Drs. Petéthan, Barella, Carpentier, Jansen, and others. Dr. Carpentier had found ninety per cent. of his post mortems on males and ten per cent. of his post mortems on females at the Brussels Hospital show signs of incurable organic alcoholic disease. The ages at which these inebriates had begun to drink ranged from fifty-five to eight years. In Belgium they were agitating (1) for interdiction of the inebriate; (2) for seclusion of the inebriate in a special asylum for treatment of his disease. Dr. Moeller was in favor of the government opening such establishments, rather than their institution by private individuals. Inebriety was a true disease, and required not only medical treatment, but also legislative care and control.

*Continental Legislation for Inebriates*, by the Rev. Dr. M. De Colleville, Brighton. In Austria, Belgium, France, Germany, Greece, Holland, Italy, and Switzerland, drunkenness is not in itself an offense, but public and disorderly drunkenness is punished by short imprisonment and fines. In some countries the fines are increased by the number of convictions. In some places bankrupts and paupers, as well as interdicted persons (for prodigality), are not allowed to enter a drink establishment for thirteen months or more, as at Lucerne and in Galicea, except for food in necessity. Drunkenness is spreading beyond the Northern Continental regions. Italy and Greece are becoming infected. Corn and other allied alcohols discovered by Libavius in 1585 (Halle University), had greatly increased drunkenness. In France, in 1885, 511,280 gallons of ettylic and 40,506,642 gallons of heavier and more hurtful alcohols were consumed. This, with the alcohol of wines, etc., gives an average annual use per head of four gallons. Laborers and mechanics are there losing £40,000 annually. There has been a decrease in Holland, North Germany, Russia, Norway, and Sweden. Only in fury, etc., is there interdiction. By the German Penal Code, Clauses 361 and 362, boisterous inebriates can be sentenced for two years to prison in-door or public work out-door labor. The English Habitual Drunkards' Act should be made compulsory in the freeing of the inebriate from his slavery, as a fit memorial of the Jubilee year.

Dr. B. W. Richardson presided in the afternoon session, and delivered an address on *Alcohol and Its Effects on the Heart*. Other papers were read as follows: *Jurisprudence of Inebriety*, by Clark Bell, Esq., Ex-president Medico-Legal Society of New York; *Pathology of Inebriety*, by E. C. Mann, M.D., Brooklyn, U. S. A.; *The Relation of Disease to Inebriety*, by L. D. Mason, M.D., Consulting Physician, Fort Hamilton Home for Inebriates; *A Prison Chaplain's Observations on Inebriety*, by Rev. J. W. Horsley, M.A.; *The Meeting-Place of Vice and Disease*, by Alfred Carpenter, M.D., J.P.; *Homicidal and Suicidal Inebriety*, by Surgeon-Major Pringle, M.D.

The president, Dr. Kerr, read a paper on the following: *Colonial Legislation for Habitual Drunkards*.—In view of the approaching expiration of the Habitual Drunkards Act, 1879, and the call for permanent and improved English legislation for habitual drunkards, I have to lay before you the result of a special inquiry into our Colonial legislative provision, immeasurably more satisfactory than with us, for the numerous and wretched victims of the terrible and truly serious disease—inebriety. For the information which I am enabled to present to you I beg to acknowledge most grateful thanks to the High Commissioner of Canada, Sir Charles Tupper, and to the Agents-General of South Australia, Victoria, and New Zealand, Sir Arthur Blyth, Sir Graham Berry, and Sir F. Dillon Bell, with their respective secretaries.

*Canada*.—Nearly all the Canadian Provinces have effective legislation.

*Ontario*.—An inebriate can be admitted, provided it is certified to the satisfaction of the superintendent that applicant is an inebriate, simply on voluntary application and the signature of an agreement to conform to the rules for any period not exceeding twelve months. Within that term he can be discharged either as cured, as incapable of benefit, as (with means) having neglected to pay for his maintenance, or as refractory. An habitual drunkard can be committed to a home by the provincial secretary, after inquiry by a judge. The inquiry can be asked for by any friend, and the indicted has eight days' notice, with power to produce and examine witnesses. Twelve months is the full term, and the committed can be discharged in the same way as the voluntary patients. Any voluntary or involuntary patient can, on escape, be retaken and reconveyed to the home by any official or by any person authorized by the superintendent. The inspector appointed by the lieutenant-governor can, subject to review by a county court judge, sell inebriate's property to pay for maintenance. Poverty is no bar to committal, but those who are able, or whose family are able to pay, are compelled to do so. The lieutenant-governor has power to purchase, equip, and maintain a hospital for inebriates; the inspector of prisons and asylums having the same power over an inebriate's retreat as over asylums for the insane.

*Quebec.*— Habitual drunkards can be interdicted by a superior court judge, as in insanity, after a report by a family council, the petitioned against having eight days' notice to show cause against the interdiction, which involves loss of civil rights. The curator can proceed against persons wilfully selling or giving intoxicating liquor to the interdicted. The curator can place the inebriate in a special home.

*Nova Scotia.*— Interdiction and power to intern the interdicted similar to Quebec, only fourteen days' notice must be given to the inebriate.

*New Brunswick and Manitoba.*— The interdiction is by a judge, and a committee of the inebriate is appointed. There is the same power to confine in any place of which the judge may approve.

*South Australia.*— Patients may be admitted for any period not exceeding twelve months, on attestation by any justice. On production of a certificate by two medical practitioners, and an application by any friend, any judge or special magistrate or two justices, can order committal to a home for a period not exceeding twelve months. An incorrigible inebriate (that is, one convicted of drunkenness three times within six months) can be similarly committed. Any patient who has escaped can be retaken and reconveyed to the retreat by any person authorized in writing by the superintendent. There is power over the property of patients able to pay, but those unable to do so can be employed at a fair rate of wages.

*Victoria.*— Voluntary admission can be had on application to any justice. A county court judge can order committal to a home on production of a statutory declaration by two medical men, and application by a friend. On escape, any one authorized in writing by superintendent can retake and reconvey to the home. The medical superintendent can appoint a substitute to act in absence.

*New Zealand.*— Voluntary application for admission may be made to a judge. A judge, on certificate of two doctors, may order detention in an asylum, twenty-four hours' notice of the procedure having been given to the alleged inebriate. Patients are bound to work, the penalty for refusal being £50. Patients are received though they cannot pay for their maintenance.

It is only fair to add that there is as yet very limited accommodation in Special Homes for Inebriates in the Colo-

nies, a practical haven of refuge, and a means of restoration to health for the narcomaniac, which is much more abundant here. We have a number of such homes for the well-to-do, though none licensed under our Act for the poor. Is it not high time that the legislature of the United Kingdom should take a lesson from her vigorous Colonial offspring by caring for the destitute as well as for the rich diseased drunkard, by offering an opportunity for the treatment of every inebriate willing to give up his freedom for a time, and by investing the proper authorities with power to compulsorily seclude the victim to narcotics for the threefold purpose of effecting his cure, of saving his wife and family from a life of inexpressible sadness, and of protecting the community from the violence and riot of a morbid maniac?

A grand dinner closed the exercises in the evening, of which the following is an account:

On Wednesday evening, July 6th, two hundred and fifty ladies and gentlemen sat down to dinner in the Westminster town hall, Dr. Norman Kerr, F.L.S., in the chair. Among those who had accepted the invitation were Lord and Lady Denman, Lord and Lady Mount-Temple, Baron Ferdinand de Rothschild, Sir Wilfrid Lawson, M.P., Sir Trevor Lawrence, M.P., Dr. Cameron, M.P., P. Maclagan, M.P., T. W. Russell, M.P., W. B. Rowlands, Q.C., M.P., William Johnston, M.P., Dr. Clark, M.P., Sir Edwin Saunders, Drs. Parrish, Crothers, Wright, and Thwing (U.S.A.), Dr. Moeller (Brussels), Drs. B. W. Richardson, Alfred Carpenter, Danford Thomas, Mrs. Norman Kerr, and a number of other ladies, clergymen, and representative temperance reformers. The dinner was served by A. B. Marshall, of the West End School of Cookery. The Anglo-Hungarian band played during the evening.

The toasts were honored in five varieties of non-intoxicating wine, imported by Frank Wright, Mundy & Co. There was also on the table Brunnen table water and Brin's oxygenated lemon water, charged with oxygen prepared from the atmosphere.



The toasts were "The Queen and the Royal Family," by the chairman; "the Houses of Parliament," by Sir Edwin Saunders, F.R.C.S., responded to by Lord Denman and Mr. P. Maclagan, M.P.; "Religion, Law, and Medicine," by Lord Mount-Temple, responded to by Rev. Dr. Lansdell, F.R.G.S., the distinguished Siberian traveler, Mr. W. B. Rowlands, Q.C., M.P., and Dr. Withers Moore (president British Medical Association); "The Study and Cure of Inebriety," by Dr. J. S. Bristowe, F.R.S., responded to by Dr. Crothers; "Our American Guests," by Dr. B. W. Richardson, responded to by Dr. Joseph Parrish; "Temperance Organizations," by the chairman, replied to by Sir Wilfrid Lawson, M.P. (U.K.A.), Canon Ellison (C.E.T.S.), and Mr. John Taylor (N. T. League); "Our Foreign Guests," by Dr. T. L. Wright, reply by Dr. Moeller (Brussels); "Legislation for the Inebriate," by Dr. Alfred Carpenter, J.P., responded to by Sir T. Lawrence, M.P.; "Our Colonial Guests," by Dr. Danford Thomas, reply by Rev. J. Gelson Gregson; "The Dalrymple Home," by Consul-General Waller, replied to by Dr. Cameron, M.P., president of the Dalrymple Home; "The Ladies," by Dr. George Harley, F.R.S., replied to by Dr. Thwing (Brooklyn, U.S.A.). The company separated at an early hour after having spent a very pleasant evening.

A large party of the Colonial, Foreign, and Provincial visitors were entertained at lunch at the Dalrymple Home, Rickmansworth, on the following day, the 7th inst. The guests, who went out by train from Euston *via* Watford, were conveyed by carriages in waiting at Rickmansworth station, to the Home, one mile distant, and were received by Canon Duckworth (the chairman), Dr. Norman Kerr (consulting physician), Mr. Branthwaite (the medical superintendent), and the committee of management. After lunch, an informal meeting was held in the spacious concert room, when Dr. Parrish, Dr. Crothers, Dr. Wright, Dr. Thwing (U.S.A.), Dr. Moeller (Brussels), and others expressed their delight with the charming grounds, their high opinion of the scientific and practical methods of treatment of the disease

inebriety, and their gratification at the excellent results already attained.

It will be of interest to our readers to hear some of the conclusions which seemed evident. The number of the papers both presented and read at this Congress, and their general literary and scientific character, was unmistakable evidence that the disease of inebriety had been recognized, and an interest created for a wider, clearer knowledge of this subject.

It was also evident that the time had come to organize and place on a scientific basis the many facts concerning inebriety which have been known and urged by observers all over the world.

The evidence on which the disease of inebriety and its curability by medical means in hospitals are based, demanded a recognition, and received it in this Congress beyond the expectations of its most sanguine supporters.

Leading medical men in both Europe and America either contributed to this Congress or endorsed it with letters of hearty sympathy. The large number of leading scientists and distinguished men who joined in the banquet, and the full reports given in the medical, secular, and temperance press of the proceedings, indicated beyond all doubt a great advance of public sentiment, and the permanent growth of the teachings of the *JOURNAL OF INEBRIETY* and its numerous writers.

The papers presented by the Americans at this Congress indicated a more thorough study of inebriety, but the thoughtful, conservative tone of the English papers, and the statistical papers of delegates from the Continent, showed a solidity of growth in the study of this subject very promising for the future.

Both the addresses and papers presented to the Congress were more suggestive of the possibilities from further study in this field than of the results already accomplished. This was the grand feature of the Congress, showing that practical men had begun on the practical side of this great new land of psychiatry.

Of course such a movement, with all its praise and enthusiasm, must bring out some adverse criticism. Here as elsewhere the same temperance reformers and clergymen were shocked and pained at the infidel error of attempting to recognize a physical side to this subject. Happily many of the best men in these classes supported this movement with much enthusiasm. While the success of this Congress was due to the efforts of its talented president, Dr. Kerr, it was evident to all that the subject had grown to such proportions that hereafter it would be discussed in great conventions, of which this was but the beginning.

The social features of the Congress were very pleasing, and will be long remembered by all who participated. The American delegation formally thanked the president in a printed letter for his courtesies. It is very pleasing to note that the papers by Drs. Parrish, Wright, Mason, and Mann attracted much attention, and quite a demand for separate copies was created, which the temperance press supplied.

Our space prevents further reference to this most interesting event, which we hope to outline more fully in the next number.

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#### UNCONSCIOUS DECEPTION IN INEBRIETY.

The following case excited much interest in a large circle of friends, and came to my notice for advice. A, a wealthy brewer, who had been a widower for years, died, leaving most of his property to his sister-in-law. This was unusual, as he had brothers and sisters and others who had more claims on his property. He was an excellent business man, kind and conscientious and above reproach. The family physician, an inebriate who drank steadily for years, and was also a man of character and respectability, volunteered under oath an explanation of this peculiar will. He said on such a day he overheard the sister-in-law urging and threatening the brewer to have his will changed. The next day he overheard a strange man writing it at the suggestion of this woman. This occurred a few days before the death of the brewer.

As the doctor could have no visible motive, and the act was strange and unusual, a detective was called in to confirm his sworn statement by other evidence. It was found that the doctor was ten miles away on the night he alleged to have heard this effort to change the will, and his associate physician made a visit at nearly midnight of that day, seeing no one but the nurse. It was also found that he did not call on the day he swore he heard and saw a strange man making out a will. It was also found that the will was written several months before in a distant city, and had not been altered in any way from the first writing. The indignation of the friends at this evidence prompted them to arrest the doctor for perjury. The doctor was very positive of his correctness, and the case came under my notice. The result of an examination made it very probable that the doctor had heard in his rounds some suspicion that the testator of the will had been forced to make such a will. This suggestion had revolved itself in his mind until he conceived that he had overheard this very thing. From this the false conception grew, and finally shaped itself into the writing scene.

There was no object in the statement, as the parties to be benefited by such a statement were not friendly to him, and those who would suffer were his friends. My opinion that this was a case of unconscious deception, growing out of a degenerate and diseased brain, was accepted, and the charge of perjury was withdrawn. Yet the doctor insists it was true, and thinks the deception was in the investigations of the detective.

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The American observer notes the fact that inebriety in England is hedged in with social customs, hygienic and sanitary conditions, making its study and treatment a more difficult problem than in America. It is also clear that inebriety is literally poverty of both mind and body more than in America, and is a symptom of degeneration, more than accidental conditions. The unsanitary conditions of homes and absence of home life are apparently greater

sources of danger than the saloons. The physical degeneration of the inebriate is more prominent among the lower classes. Public drinking and intoxication on the streets attract less attention, and attempts to control inebriety are resented as infringements of personal liberty. Many homes have been established for inebriates, but with few exceptions they are inadequate for the work, because based on erroneous views of inebriety and its cure. The temperance agitation, while intense and dogmatic, has a conservative element which prevents extreme radicalism, and both clergymen and temperance men are alive to the progress of science. The unfortunate Habitual Drunkards Act has been an obstacle in the growth of asylums, but as the act expires soon, great efforts are being made to pass a more practical bill. In many of the discussions noted the confused attempts to explain will and disease in inebriety indicates an early stage of the study of the subject.

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A Boston journal presents some statistics of the arrests for drunkenness and assault in ten leading cities of the Union. From these figures it appears that one in every eighty persons are arrested for this offense in Washington, D. C.; one in every one hundred and twenty in Albany, N. Y.; then comes Baltimore, Boston, Buffalo, New York city, and finally Columbus and Cincinnati, which have the least arrests of any cities for inebriety and assault. The inference is that these are the most temperate, law-biding cities of our country.

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Governor Hill, in his veto of the New York High License Bill, brought out some curious facts of the number of licenses granted per one thousand inhabitants in the leading cities of New York State. Buffalo has thirteen licenses to every one thousand people, the highest on the list, and Albany the least, less than one to a thousand; New York has seven and Brooklyn five, Troy has ten, Syracuse eleven,

and Rochester eight. These curious statistics indicate a great variety of local causes which permit spirits to be sold so freely in one place and checks it in another. In Buffalo the climate is no doubt a predisposing cause. The sharp extremes of high winds and cold rains have much to do in breaking up the nervous equilibrium of the body and intensifying the nutritive disturbances calling for the narcotic of alcohol.

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In the comparison of the histories of many cases of inebriety, certain ranges of fact appear in a regular order. Continuous chains of cause and effect run through all the events. What appears to be the free will of the victim is but a narrow channel along which he is forced by conditions which he cannot escape. Appeals to his feelings and reason are useless, for these faculties are unable to direct or control the progress of disease. Often the victim is unconscious that he has lost his power of control, unconscious of the march of events; the steady disintegration of brain vigor and health, and never realizes it. Delusions of health and self control become fixed as the disease goes on. The range of his mental powers steadily narrow and approach the animal in comparison, and are finally lost in a general dissolution.

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The delay in the appearance of the Journal was for the purpose of publishing some of the papers and proceedings of the Congress of Inebriety. Other papers and proceedings will appear in the future numbers of the Journal.

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The time for argument to prove inebriety a disease has gone by. The facts of inebriety are so accessible and numerous that it is a question of observation and interpretation of these facts, and not of theory or speculation. Opinions on questions not based on facts may differ, and even the teaching of facts may vary with the observer, but the truth is always and ever the same.

## Clinical Notes and Comments.

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### GEYSER SPRING WATER.

In 1870 an experimental drilling near Saratoga Springs struck a vein of mineral water at a depth of one hundred and thirty-two feet in the solid rock below the surface. The pressure of gas was so great that the water was forced out over thirty feet above the surface, and has flowed continuously ever since. From analysis this water is found to be very rich in chloride of potassium, bicarbonate of soda, magnesia, and lithia, and coming from such a great depth is free from impurities common to other waters. Unlike other Saratoga waters it is found to be a marked nerve tonic, especially in cases of nervous prostration associated with dyspepsia. We have used it in a few cases of alcohol and opium inebriates, giving it in small doses night and morning with the best results. Its tonic effect comes no doubt from its action on the liver and other glandular organs, and while not purging the bowels, it seems to excite to a healthier action. The natural carbonic acid gas in this water has a marked medicinal value, and so far there seems every indication that this Geyser water will be found a nerve remedy of great power. We urge our readers to try it in all neural diseases.

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The *Lactated Food* is one of those remedies that are almost a specific in some cases of inebriety.

The *Acid Phosphates* of Horsford is probably the most extensively sold and widely known of all remedies in the market.

Parke, Davis & Co.'s *Coca Cordial* is a most excellent preparation for all cases of nervous disease, and should be used in all cases of inebriety and opium taking.

*Lactopeptine* has come to be regarded as the great new remedy for nutrient disturbances.

*Peptonized Cod Liver Oil and Milk*, by Reed & Carnrick of New York city, has a special power as an oil tonic and stimulant which is invaluable at times.

The *Murdock Liquid Food* will be found of good service in anæmia and insomnia and dyspepsia.

The *Anglo-Swiss Milk Food* can be used with most excellent results as a concentrated food for nervous invalids.

*Colden's Liquid Beef Tonic* is a stimulant of great power. It can be used in the place of alcohol in emergencies, with the best results.

*Maltine* with Alteratives is combined with the most valuable alteratives known, such as iodides, bromides, and chlorides, and will be found a remedy of the highest value in syphilis and all depraved conditions of the blood. Each fluid ounce of Maltine contains : chloride calcium, 5 grains, chloride magnesium, 5 grains, bromide sodium, 5 grains, iodide potassium, 1 grain, iodide iron,  $\frac{1}{4}$  grain.

*Valentine's Preparation of Meat Juice* has proved in our hands to be superior to any other form on the market. As a stimulant and tonic it seems unrivaled in alcohol and opium cases.

W. H. May, M.D., New York city, says: "I have had very successful results in the administration of *Bromidia* in cases having their origin in disorders of the nervous system, such as cholera infantum, paralysis, insomnia, etc. *But I find it to be of special value in treatment of delirium tremens, and the results of debauch*; it being retained upon the stomach and speedily controlling the most dangerous symptoms, and producing the desired calmness and sleep necessary when morphia and other soporifics have failed to do so, and thus rendering the disorder amenable to further treatment. Have also prescribed it successfully in the terrible state of nervous exhaustion due to opium habitues endeavoring to relinquish the habit. And, finally, as result of experience, I pronounce it the 'hypnotic *par excellence*.' "

*Fellow's Hypophosphites* are an excellent combination of remedies that have been found of great value in nervous prostration, anæmia, and many other diseases of nutrition.



THE  
QUARTERLY JOURNAL OF INEBRIETY.

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Vol. IX.

OCTOBER, 1887.

No. 4.

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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 PATHOLOGY OF INEBRIETY, AND THE  
IMPORTANCE OF THE EARLY RECOGNITION AND REPRESSION OF THE DISEASE IN ITS EARLY STAGES.\*

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Before entering upon the discussion of the pathology of inebriety, I desire to say a word relative to the lack of interest in the disease of inebriety by the general profession.

When we reflect upon the fact that an insane temperament which may be transmitted to offspring may be established by the alcoholic habit; that the alcoholic appetite may originate in moderate indulgence to become fixed and hereditary; that epilepsy, hysteria, idiocy, and insanity result from the alcohol habit and become hereditary; that the people of the United States spend, in the period of eleven years, for alcohol, more than the entire value of their agricultural, mechanical, and manufacturing products; that thirty-three and one-third per cent. in New York, and probably a similar per cent. in every large city, of all deaths are occasioned directly or indirectly by the use of alcoholic drinks; that from thirteen to twenty-five per cent. of all

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\* Read at the International Congress of Inebriety, London, England, July 6, 1887.

cases of insanity, according to different asylum superintendents, become insane through alcoholic drink; that the progeny of alcoholics are peculiarly liable to degenerations of the nervous system; that the alcoholic habit is antagonistic to the highest standard of bodily health and vigor, and of capacity for work of individuals and of communities; when we reflect upon these indisputable facts, then every thoughtful physician must realize that we have before us one of the deadliest evils that curses modern society, and we can but wonder at the astonishing apathy that exists in regard to the importance of a thorough knowledge of the disease of inebriety in the daily work of every member of the profession. The chief study in this direction ought not to be limited to the small band of specialists in the profession who are devoting themselves to the care and cure of inebriates. The disease of inebriety does not chiefly fall in its practical relations within the working limits of this exceedingly small band of specialists in the profession, nor is its study so difficult as to be at all impossible to the busy practitioner. He is the one who first meets with it in its early, curable stage, and it should be alike his duty and pleasure to instruct the public that the effect of alcohol penetrates to every part of the living body, that there are but few blood-vessels, not a muscle, not an active portion of any of the membranes, not a secreting gland, small or large, not an organ of sense, not a single viscus, whether pelvic, abdominal, or thoracic, which is not interpenetrated by alcohol, when the alcohol habit is indulged in. That it causes marked changes in the rate and force of the heart's action, in the tonicity of the muscular arteries; that it alters temperature, and causes changes in the rate of action of glands and muscles; that it causes changes in the varied forms of sensibility, from the most general to the most special; and that it causes the most grave changes of all in the most exalted of all functions comprised under the head of mind and mental operations, until finally the co-ordination function in the brain is overthrown, and the consciousness of personal identity and responsibility is destroyed.

We desire to say that from some years' experience in the field of diseases of the mind and nervous system, that we know of no disease of the nervous system more grave and more demanding a careful, methodical, intelligent plan of treatment than the disease of inebriety.

Let the profession regard inebriety in its true light as a physical disease, amenable to treatment, and aim to instruct the communities in which they practice medicine as to the physiological action of alcohol on the functions of the human body, and the science of preventive or state medicine will owe an incalculable debt of gratitude to them for disease and death prevented, and much domestic misery averted. With these preliminary remarks we come to the subject of this paper, "The Pathology of Inebriety."

In considering the pathology of inebriety, we must look for a moment primarily at the complexity of the nervous system, its manifold functions and its extensive distribution.

We have the cerebro-spinal system, consisting of the encephalon, the spinal cord, and the encephalic and spinal nerves, the organic system of nerves, consisting of the pneumogastric or vagus nerves, and the great sympathetic system, including the vaso-motor system of nerves. In the disease of inebriety the primary morbid changes are not in the nerve elements themselves, or in the interstitial connective tissue of nerve, except in those who inherit a structurally degraded nervous system, but it is initiated by altered quality of blood and secondary disturbance of nerve function. The interference with the proper and well-balanced working of the nervous system in the disease of inebriety depends primarily upon the supply of blood to the different nerve centers, being neither definite in amount, nor uniform in quality. The proper nutrition of such centers, and their normal molecular mobility, is at once disturbed, and the maintenance of the accustomed degree of excitability in the different nerve centers is interfered with, and we get at once an exaltation, diminution, or other perverted activity of the whole nervous system. The variations taking

place in the nutritive conditions of the nerve centers involve not only an altered action in that part, but a perverted functional activity of all other related parts. Thus, in the disease of inebriety we get the most varied grouping of abnormal phenomena traceable to altered action in the nervous system, and having for a starting point some perverted functioning of one or more nerve centers. We have in inebriety morbid conditions of a progressive type, ending in special forms of atrophy and degeneration, showing themselves more especially in the nerve cells of the brain, spinal cord, or sympathetic ganglia.

Clinically, in the wide and varied phenomena of the disease of inebriety, we meet with perverted sensation and perception ; perverted emotion and ideation ; perversions of consciousness ; perversions of motility ; nutritive or trophic change and perverted visceral actions. In the class of perverted sensation and perception, we have the special senses interfered with. In the class of perverted emotion and ideation we have a long range, from mere emotional display, to actual insanity. In the class of perversions of consciousness we see drowsiness, stupor, and coma. In the class of perversions of motility we see tremors, twitchings, spasms, both tonic and clonic, and also co-ordinated spasms, as in the epileptiform attacks of inebriates, paralysis and defective co-ordination of muscular acts. In the class of nutritive or trophic changes, we meet with degeneration of brain tissue itself, inflammation and congestion of the lungs, or as hemorrhages into these organs, blanching of hair and altered pigmentation of the skin. In the last class, that of perverted visceral actions, we see exalted activity of the stomach, intestines, bladder, and heart, and, in women, of the uterus.

Inebriety is a disease caused by heredity, by defective nutrition, by emotional shock, by physiological crisis, by visceral diseases, and by structural changes in the brain. We may have anæmia of the brain in inebriety, with the blood in the capillaries deficient in quantity and defective in quality ; we may have secondary atrophy of the brain ; we

may have hyperæmia of the brain, with increase of quantity of blood in the capillaries, with symptoms either of excitement or depression. We may have œdema of the brain, with infiltration of it and of the pia mater with serum, especially when the case of inebriety is associated with Bright's disease. The cerebral substance itself is not infiltrated. In these cases we see a slow diminution of mental power and motor force. We may have softening of the brain from vascular obstruction, depending on vascular degeneration, causing trombosis, or valvular disease of the heart causing embolism. The former in inebriates is the usual form, and it is associated with chronic alcoholism and Bright's disease. There are generally the premonitory symptoms of mental deterioration, numbness, pains in the limbs, and pains in the head, in the brain softening of inebriates. Subsequently we see mental dullness, defective perception, drowsiness, loss of memory, slight delirium, emotional attacks, headache, articulation and handwriting bad, the delicate motor acts badly performed, and less of physical power. Dementia may end the scene.

Inebriety is a disease exhibiting certain essential psychic and physical signs. It is a disease in which the tone and power of the nerve centers are lost. There is generally, and I believe always, could we get at the true family history, an inherited neuropathic constitution; but here, as in insanity, it is in the higher classes very difficult to elicit the whole truth from the relations. It is a disease, perhaps more than any other excepting insanity, requiring for its cure time, and long-persisted hygienic influences to restore the normal vasomotor condition, affecting the nutrition and circulation of the brain and nerve centers. The importance of the early recognition and the repression of the disease of inebriety in its incipient stages, has thus far received very little or no attention, even at the hands of those who have written extensively on the subject.

Inebriety is, like insanity, a psycho-neurosis, which either attacks an intact brain, or more frequently a brain not

intact, but predisposed to the acquisition of inebriety by hereditary or acquired vices of conformation or nutrition.

It has an early prodromic, very curable stage. The same remarks, which in my writings on insanity I have applied to that disease, apply with equal force to the disease of inebriety, that there is an early, neurasthenic, equivocal state, differing but little from perfect sanity, but which is the earliest phase of mental alienation, and if recognized by the general practitioner, and promptly treated in this incipient stage, subsequent trouble might be averted. A very careful study and comparison of the two diseases of inebriety and insanity has shown conclusively that in both alike we have early premonitory symptoms, which, unrecognized and unchecked, lead or lapse into active inebriety and dipsomania upon the one side and into insanity on the other. They are grave psychical symptoms, and should lead to an early diagnosis by an intelligent physician, especially if he suspects that his patient has been previously a so-called moderate drinker. As I shall show presently in detail, in this early stage of the disease of inebriety we have general malaise, impaired nutrition and assimilation, muscular atonicity changing the facial expression, and neuralgia. There is at times cerebral anæmia, and there is mental depression and insomnia. There are profuse perspirations and a loss of the normal elasticity of the skin. There are periods of marked mental inactivity, alternating with a hyper-activity of the mental functions. There is physical and mental prostration, muscular feebleness and mental dullness. There is, or may be, vertigo and confusion of mind also. Dyspepsia is also often present.

Inebriety is to-day a neurotic affection, preceded by a distinct interval of morbid nervousness. In the American of to-day, and I think in the Englishman also, there is a greatly augmented susceptibility to the action of stimulants and narcotics. This is due to the increasing complexity of the nervous system, and to the increased complexity of life. Our brains, as Sir Crichton Brown has truly said, are finer in structure, more subtle in mechanism, and also more unstable

than were those of our ancestors. The conditions of modern life acting on our complex and excitable nervous systems, cause our increased nervous diseases, prominent among which stand inebriety and insanity. Given in a certain case an inherited neuropathic constitution, and dipsomania will appear in the exhibition of the slightest exciting causes. This causes an important feature of the disease. Cosmical influences operate with great readiness in producing an outbreak of the disease in persons thus predisposed to it. The phenomena of nervous exhaustion, which one who inherits this neuropathic constitution generally exhibits before the actually developed disease, are certain functional disturbances of the whole bodily organism. There is a relaxation of the general muscular tone which gives rise to partial or total loss of voice, generally partial, the chest tones being weak; relaxation of the facial muscles, giving the face an enervated, spiritless appearance; relaxation of the ocular and orbital muscles, giving a tired, worn-out expression to the eye, and this same relaxation of the general muscular tone in extreme cases may produce involuntary defecation and micturition. There is cardiac stimulation and palpitation, the palpitation being the more prominent. Irregular action of the heart best expresses this state I refer to. If you command the individual to hold out his hand and arm perfectly straight before him with the palm downwards, you will perceive that the hand trembles visibly. This is a very good test for the general relaxation of muscular tone all over the body, and a very simple one. There is vocal tremor; trembling of the legs especially about the knees; atony of the digestive, excretory, and other organs, producing a general malaise; idiopathic fits of perspiration and rigors. There is also great irritability of the cerebral cognizant centers, evinced by frights from slight causes. These persons have fears of inability to perform certain acts, and the fears of involuntary performance. There are muscular twitchings, a hasty or imperfect utterance, and a quick agitated manner. If from this simple state of neurasthenia our patient passes into the

graver state of hysteria or hypochondriasis, according as it is a female or a male, we shall now observe more complex phenomena which may or may not usher in the paroxysm of dipsomania. There will be local pain due to visceral disease. There will be pains referred to parts not diseased, due to transference of the nerve force or vascular disturbance of nerve centers. There is defective functional action of viscera due to reflex action. There are disordered muscular movements due proximately to reflex action or vascular disturbance of nerve centers. Aside from heredity, excessive sexual indulgence, loss of blood, excessive mental and muscular exertion, or any painful disease may be the cause of the neurasthenia, or nervous exhaustion, which ends in inebriety.

The heart, the spinal cord, and the brain, all functionate abnormally in the neurasthenia of inebriety, and all the forms of fear of which I have spoken are the characteristics of debility of brain, due to general failure of the normal appropriating power of the brain, and all this is very often directly traceable to the daily use of alcohol in some shape, in what is conventionally termed moderation, but which has nevertheless paved the way for the establishment of the disease of inebriety. What physician of experience has not witnessed in the neurasthenia of the dipsomaniac and insane man alike, that change of the mental character in which irresolution has replaced former decision of character? As active dipsomania or insanity appear well developed all the psychical characteristics of the prodromic neurasthenia of which I have spoken, increase. I would therefore insist on the existence of this early neurasthenic stage of inebriety—especially when occurring in those who daily use alcohol in moderation—as one of the most important points in the pathology of the disease, a stage which the general practitioner should regard as the danger signal of active dipsomania not far off, although the irresistible craving for alcohol, which is the great diagnostic mark of dipsomania, may not yet have been actively displayed. Now is the time to prevent the neurasthenia of inebriety from lapsing into the actively developed disease.



The constant current of electricity, as centric galvanization and cerebral electrization, will do much to antagonize the symptoms of this early stage, while attention to rest, sleep, mental hygiene, cod liver oil, with the free use of malt and hypophosphites, strychnia, iron and arsenic, zinc and phosphorus are all indicated as circumstances may dictate, both to combat the disease, and build up and restore the shattered nervous system. The fluid extract of coca is also at times very valuable, as is also Warburg tincture and quinine. A single teaspoonful of Warburg tincture taken before breakfast daily is one of the most efficient nerve tonics with which I am acquainted. In the children of even moderate drinkers who have never been suspected of being inebriates, I have witnessed the neuropathic constitution strongly marked. The phenomena which I have seen have consisted of sleeplessness, and night terrors, and emotional outbursts in early childhood, the train of nervous phenomena in cases untreated becoming gradually intensified, and becoming well marked at the age of puberty, when a disposition to either recurrent mania or dipsomania may appear. There are vaso-motor neuroses with recurrent cerebral hyperæmia, the outward expression of which state may be either the development of a true periodic insanity, or dipsomania, as the case may be. The phosphates and cod liver oil should be fed to such children from the earliest childhood, so that nature, if possible, may restore herself to the normal standard, and over-stimulation of the brain in too premature education of such children be avoided with like care.

The great danger to American children to-day is in the inheritance of the neuropathic diathesis, which will, if not antagonized as they grow up, tend to make many of them inebriates and mentally unsound. This is particularly true of the refined and cultivated classes, where by premature and stimulating processes of education, an elaboration of cerebral structure is forced, and the functional activity of the brain in children hastened, overstraining the brain centers at their nascent period, thereby dwarfing and weakening

them, disturbing the balance of mind by seriously interfering with the natural sequence of the evolution of the brain centers, and preparing the child to fall an early victim to some of the modern nervous diseases. Careful building up of the nervous system, and a careful direction of the mode of life and observance of the rules of mental hygiene may, even in children who inherit the neuropathic diathesis, restore functional energy, antagonize the morbid psychosis, build up the nervous centers, and prevent much inebriety and mental disease in later life. Preventive medicine is a wide field for study, and by such study must inebriety and mental disease be stamped out, if they are to disappear. I have endeavored to be as brief as possible in these remarks on the Pathology of Inebriety, and the importance of the early recognition and repression of the disease in its early stages.

The fully developed disease exhibiting the great nervous irritability and restlessness, the unnatural sensations, the uncontrollable desire for alcoholic stimulus, and the disposition to frequent fits of intoxication, are familiar to all here present. The great salient point to me in the Pathology of Inebriety is, that there exists a departure from a healthy structure of the nervous system, and that it is this abnormal condition of the centric nervous system demanding stimulants that is essentially the disease. How far and to what degree the phenomena of inebriety are controlled by cosmic influences, such as electrical phenomena, lunar attractions, velocities and directions of winds, geological formations, elevations above the sea level, the approaches of storms, barometrical changes and temperature, are most interesting questions, for the complete elucidation of which time is yet required. Accumulated results of experience indicate, however, decisively that the propensity for drink in this disease arouses the appetite, overcomes the will, blunts the moral sensibilities, and makes everything else subservient to its demands. The will power of the individual is overborne by the force of the disease precisely as in mental disorder ; and

just as the periodically insane man has free intervals of comparative sanity, just so does the dipsomaniac have free intervals of sobriety, when the irresistible craving for stimulants passes away, to return again, however, with the next paroxysm, unless the proper remedial measures are applied. If this morbid craving for stimulants is clearly traceable to a brain condition, what is the mental responsibility of the inebriate? To me a modified responsibility in the disease of inebriety is clearly demonstrated, and we hope the day is not far distant when the protection of the courts will be extended to the inebriate.

The study of the Pathology of Inebriety would lead us, if carried out to its fullest extent, through inquiries into physiological action of alcohol with its stage of vascular nervous excitement, the cerebro-spinal changes induced, the fall of animal temperature, the collapse of the volitional nervous centers, modification of animal function and structural degeneration. The study of the functional disease from alcohol would reveal the diseases of the digestive system, the result of alcohol, the sensory changes, the vascular changes in the skin, alcoholic thirst, and early systemic failure. The organic disease from alcohol would show us fatty and diseased hearts; weakened and diseased blood-vessels; alcoholic phthisis, diseases of the liver and kidneys; diseases of the eyes; and serious deterioration of cerebral structure. The nervous diseases would reveal, aside from insanity, epilepsy, paralysis, and *delirium tremens*. We may see chronic meningitis, with impairment of memory, dullness of intellect bordering on dementia, tottering gait, hesitating stammering speech, and other symptoms indicative of gradually progressing paralysis. Softening may also occur from the slight attacks of cerebral hemorrhage not infrequent in inebriates.

Finally, I would speak of the great importance of the recognition of the mental condition that in inebriates is the precursor of actual insanity. I have had the opportunity of studying carefully several such cases, many of whom I have been so fortunate as to restore to home and society. The

clinical manifestations which I have observed in these cases have been depression, unwonted excitability, disregard of the minor proprieties of life, a change coming over the warmest affections, quick changes and rapid transitions in the current of the feelings, sleeplessness and a complete change of character and habit ; the person meanwhile entertaining no delusions, but occasionally losing his self-control, the general acts and manner at such times being strongly expressive of the inward emotion. There are intervals of perfect calmness and self-control, during which the person clearly discerns his true relation to others, and even perhaps recognizes the influences which the incipient disease exercises over his feelings and actions. In those cases where insanity appears, we see the utter downfall of the intellect manifested by the fury of mania, or the moodiness, suspicion, depression, and impulse toward self-destruction, of melancholia. All these are the successive links forged in the chain of the insanity of the inebriate, the study of which is full of interest, not alone to the student of mental pathology, but to everyone who desires to lead the wandering mind out of the darkness and mazes of disease back into the light of reason.

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The inebriate is always unconscious of the influences which are determining his actions. He seeks reasons to explain the act after, and is indignant when told that diseased impulses control, and thinks his own conception of his acts far more accurate than that of others. It is impossible for him to detect the real condition and causes which control him.

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To reason abstractly as to the nature and causes of inebriety without first having found what these actual conditions are is to plunge into a fog-bank of error and misconception that is fatal to all true, practical realization of this subject.

THE RELATION WHICH DISEASE BEARS TO  
ALCOHOLIC INEBRIETY.\*

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Disease may act as the predisposing, exciting, or complicating and protracting cause of alcoholic inebriety. The disease may be inherited or acquired. It is proverbial that the progeny of insane or inebriate parents frequently become insane or inebriate, either at or near puberty or middle life, when the exciting causes are presented that develop the latent tendency. As many are born imbecile, epileptic, or idiotic, because of some defect in the procreating power, so many are born who inherit an "inebriate diathesis" — it is their sad birthright. They are the product of a defective and degenerate parentage. Of several hundred cases of inebriates whose ancestral record we have noted, over one-third had either insane or inebriate parents, the latter being in excess.

While we may regard inebriety or insanity in parents as the principal predisposing causes of alcoholic inebriety in their offspring, we should also include among the predisposing causes of a hereditary character, only secondary in importance to those mentioned, all neurotic tendencies, all hereditary diseases accompanied by degenerative changes, congenital syphilis, tuberculosis, epilepsy, or other neuroses. The subjects influenced by such diathesis are born with a defective nervous system. They have a low resisting power to the inroads of disease that still further degenerate the nervous system; they are congenital neurotics; they have a

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\* Read at the International Congress of Inebriety at London, England, July 6, 1887.

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natural tendency toward drugs, either stimulating or narcotic, and readily become insane, or inebriates, or opium habitues whenever a sufficient exciting cause is presented.

In brief then, any disease of a hereditary character, acting either directly or indirectly upon the nervous system, while it may not be as important as hereditary insanity, or inebriety in determining the channel in which the future life shall drift, nevertheless it imposes upon that life a diminished resisting power to the use of alcoholic stimulants or narcotics, and so predisposes the individual to inebriety.

Let us now consider those circumstances which may be denominated the *exciting causes* of alcoholic inebriety and these we shall find are *acquired* in the form of disease or injury by the person at some period of his life antedating his inebriety.

These exciting causes may operate upon a person predisposed by heredity to inebriety, and so precipitate or hasten a tendency that might have manifested itself later, or they may act upon one who has not any hereditary tendency to inebriety, but who becomes an inebriate from disease or injury.

These exciting causes may be divided into —

*Direct.* Those that operate immediately upon the cerebro-spinal axis, as cerebral concussion, fracture of skull with or without depression, sunstroke, cerebral syphilis, or other disturbance of the encephalon more or less profound ; and,

*Indirect.* Or any disease or injury not producing direct changes on the cerebro-spinal axis, but localized outside of it and operating upon it by reflex influence, viz. : painful ulcers, neuritis, neuromata, urethral stricture, and dysmenorrhœa. In brief, any distressing or painful condition, acting thus indirectly upon the nervous system.

In our experience "head injuries" hold an important place among the *direct exciting causes*. At least one in six had received blows on the head, forty-one of one hundred and twenty-three cases of head injuries recorded at Fort Hamilton, were fractures of the skull. In four of these

cases there was loss of bone; seventy-one of the one hundred and twenty-three became habitual inebriates, the balance periodical.

*Sunstroke.* Our records show only a limited number of cases assigned to this cause, but we believe that further research in climates where it is of more common occurrence, might give it more prominence as one of the exciting causes of inebriety.

*Syphilis.* About one in four of the cases entering our asylum were syphilitic. Syphilis is not unfrequently the exciting cause of inebriety, more especially in the later stages, when the nervous system becomes involved. We have cases on record in which the syphilitic did not become an inebriate until the nervous system was affected. At whatever stage the disease may manifest itself it should always be regarded as a complication and receive proper treatment.

*Mental Shock.* Resulting from sudden or excessive grief or joy may be an exciting cause of inebriety, acting as it does directly upon the nervous centers by vaso-motor disturbance.

The relation which insanity bears to inebriety and the reverse, is one with which every asylum superintendent is familiar. The distinction to be made is whether the inebriety is causative or preceded the insanity, or whether contributive, that is, accompanies and is due to the insanity.

The history of a sudden transition from habits of sobriety to the reverse, especially if preceded and accompanied by marked mental changes, we should regard as strong presumptive evidence in favor of the insanity, not arising from alcohol; whereas, in chronic alcoholic mania or dementia, there is the evidence of intemperate habits extending over a long period antedating the mental alienation. The history then of the patient preceding his insanity will enable us to determine the relation that alcohol may have to the insanity.

The differential diagnosis is more readily made in the

more acute forms of mental disturbance that arise in connection with alcoholism. When an insane person has been using alcohol over an extended period, it is somewhat difficult at first to determine what part alcohol holds in producing the mental trouble, so that it is necessary to keep such cases under observation for a while after the withdrawal of the alcohol, before determining whether it is causative or contributive to the insanity.

But while mental shock, if it does not kill outright, may precipitate the subject of it into insanity or inebriety, and while the first overt act of the insane may be an outbreak of intemperance and licentiousness in a person heretofore temperate and moral, these exciting causes of inebriety are insignificant, when compared with *neurasthenia* or *nerve-exhaustion*, a prolonged vaso-motor disturbance of the cerebral circulation, resulting from under-feeding and overworking and worry or other depressing causes, producing physical weakness, want of mental energy, and almost total inability to perform the ordinary duties of life; under these conditions alcohol is sought for its stimulating effect. It is the spur by which the tired heart and wearied brain are goaded on in the treadmill of routine and daily toil. These galley slaves are chained to the desk and to the ledger, they carry their task into the small hours of the night, they rob the body of its needed rest until wearied nature refuses further to carry on the unequal conflict and a protracted illness ensues, or a cerebral effusion or the failure of a weakened heart ends the scene if these crises are past, these unfortunates join the ranks of the confirmed inebriate, the staff on which they leaned for support becoming a rod of torture. It is for the neurasthenic we invent the "rest cure," "massage," "systematic feeding," and happy is he who seeks it early, before the chains of habit and disease engendered by habit, have made him fast a prisoner.

The social customs and tendencies of the age in which we live are oftentimes the foundation causes of neurasthenia, the fierce rush in the race of life for wealth, position, and



“that honor that comes from men,” is so great that to outstrip our fellows, the words “rest,” “diet,” “recreation,” must be erased from our vocabulary. We have presented a few of the principal direct exciting causes of alcoholic inebriety, let us now consider those exciting causes that operate *indirectly* or by *reflex influence* upon the cerebro-spinal axis. Some of these have already been mentioned: painful ulcers, neuromata, neuritis in its multiple forms, urethral stricture, dysmenorrhœa, diseases which are accompanied by much distress or pain, and which are often and necessarily chronic.

A case entered the Fort Hamilton Asylum some years since, which at the time impressed me very much. The patient, a young man affected with tertiary syphilis, manifesting itself in a severe neuralgia of the face and neck. This had yielded partially to the usual treatment, but not so as to give the patient permanent or satisfactory relief. He assured me he drank for the relief it gave him, and—he was only free from pain when “comfortably full—” to use his expression; and that his pain made him drink. He further stated that he had tried opium, but did not like its effects.

Cases are on record where an inebriate cured of his stricture was cured of his inebriety also, and of one who was relieved of his inebriate tendencies by the passage of a tape worm. We might multiply examples, but let these suffice. We desire, however, to suggest that this return to habits of sobriety after the relief or cure of some painful disorder is oftentimes so marked, that with a fair family and personal history and absence of alcoholic changes, we can almost guarantee a cure of the inebriety coincident with a cure of the co-existing disease, and this cure is often so prompt that there seems to be a compensatory influence between the relief from the depression incident to a painful disease, which more than balances the depression that would naturally follow the withdrawal of the alcoholic stimulant, hence the rapid recovery from the inebriety.

Having pointed out, briefly, the relation which *disease or injury* may hold to *alcoholic inebriety* as its predisposing,

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exciting, or protracting cause, let us reverse the consideration and see what relation *alcohol bears to disease* as its exciting cause.

Before considering the special effects of alcohol on the various organs or tissues of the body, we may remark that alcohol is no respecter of tissue, while it has some habitats or localities in which it seems to prefer to exert its effects, and is probably more rapidly destructive there than elsewhere, and in this respect may be local in its action; it is general also. There is not any tissue or organ of the body that escapes its deteriorating effects.

As to the cerebro-spinal axis upon which its most profound effect is felt, we note its action on the cerebral vessels, as seen in vaso-motor paralysis and its sequence, or fatty degeneration of the capillaries and leakage of the watery constituents of the blood, constituting serious apoplexy or wet brain, a not unusual, and, in our experience, fatal form of cerebral disturbance in the inebriate.

*Epilepsy* is one of the most common of the neuroses due to alcohol. About one in fourteen was the proportion in several hundred cases of inebriety recorded at Fort Hamilton, and exclusive of a few complicated cases resulting from traumatism, all were due to alcohol as the exciting cause.

The relation of alcohol to the various forms of acute and chronic mania, as the exciting cause, is shown in the many types of mental alienation peculiar to alcohol. These are: mania-a-potu, delirium tremens, chronic alcoholic mania, chronic alcoholism; but we are not limited to these special manifestations of alcohol on the nervous system, resulting in mental disturbance; we can also recognize its causative effect, in other diseases of the nervous system which also arise from other causes, namely, general paresis, hemiplegia, and the multiple forms of neuritis, etc.

Whether these results be due to the direct effect of alcohol, acting as a poison on the nervous centers, or to degenerative changes, we must nevertheless recognize the fact, that alcohol cannot be ignored in its causative relation

to most, if not all, diseases originating in the nervous system, and that it impresses its special characteristics on these, whether it be an exciting cause, or contributive only in its action.

Passing then to consider the effects on other organs of the body, we find gastric derangement, dyspepsia, atony or actual degeneration of the mucous coat, and glandular structure of the stomach, so that the organ is rendered incapable of performing its simplest function. This condition is oftentimes secondary to acute or chronic hepatic derangement. A serious complication, and in the latter stages of inebriety, hastening the end of a patient, owing to the inability to retain or assimilate proper nourishment.

As to the frequency of chronic gastric disturbance, or serious liver complications, our experience does not coincide with the general impression, that these conditions are extremely frequent. Indeed, serious disturbance of the stomach, intestines, or liver, are much lower in the scale of fatality in inebriety than in disease affecting the lungs or nervous system. At least this observation applies to our asylum experience.

Private or public inebriate asylums, in which cases are taken for reformation, if we can use that expression, as a rule are privileged to receive selected cases only, and also to discharge cases affected by incurable disease. Indeed, such cases are often removed by the friends, preferring that the inebriate shall die in his own home. Hence the death rate is small, and the opportunities for autopsical research are limited, or only occasional.

It is in large hospitals and pauper asylums that such research can be carried on, to any extent, and to those we must look principally for the pathological effects of alcohol. We therefore take pleasure in presenting here "An Analysis of 250 Autopsies on Drunkards, Illustrating the most Prominent Anatomical Lesions of Chronic Alcoholism," by Dr. H. F. Formad, at the stated meeting of the Philadelphia Pathological Society, who presented specimens and read a

paper, with the above title. We will give a brief synopsis of the paper and the discussion of it as published in the Society's proceedings:

"Dr. Formad considered the most conspicuous lesions to be cyanotic induration of the kidneys, fatty infiltration of the liver, and mammillated stomach. His cases had been those in which there had been a history of a long-continued series of debauches, the subjects often dying in one of these debauches, and did not include moderate drinkers or those who perished after imbibition of an enormous quantity of alcohol without any previous chronic causes. He thought that the exposure, irregularities of diet, etc., incident to a state of drunkenness, had much, probably more than the alcohol itself, to do with the production of the lesions, but it was not at all possible to separate one from the other. He gave a long list of lesions considered by various authors to be results of chronic alcoholism, among which the cirrhotic liver, with contraction, held a prominent place. He had himself at one time considered cirrhosis a very frequent, if not almost necessary, concomitant of long-continued excessive use of alcohol, and had even testified in court that a certain person was not likely to have been a hard drinker because at the autopsy no cirrhosis of the liver was found. He had thought, too, that the connection between the two was so close that it was impossible to have a case of cirrhosis without a previous history of alcoholism, as is held by various authors. Therefore, it was surprising to him to meet in his 250 autopsies with only six cases of cirrhosis of the liver with contraction. In 220 cases the liver was considerably or even very much enlarged, the enlargement in most cases proving to be due to a fatty infiltration. Cyanotic induration of the kidney, and chronic gastritis with mammillation of the stomach, were found in nearly every case. This cyanotic induration is peculiar, and differs from the cyanotic induration due to heart disease. At a future time he will give a detailed account of the above lesions, and a more extensive analysis of the cases."

“Dr. James Tyson could not speak from a systematic observation of a large number of autopsies in the cases of confirmed drinkers, but he remembered distinctly being surprised, in several cases, by the absence of cirrhosis where he confidently expected to find it.”

“Dr. Wilson said that Anstie, in the article on alcoholism in ‘Reynold’s System of Medicine,’ had called attention to the comparative infrequency of contracted liver in confirmed drinkers. This observer, in an extensive out-patient practice in London, had seen large numbers of cases of alcoholism, but very few among them presented the physical signs of cirrhotic (contracted) liver. The experience of the staff at Blockley Hospital confirms this view. There, many of the patients are soaked with alcohol, but even among those whose death is directly or indirectly due to alcoholic excess, fatty liver is much more common than contracted liver.”

“Dr. Osler thought the experience of pathologists and morbid anatomists with histories of patients not of the most satisfactory character, he often having had cases to dissect where he knew very little of the history. Before saying these cases were chronic alcoholics, Dr. Formad should present more specific statements about them. His own experience with livers, in a large number of autopsies on cases of chronic alcoholism, had led him to divide them into four classes: 1. Those in which the condition of the liver is pretty satisfactory, some of these cases may take alcohol for many years and yet the liver pass muster. 2. Fatty cirrhotic livers; the cirrhosis may not, perhaps, be distinct to the naked eye, but plainly shown by the microscope; this is the largest class. 3. Hobnail livers; these he would say were much more common than in Dr. Formad’s series. 4. Hypertrophic cirrhotic livers. The difference between his observations and those of Dr. Formad, might possibly be accounted for by a difference in the form of alcoholic beverage taken. He had not observed the special form of kidney described by Dr. Formad. In reply to a

question he said, in order of frequency he would place them, fatty cirrhotic, hobnail, hypertrophic, cirrhotic, apparently normal."

"Dr. S. Solis-Cohen said that there were certain theoretical considerations which suggested themselves in this connection. The text-books teach that the lesions of alcohol are of two kinds, sclerosis and steatoris. It is known that in some organs the fibrous change precedes the fatty one. The latter is the higher grade of degeneration. The subjects of Dr. Formad's autopsies were confirmed whisky-soakers, in whom one would expect to find more intensity of degeneration than in those whose use of alcohol, though persistent and excessive, was not so outrageous. Another point which had not been alluded to was the fact that some lesions might result from a local action of the poison upon the tissues, while others might be due to its systematic action. No study of the subject could be complete in which these points were overlooked."

"Dr. B. A. Randall suggested that the point touched upon by Dr. Osler, 'the character of alcoholic beverage,' might be very important. In Vienna, among beer-drinkers, he had found the fatty liver much more common than the cirrhotic, while in England, where much gin is drunk, and he should suppose in Scandinavian countries, where they drink altogether strong spirits, the cirrhotic liver is doubtless comparatively frequent."

"Dr. Musser had recently had to go over the records of the Pathological Society, especially in liver diseases, and had found the total experience of different observers the same as Dr. Formad's, and also in those cases cirrhosis was caused not so much by heavy drinking as persistent drinking of spirits on an empty stomach."

The effect of alcohol on lung tissue results in fibroid degeneration, interstitial changes, hence the term "fibroid phthisis," "chronic interstitial pneumonia." It is bilateral, fine crepitant rales are diffused over both lungs, the sputa is limited or largely bronchial mucous, not marked by pro-

ducts of disintegration; temperature and pulse progressively high. Dyspnœa become more and more marked, the disease in the latter stage becoming rapidly fatal. This is an intractable and inevitably fatal form of phthisis. As to the prognosis, the question is not whether the inebriate will become sober, but only how long he will live. The mischief is done and is beyond repair, irremediable tissue changes have taken place; alcohol is master of the situation and to withdraw it would simply mean to hasten the death of the patient.

About one person in twenty who enters our asylum has phthisis in some form.

The origin of these cases could be traced in some instances to a tubercular or syphilitic diathesis, although a certain proportion were produced by the long-continued action of alcohol on lung tissue.

We have dealt with cases of phthisis under several conditions.

*1st.* Cases of inebriety have died in our asylum from phthisis, which they had contracted previous to admission.

*2d.* Cases of inebriety, complicated with phthisis, in the advanced stage have applied for entrance into our asylum and been refused, as improper cases for admission.

*3d.* Cases of inebriety complicated with phthisis have been discharged from our asylum as improper cases for further special treatment.

We cannot pass this phase of our subject without asking what relation the consumptive from any cause, not alcoholic, bears to alcohol? Whether ushered into the world with a tubercular diathesis or whether the phthisis be acquired in the ordinary catarrhal form from exposure, etc., he must face alcohol as a medical prescription; his case necessarily chronic, he must use alcohol for a long period. Query: A certain proportion of cases of phthisis prove fatal; a certain proportion end in temporary if not permanent recovery; what proportion of those in whom the disease was arrested or reported cured, became addicted to the excessive use of alco-

hol, that is, became inebriates? It seems to me that this question might well be agitated in professional circles.

Whether then the alcoholic degeneration is fatty or fibroid, whether it produces alteration of tissue or acts by vaso-motor disturbance, as in some cerebral conditions, *alcohol produces disease* and very destructive forms of disease, which in the advanced stages are irremediable and eventually fatal.

The question naturally suggests itself: why does the inebriate use alcohol, or why do people afflicted with disease use alcohol, and so eventually become inebriates? Without attempting to exhaust this question we shall at least give it a partial answer.

Aside from those who use alcohol as a beverage or from social custom, who belong to the great class of so-called moderate drinkers, we should say that a large proportion, larger than we are aware of, are addicted to alcohol because they are diseased and use it for one of two reasons:

*First.* As a stimulant, cardiac primarily, then upon the cerebral circulation. The neurasthenics already alluded to are of this class, also those who are suffering from physical weakness, engendered by exhausting or depressing diseases.

*Second.* A certain class use alcohol because it is an anæsthetic in painful or distressing diseases or conditions. A familiar example is the use of alcohol in dysmenorrhœa, an effective but dangerous remedy. How many women can trace the first use of alcohol to this cause? The decided anæsthetic effects of alcohol have been not only proven by the direct experiments of Anstie and others on the inferior animals, but the older records of surgery bear ample testimony to its anæsthetic effects upon the human subject. There is no doubt as to its pain-relieving qualities, and this does not necessarily imply a complete toxic effect or alcoholic coma. It is also known that tactile sensibility is much impaired in the habitual inebriate, indeed so much so as to constitute a diseased condition.

Without multiplying examples, or further demonstrating



the premises laid down, we have endeavored to impress the fact that disease, either hereditary or acquired, may be in a certain proportion of cases the underlying cause of the alcoholic inebriety, and that *alcohol* by its well-known degenerative tendencies will produce disease, which, when established, tends not only to produce, but also keep up habits of inebriety.

If these premises which we have presented and endeavored to prove as to the relation which alcohol holds to disease and the reverse, are correct, then we are warranted to draw the following conclusion :

“Alcoholic inebriety is often based upon and dependent on diseased conditions, and demands proper medical treatment to remove, if possible, these diseased conditions.” “The inebriate is a diseased person, and the disease has either preceded the inebriety, or is dependent upon it.”

The “moral view” has had full sway; the “moral responsibility of the drunkard” has been the topic of a century; institutions have been founded on the “moral basis,” and society and the law have treated the inebriate, not as a sick man, but as a “moral delinquent.”

The relation which morality bears to inebriety, ceases or assumes a secondary position when the inebriety is dependent upon diseased conditions. We do not desire to exclude those moral influences that operate on the higher and better nature of man, from our asylum, but would assign them their proper place. Let the authorities of the church and all philanthropic bodies and individuals be co-workers with us in the return of the inebriate to his normal condition, but let not those supplant the hospital, the physician, and the medical means used for his recovery.

There is not any quarrel between the true moralist and the true physician. The true physician is the highest type of a moralist; he is the exponent of right living and right thinking, and is foremost in all that pertains to the physical and mental elevation of the race.

It is not extravagant to assert that the so-called “moral

treatment" of the inebriate has been the great obstacle in the proper treatment of inebriety. One of its evil effects has been inefficient, irregular, or improper treatment — worse than none — and the long delay that frequently elapses before the patient is placed under proper and systematic treatment and restraint. Hence the hospital and the physician, that ought to have been placed first, have been placed last, and sought only when every other means have been exhausted. Our records show that the majority of inebriates do not apply for asylum treatment until the inebriety has existed a long time — in nearly all instances over five years, and in a large proportion of cases over ten years. Often during this period organic disease, the direct result of the habitual use of alcohol, has undermined the system, and the patient is beyond relief.

It would seem almost puerile to bring before your association the various methods and expedients that society has invented to deal with the inebriate, and if possible to effect his reformation. They are simply the outgrowth of viewing and dealing with the inebriate from the "moral standpoint." There has been a fog of mysticism, not only among the laity, but in our own profession also, as to the exact status of the inebriate.

Let us now epitomize the facts that we have endeavored to demonstrate.

*First.* There is an "inebriate diathesis." A certain proportion of persons inherit a tendency to inebriety, just as others inherit syphillis, tuberculosis, or other disease, or tendency to disease, from parents.

*Second.* A certain proportion of persons become inebriates as the result of injuries or diseases affecting the nervous system, either directly or indirectly, and these may operate on persons with a good family and personal history antedating the disease or injury, or prove the exciting cause when a latent tendency or predisposition exists. In the first instance the inebriety may be said to be acquired; in the latter the tendency simply developed.

*Third.* Alcohol by vaso-motor paralysis, or degenerative

changes, produces disease. The disease so produced not only develops inebriety, but tends to protract it, and will do so until the person is relieved or cured of the disease.

*Fourth.* Disease associated with inebriety, whether it be hereditary or acquired, whether it be regarded as the exciting cause of the inebriety or not, must always be regarded as a complication protracting the inebriety, and rendering the recovery of the inebriate practically hopeless, unless the associated disease be removed or modified.

We have endeavored in this paper to give a general review, rather than an elaborate and exhaustive presentation of the facts herein embodied. Our object has been mainly to give prominence and emphasis to a few observations accepted by the profession, here and elsewhere—at least that portion of it who have given especial attention to the “cause and cure of inebriety.”

We have endeavored to demonstrate the relation disease bears to alcoholic inebriety, and thus answer in part at least, what is the “Etiology of alcoholic inebriety,” a question we cannot ignore nor refuse to answer; that precedes all others in point of importance; a problem the solution of which cannot be delayed, as it is one that affects not only the well-being of society, but the destiny of the race itself.

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The following papers, read at the International Medical Congress at Washington, will be of interest as showing the drift of medical thought towards inebriety and its disorders: “The Application of Alcoholic Stimulants to Medicine, or the Therapeutics of Alcohol in Disease,” by Dr. E. N. Liell. “On Alcohol in the Organism,” by W. Hudson Ford, M.D., St. Louis, Mo. “Pathological Anatomy of Alcoholism,” by Henry F. Formad, M.D., Philadelphia, Pa. “The Relation of Psychological Medicine to the Disease of Inebriety,” by Edward C. Mann, M.D., Brooklyn, N. Y. “Cocaine Inebriety, its Cause, Consequence, and Cure,” by J. B. Mattison, M.D., Brooklyn, N. Y. “The Disease of Inebriety and its Treatment,” by T. D. Crothers, M.D., Hartford, Conn.

## LEGISLATION FOR INEBRIETY.\*

BY DR. PETITHAN,

*President Society of Medicine, Liege.*

Of recent years this question has ripened. Alcoholism has augmented in frightful proportions. The number of ruins, diseases, suicides, insanities, and crimes it causes is frightful. Shall we continue to cross our arms, to let the people become willingly depraved, or have we the right, before a supreme peril, to save him in spite of himself: *Salus populi suprema lex*. Let no one say that the nations can always save themselves, and that liberty and instruction are sufficient to cure them. England and Netherland, these two classic countries of progress and liberty, have not hesitated to make repressive laws for alcoholism. France has preceded them. We must not remain behind these sister nations. The same blood is flowing in our veins, the same spirit inflames us; we wish, absolutely like them, the progress of liberty; but there is neither progress nor liberty for the embriuted nations.

Needless to show all the marvels of industry, all the treasures of our soil, make the proud statistique of the national riches; there is, besides, morally and physically profound miseries, madness, phthisis, scrofula, brain-illness, incontestable degeneracy of the race. It is important to determine the present situation of the alcoholized man, if it be possible. When this will be determined, we shall recognize the imperious necessity to take immediate preservative measures for family and society. They will constitute by themselves, if they be energetical, the best prophylactic of alcoholism.

At present the alcoholized man who is not yet arrived to the last period, is not dealt with. He does not really enjoy his free will; this delicate property of will, which to the most

\* Read before the International Congress at London, England, July 2, 1887.

advanced spiritualist point, requiring a rare concurrence of circumstances, has left him. There is no more personal determination, or deliberation, or a thorough knowledge of the matter.

The alcoholized man being not free, is no more responsible; and, nevertheless, he continues to take part in civil and politic life. He has the direction of his family, the administration of his goods; he is elector, he is juryman. Is it possible? Yes, it is possible; and every day we ascertain it. Unless he be completely mad, it is even forbidden to interdict him, according to the civil code. The mental state is neither madness, nor fury, nor imbecility. That is a special and indefinable situation in the actual terms of law, but which ravish their responsibility and culpability, in allowing him the means to commit the most criminal acts. Every day he is ruining and disgracing his family; he robs and he kills. Nothing can stop him. What do I say, he is excused, as one may say, by the tribunals? He is alcoholized. The barristers never want to plead irresponsibility, and they succeed to make acquit all the infamies, all the most detestable faults; and they have reason, because, till this moment, this new disease, characteristic of our epoch, could not receive in our civil or penal laws the place it ought to occupy. First, the alcoholized man, whose state is medically and legally recognized, must be interdicted; second, when he is interdicted, one must have the power to close him into a special establishment, where he should be treated, and obliged to work, according to his strength.

There are two propositions which must be introduced in our laws, and if they are adopted, they would already constitute a mighty curb for alcoholism. They would diminish, by half, criminality, and prevent incalculable damages.

How is it possible to arrive to the interdiction? We must not leave to the family only the right to provoke it. Even I should say, in order to prevent reproach and vengeance, always to be feared in such a situation, that the public attorney, as representing the social interests, ought, before

all, to ask and to bring it before the court of first instance, conformably to article 491 of the civil code.\*

But this article gives only the right to act in case of fury or imbecility. These warped or old designations do not create a sufficiently strict duty. Alcoholism constituted a better determinated state for the physicians; and the alcoholized man can instantly commit all the faults, without being imbecile or furious before their perpetration. The alcoholism is a chronic poisoning, so well defined in its lesions or symptoms, as the typhic, plombic, or mercuric intoxication. The question is to obtain a simple addition to the article 489,† and thus to deprive, by judiciary way, the alcoholized man of all his rights, to make of him an under-age.

The article 510‡ says that, according to the character of the disease, the family council could decide that the interdicted man should be treated at home, or in a lunatic asylum, or in an hospice.

It is yet evident that the public attorney, enlightened by the legist physician, is more able to determine such a measure, and that it is greatly preferable to leave to justice the care to provoke it.

But what will this asylum or this hospice be that the legislator wish for the alcoholized man? The hospital and the asylum are actually closed for him. Unless the diseased man have arrived at mania or madness, the directors of these establishments, the special physicians, do not dare to receive them. We do not imagine the difficulties that present every day similar cases.

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\* Article 491.— In the case of fury if the interdiction is provoked neither by the husband or wife, nor by the parents, it must be so by the procurer of the king, who, in the case of imbecility and madness, can also provoke it against a man who has no known wife, or husband, or relations.

† Article 489.— The major, who is in an habitual state of imbecility of madness, or fury, must be interdicted, even when his state presents lucid intervals.

‡ Article 510.— The revenue of an interdicted man must be especially employed to soften his lot and to quicken his cure. After the character of the disease and the state of his fortune, the family council could decide that he shall be treated at home, or that he shall be placed in a lunatic asylum, or even an hospice.

If we cannot confine the irresponsible alcoholized man in a lunatic asylum, we can establish special establishments under the direction of intelligent physicians.

The interdicted alcoholized man should be shut up by the magistrates. That is what I call preventive justice, the only one which may be human and efficient. In society should remain only responsible beings, or men whose responsibility is covered by bondsmen. Every experienced physician knows that the determined alcoholized man refuses this measure which alone could save him.

These special establishments must be fitted up so as to accomplish all the conditions of health. We must not take away from these unhappy men the hope to come back into society with the consideration so necessary to all conversion. Amongst the objections remains the question of money. I do not consider it before so great a social peril. It is necessary to save the people whatever may be the price. Is there a better use of our great riches than the cure of such a terrible illness? Should it not be a real economy upon the hospital and prison budget? The spent money for instruction and hygiene is lost by alcoholism. On the economy point, it is a thousand times better to prevent the destruction of capital resulting from interrupted labor, made by brutish beings.

In some parts of Bohemia one liquor station is found for fifty-seven, nay for twenty-one inhabitants. In Bohemia and Carinthia mothers were found lulling asleep their nurse-children with dram, and schoolboys were seen lurching on spirits! Vienna has one liquor station for every twelve houses; the number of ginshop-keepers has trebled at Vienna since 1859. 33.41 per cent. of the insane kept in the Vienna asylum are sick from alcoholism, that is, seven times more than ten years ago.

Alcoholism and inebriety have risen on a large scale since spirits are made out of amylaceous materials like molasses, potatoes, sweet turnips, Indian corn, etc. Inebriety has risen in Carinthia since the consumption of genuine Tyrolean wine

has decayed, since a tax was levied on the light stone beer, since the production of wine was diminished by the oidium Tuckeri. Inebriety is not only increasing, but it causes also much heavier disease, since the empyreumatic alcohol is distilled from potatoes, etc.

We wish to see the duties on spirits considerably heightened, and the amount of liquors checked. It would be useless to strive for a suppression of the spirit production, as we have to reckon the maintenance of distilleries by financial, agricultural, and industrial motives. But we wish the Government would lay heavy duties on the spirits the moment they get drinkable and enter the public intercourse; thus the consumer will be repelled from taking liquors, by their raised price, and the unscrupulous retailer will lose a profit, which now is pernicious and enormous — one litre of brandy, worth 8.5 kr., being sold up to 30 kr.

The cleaning of liquors from empyreuma should be careful and obligatory, the official control a very sharp one.

Licenses ought to be given to liquor stations only in strict correspondence with the exigencies and the number of full-grown inhabitants, on a rational scale, as the Dutch law does. Notorious drunkards and abusers ought to be punished. Habitual drunkards ought to be kept in homes for inebriates.

An elaborate statistic is necessary.

The Magistrates of towns and boroughs should heighten the excise on spirits of all kinds, and lower it for victuals and light beverages. It is a fact — for England, too — the consumption of spirits increases, the more taking light and healthy drinks are impeded by their price or the duties. There is certainly a relative progress established if the people, instead of empyreumatic liquors — holding an alcoholic body of 24 per cent. to 30 per cent. volume — are enabled to consume the light Austrian beer and wine, tea, coffee, etc., the national character being inept for the pledge of abstinence.

The Vienna excise on 1 hectolitre (100 per cent.), of spirits is in summa — 1 fl. 11 kr. (the same quantity pays at



Paris 66.50 francs). The excise on 1 hectolitre of beer is equal to 1 fl. 81 kr. The Austrian Inebriety Society has therefore, in 1885, requested the Provincial Diet to tax spirits with twenty-fold of the actual beer tax, viz. : with 20 by 1.81 fls.— 36 fls. 20 kr.

A new consumption impost on spirits is in preparation, and will afford about fifty million florins for the whole monarchy. The minister of the finances refused any discussion on monopolizing the spirit production, and there is for our purpose certainly a great danger in the establishment of official liquor stalls inciting the public by the agents of the monopoly.

(a). *Austrian Legislation on Inebriety. Laws affecting whole Austria.*

I. Drunkenness itself is punished in two cases by the penal laws, 27th May, 1852. (1). Malefactions otherwise reckoned as crimes cannot be considered such, when perpetrated in accidental intoxication ; but drunkenness in that case is punished as trespass ; it will be considered a particular aggravation, if the drunkard knew from experience he was severely emotional when intoxicated (Secs. 236 and 523). (2). Inveterate drunkenness punished as misdemeanor, with craftsmen working on roofs and superstructures, or having to do with objects easily taking fire, and with servants whose carelessness might cause a fire. (Sec. 524.)

Neither the penal law, nor the new bill on it, punish inebriety as immorality, but only for troubling public order and security.

II. Imperial spirit tax, 23d July, 1881 (*vide supra*).

III. Imperial law, 8th March, 1885, declaring Sunday a resting-time for all professional and industrial works, in a stricter way. Among the exceptions granted for the necessities of the consumers is selling spirits. The poison of liquors ought not to have any privilege. The easier and frequenter the occasion, the more will be drunk. The liquor stalls should be shut as well on Sundays as commercial shops ; if possible from Saturday 5 P. M. till Monday 9 A. M.

Inns, dealing with light beverages, will be quite sufficient for the public exigencies.

The same law determines: Auxiliary workmen may be dismissed without warning when inebriated, having been admonished in vain. (Sec. 82.) The payment of wages in taverns and inns is prohibited. (Sec. 78a.) Credit of spirits to workmen in factories and to auxiliaries is neither actionable nor accountable (Sec. 78b.), neither between tradeholders and workmen, nor between the surveyors or the employers' relatives and workmen. As spirits are a general breakfast with Austrian workmen, the Austrian Inebriety Society has suggested the institution of soup and coffee-rooms near the factories. Introducers of spirits into factories are severely punished or dismissed.

The wages ought to be paid on Monday night, to restrain people from spending their week's pay on Saturday night, or on Sunday, their day of rest.

IV. Imperial law, 1835, and

V. Imperial law, July 23d, 1883, on controlling the cleaning of spirits.

(b). *Austrian Parliament, Vienna, March 13, 1885, and May 7 and 10, 1887.* Chev. E. de Proskowetz (member of the Austrian Inebriety Society) requests restraining inebriety, and desires the ministers to propagate in schools the notion of intoxication's fatal consequences. He desires, accordingly, pamphlets to be posted everywhere.

(c). *Provincial Legislation.*

I. Law for Galicia and Bucovina, July 19, 1877 (given by the Austrian Parliament).—This law intends punishing inebriety, and checking the economical danger of drinking-bouts, which often, by drafts and bills of credit, prolongation and anatocism, ruin the thoughtless debtor (the debt of 20 fls. increased to 1,000 fls. in a space of three years, in one case!).

Punishable by the law:— 1. Whoever gets drunk, or is found so in public places. 2. Whoever makes another drunk on purpose thereabouts. 3. Inn-keepers delivering liquors to a drunken customer, or to minors. Penalty— Imprisonment up to one month, or a fine of 50 fls.

The district police are authorized to interdict a person, punished thrice a year for inebriety, from liquor stalls in his domicile and around it. Abusing tavernmen to lose their license for ever, or for some time. Claims from drinking-bouts are not actionable, if the debtor owed such in the moment of entering the new score, or if the claim was ceded meantime. Sham transactions punished by prison (up to two months), or by a fine (of 200 fls.). The laws' text to be posted in all taverns. Omitting this is punishable by a fine of 50 fls. In 1878-83, 132,403 persons were punished for offense against this law.

The law contested in 1877 as an "affronting guardianship" by the Gallician deputies, proved an efficacious expedient. The Provincial Diets of Moravia, Salzburg, Tyrol, and of Bohemia, have brought according bills, without till now being able to make them pass.

II. Bosnia law, 6th February, 1885 (nearly equal to the precedent).

III. Moravia (Provincial Diet), 1878. A law on inebriety solicited by P. Wurm. 1885. (Idem.) 1885. Alfred Skene's motion on limiting the validity of drinking-bouts. Chev. E. de Proskowetz' motion for a new spirit-tax (50 fls. a stall). 1886. H. E., the Governor Count Schoenborn orders, on suggestion of the Austrian Inebriety Society, by a public act, a strict revisal of distilleries and liquor-stalls. 1887. Chev. E. de Proskowetz' motion renewed.

IV. Bohemia (Provincial Diet.) 1885. K. Adamek (Member Austrian Inebriety Society) requests a reform of the inebriety legislature. Dr. Roser (honorary member Austrian Inebriety Society) requests the selling of liquors in groceries to be prohibited. Dr. Tausche says: the petitions of 1880 spoke of immoderateness, those of 1882, of inebriety, those of 1885, of drunkenness as an epidemic pestilence.

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A half drachm of alcohol to each pound weight of the body, is the quantity capable of producing intoxication in most cases. An increase of this is dangerous and often fatal.

INEBRIETY IN BELGIUM, FROM A MEDICAL  
AND LEGAL POINT OF VIEW.\*

BY DR. MOELLER, BRUSSELS,

*Member of the Belgian Royal Academy of Medicine.*

When I accepted from your learned president the charge of presenting a communication on "Inebriety in Belgium," I experienced a great embarrassment.

I have to confess for my country that little has been done by us for this great and difficult class of degenerates, whose existence is practically ignored by the civil authority as well as by the people in general. But let it not be supposed that no one in Belgium cares for the state of the unhappy inebriate. One of the most valiant advocates of the cause of temperance, my courageous and eloquent friend, Dr. Petithan, has for many years drawn the attention of his fellow-countrymen to the danger of leaving uncontrolled those who are no longer altogether responsible for their actions, and to the necessity of providing for such diseased persons asylums where they can not only be secure from doing an injury to anyone, but also where they can be treated with the hope of cure, or at least amelioration. The short history I shall present to you will make known the work of Dr. Petithan, and at the same time show where we are on this question, one most worthy of the solicitude of the physician, of the philanthropist, and of the Christian.

You know that the struggle against alcoholism has been comparatively recent with us, though there have always been men who have raised their voices to denounce the ceaseless progression of the plague of modern society. I specially mention Drs. Durpetiaux, Frere-Orban, Lefebvre, Barella, Desguin, Jansen, and Petithan. But these voices for long awoke no echo. Only in 1880 was an association formed to study the fittest means to arrest the progress of the evil

\* Read before the International Congress on Inebriety at London, England, July 2, 1887.

which we all deplore. In that year the second International Congress on Alcoholism was held at Brussels, in which many Englishmen took an active part. One of the sittings was signalized by an interesting communication by Dr. Carpentier of Brussels, who contended for the necessity of enlightening the public mind with precise knowledge, and reducing the inebriety of the country. He added that his researches in the Brussels Hospital, which agreed with those of the learned Professor Croig, had discovered *post mortem* signs of alcoholism in eighty per cent. of the autopsies held under his direction. He concluded that the working population of the Belgian capital ought to shut up about eighty per cent. of the subjects of alcoholic intoxication. This communication and its figures created a great effect in our country. They in a moment showed to many persons the profundity of the abyss into which we have fallen. At this sitting Dr. Petithan proposed: (1) That the alcoholized should be put under interdiction at the demand of the minister of justice. (2) That they should be placed in establishments specially organized for their detention and cure. These propositions provoked a lively discussion, in which Drs. Barella, Lunier, Decroix, Lefebvre, Petithan, and Reding took part, and were finally adopted by a majority of sixteen to six, with nine abstentions. Great opposition had been encountered, which was not surprising, for at that time the opinion enunciated by Dr. Benjamin Rush was not known, viz.: that intemperance is often a physical malady. Thus there was then little difference supposed to exist between drunkenness and alcoholism. However, public opinion changed. In 1881 the Belgian Royal Academy of Medicine asked the following question: "Determine from precise observations the effects of alcoholism, from a material and physical point of view, upon the individual and upon his descendants." The replies proved that the Academy of Medicine agreed with the opinions of Dr. Rush, and considered alcoholism to be a true organic disease, transmissible by heredity. The learned body added this recommendation:

that the observers should endeavor to define the boundary separating drunkenness from madness, as well as the responsibility of the drunkard for acts of which he is the author. Five memoirs were returned. A very remarkable report was presented to the academy by Dr. Kuborn. The prize was awarded to an original work by Dr. Lentz of the Asylum for the Insane at Tournai, which was published in the annals of the academy. Dr. Teeters of Gheel Asylum, received honorable mention for a work which he published. Both writings embodied numerous observations on alcoholism, proving the extent of the evil which ravages our population.

However, Dr. Petithan did not rest inactive, and on every possible occasion strove to create a sound public opinion, and at the International Congress at Antwerp in 1885, when a hope was expressed that the government present to the chamber a project of law demanding the interdiction of the alcoholized and their restraint in *maisons de temperance*. Yet the question made slow progress. Though the economics of inebriety were well promulgated, little was done to make clear the medical and legal aspects. In 1886, following the effervescence of the working classes in some parts of the country, and some profoundly afflicting occurrences, the government appointed an inquiry to examine into the causes of the social, economic, and industrial misery. This commission necessarily occupied itself with the question of alcoholism. From all parts of the country came accounts of the lamentable progress of the drink plague and its serious results. One of the members of the commission, M. Deridder, Professor of Political Economy at Gard University, issued a valuable report on the various measures which had been resorted to to combat the abuse of alcohol, yet he did not allude to interdiction or to confinement in asylums for inebriates; one more proof that the importance of this subject is yet far from being recognized. However, a few months thereafter Dr. Carpentier, in a short, useful paper in *Les Cliniques*, stated that his

former estimate of 80 per cent. had not been too high, and gave the following results of his more lengthened hospital experience: In 86 cases (48 men and 38 women), 45 men were inebriates (93 per cent.); 4 women were inebriates (10 per cent.); of the male alcoholics the youngest was 16, the others from 20 to 55. All exhibited incurable organic lesions, characteristic of alcoholism. One began to drink at the age of 30, 1 at 25, 10 at 20, 2 at 19, 4 at 18, 2 at 17, 4 at 16, 6 at 15, 1 at 14, 2 at 12, 2 at 10, 1 at 8 years of age.

Quantities drunk daily: 3 drank about 4 glasses of spirits; 5 drank about 6 glasses of spirits; 3 drank about 8 glasses of spirits; 1 drank about 9 glasses of spirits; 8 drank about 10 glasses of spirits; 2 drank about 17 glasses of spirits; 3 drank about 20 glasses of spirits; 1 drank about  $\frac{1}{2}$  litre of spirits; 1 drank about  $1\frac{1}{2}$  to 2 litres of spirits. Are not these figures terrible? What can one hope for a population which is so drunken with, for the most part, the most pernicious alcoholic beverages? Is it not sad to think that nothing has been done for these unhappy victims of this most inexorable and degrading passion?

It is with lively satisfaction that I refer to a fact which will show that our efforts have not been altogether sterile. The minister of justice has presented to the legislative chambers, measures repressive of public drunkenness, though they do not touch our special project. But the Prince de Rubempré, who has been entrusted with the preparation of the report, calls attention to the labors of Dr. Petithan, and points to what has been done in England for the treatment of inebriates, while directing the notice of the Belgian government to this.

On the 16th of April last, the president of the council of ministers received a deputation from the Belgian Patriotic League, against alcoholism, when Dr. Petithan presented startling facts on legislation for inebriates, which created considerable impression.

On the 12th of June last, the League devoted the most of its sitting to the discussion of interdiction of the alcoholized,

when Dr. Petithan and I were accorded a patient hearing, and an interesting discussion ensued, to be resumed at a future date.

It seems, therefore, that we are coming nearer in Belgium to a satisfactory solution of this problem, the importance and urgency of which are still further deepened by the continued increase of alcoholism in all grades of society. There is with us a growing demand for these two measures: 1. Interdiction of the inebriate. 2. His seclusion in special homes. Interdiction is a judicial decision, in virtue of which an individual is deprived of certain rights, which he is held to be unworthy or incapable of exercising. These rights are the administration of their substance, the direction of their family, the disposal of their fortune, taking part in political elections, making part of a constituted body, such as a jury called to judge a citizen. Actually interdiction, at present, lies only in dementia, madness, and imbecility. Now the alcoholized may be neither demented, nor furious, nor imbecile, and yet be incapable of properly exercising civil and political privileges.

Is it necessary to resort to this interdiction? Yes; for the alcoholized himself, who will be placed so that it will be almost impossible for him to satisfy his passion; for his family, whose honor and patrimony will be safeguarded; for society, for it is dangerous to trust any part of the government of a country to one whose freedom is enchained by a vile passion, and whose intelligence is completely obscured by a profound and permanent poisoning. The interdiction would apply only to the alcoholized who are not dangerous to themselves or to others. On the other hand, it only feebly augments the chances of cure. If it is wished to put the inebriate in the condition most favorable to cure, it is important to place them in institutions created for that purpose.

Two questions arise. 1. In Belgium, as elsewhere, it is necessary to have a new law to seclude in a special home inebriates, whether they are willing or unwilling, every time



that the need arises. In practice, one can forfeit the liberty of the alcoholized only when attacked by delirium tremens, and they must be set free as soon as the attack has passed, or, at least, there no longer persists a diseased craving for drink; in other terms, the symptoms of a veritable dipsomania. This is what I gather from the terms of a circular of the minister of justice.

As medical men, we are in the greatest difficulty in the presence of the alcoholized, who are not laboring under delirium tremens; who have only intermittent inebriate paroxysms, and who would benefit greatly by being retained in a special establishment.

Objections are raised to our contention. It is urged that it will be difficult to distinguish between those who are, and those who are not, alcoholized; that the gradations between moderate drinking and drunkenness are so insensible as often to be extremely difficult, if not impossible, to discriminate. But we may reply that there is the same difficulty in the case of the insane. There is the same insensible gradation between the most sane and the most idiotic. Are we, because it is difficult to place in different categories those who are difficult to class, either as insane or inebriate, are we to hesitate to compulsorily restrain those about whom there is no doubt whatever?

We can shut up only those alcoholized who are dangerous to themselves or to others. Here is the principle to guide us. Acting on this, the embarrassing cases will be rare.

2. The second question is, should we ask the intervention of the state in the establishment of asylums for inebriates? I do not hesitate to pronounce in favor of the institution by the government of these establishments. It is not that I do not recognize the generosity of my fellow-countrymen. The philanthropic and charitable institutions which cover the soil of Belgium attest their benevolence. But I fear that a private initiative will fail from the widespread prejudice that "who has drunk will drink." We meet

this prejudice everywhere, even in men who are in the foremost ranks of the temperance cause. The prejudice is false. The results of the efforts of numerous total abstinence societies in the rescue of drunkards, prove that it is unfounded. So false and prevalent is this baseless prejudice, that I fear it would paralyze for a long time a private initiative, which does not care to enter upon any course of which it does not clearly see the issue.

Another reason which makes me prefer state to individual action, is that we might see speculation hinder this idea of the treatment of the alcoholized. Asylums can be opened for the object of gain, as well as for the sake of good. A first trial, injudiciously essayed, might yield deplorable results, which might for long sadly injure the great work of which we hope to see the realization.

I have, gentlemen, dilated at length upon the state of the inebriates in my country. You will pardon me. I have, alas! only regrets to express. I am tempted to reproach myself with the length of my communication. Instead of placing before you the blots of my fatherland, I would, perhaps, have done better to imitate the example of the two good sons of Noah, and thrown over the alcoholized condition of Belgium a discreet and patriotic veil. But this would not have been the means to attain my end, to be able to stimulate my countrymen to accomplish what has already been realized in the beautiful country of England, where all generous ideas always find men and devotion ready to put them into execution.

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Some recent researches into the energy-producing qualities of foods, show that certain articles of diet entail double work on the excretory organs to get rid of the waste of the body. This explains why the turkish bath is of such a signal service in many cases. Cases where the restoration appears to be almost in the nature of a miracle, are seen every day at Dr. Shepard's Turkish Bath Sanitarium at Brooklyn, N. Y. Is it evident that this therapeutic agent has a great future in practical medicine.

THE HERMAN MURDER CASE.

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BY T. D. CROTHERS, M.D., HARTFORD, CONN.

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Charles Herman was arrested for the murder of his wife at Buffalo, N. Y., November 1, 1885. Seven weeks later, December 21st, he was tried for this crime, found guilty, and executed February 12, 1886, about fourteen weeks from the time the crime was committed.

A study of the evidence in this case from a scientific standpoint brings out some very interesting conclusions.

The following facts in the history of the prisoner and the homicide seemed to be unquestioned: The prisoner, a Prussian by birth, could give no history of heredity. He was about forty-two years of age, and had drunk for many years, seemingly governed by no other motive except his ability or inability to pay for it. He had been married for eleven years, and lived happily with his wife up to within four or five years. When after drinking he manifested an intense suspicion of her infidelity. This had grown into a settled conviction, although there was no evidence that it was true. When sober no reference was made to this suspicion. He worked at his trade as a butcher, but changed places often, probably because of his drinking. Two years before the crime he sold out his furniture, tramped to Chicago and back, and commenced to keep house again. He was a quiet, reserved man, but when drinking talked of his wife's infidelity, and threatened to kill her in the hearing of some friends. On several occasions when drinking freely he had quarreled and attempted violence to her. He was not often stupid when drinking, but was irritable and suspicious and greatly changed in conduct and manner.

In regard to the crime, it was in evidence that he had

been drinking freely every day for a week before, and although not intoxicated, was under the influence of spirits. He was known to have drunk beer and spirits on the Sunday on which the crime was committed, and was seen on this day with his wife as usual. On Monday, Tuesday, and Wednesday he was noticed coming and going, drinking as usual, only his wife was not with him. The absence of his wife created suspicion, and from a search she was found in bed with her throat cut. He was arrested, and acknowledged killing his wife on Sunday evening, and placing her body in the bed and sleeping with it for three nights from Sunday to Wednesday, going away in the morning and coming back every night. He seemed to have no conception of the crime, and made no effort to escape. When arrested in a saloon he talked freely, describing the incidents of the murder, giving no reason for it, except that his wife was going out and would not stay in when he asked her, hence he threw her down and cut her throat. A few hours later, in the jail, he became restless and very nervous from the withdrawal of spirits, and could not sleep. This passed off in a few days, then he denied all memory of the past, claiming to have forgotten every detail of the murder. This he continued to assert up to death, and also manifested general indifference and unconcern about himself.

The following conclusions from these facts were fully sustained by the testimony: 1st, The history of the prisoner was that of an inebriate who drank steadily whenever he could get spirits, chiefly beer and whisky. He was unthrifty, and changeable in his character and habits. His suspicions of his wife's infidelity grew with the increased use of spirits, and finally culminated in the murder. 2d, The circumstances of the crime, the act itself, and his obliviousness to the consequences following from it; also his conduct at the time and later, with the absence of all reason or emotion, suggested some form of insanity. 3d, His conduct in jail, after the first few days, when suffering from the removal of alcohol, was not unusual. He was very reticent,

but acted with reasonable sanity; the only fixed idea concerning himself was that the man he alleged to be intimate with his wife was responsible and should be in his place.

The *defense* was insanity and irresponsibility due to alcohol, and probably alcoholic trance. This was based on the history of excessive use of spirits, with the usual characteristic delusions of marital infidelity. The trance state was indicated by his conduct after the crime and general indifference of the act and its consequences; also the automatic character of the crime, done in the same way he had been accustomed to kill animals. His first recital of the details of the crime, then loss of memory of all these events, was also characteristic of this state. His crime was probably committed in a trance state, in which he was oblivious of what he was doing, and most naturally acted automatically from an insane impulse and in a state of partial dementia.

The *prosecution* denied all evidence of insanity and claimed that premeditation and brutality marked all the symptoms. The medical witnesses for the prosecution doubted the existence of alcoholic insanity and alcoholic trance. Two medical men were confident that spirits could be used for years to excess without causing any degree of insanity or mental impairment. One physician swore that he did not think it was the alcohol that intoxicated. The usual hypothetical questions were answered in the usual dogmatic and confused way. The possibility of insanity was doubted, because the prisoner did not then appear like an insane man.

The judge's charge to the jury entered minutely into the question of premeditation and knowledge of right and wrong and responsibility of inebriates. The letter of the law was followed closely, and the jury was told to discriminate on questions of fact and science which were clearly beyond the mental range of the judge or even the most scientific experts to determine.

The verdict was guilty, and the prisoner manifested the same indifference to his condition up to his execution.

A review of the facts brought out on the trial appears to fully sustain the following :

1st. Charles Herman belonged to a not uncommon class, who both drink and act in a way and manner that proves a defective brain and faulty judgment also a degree of mental incompetency that should never be mistaken.

2d. Such men always have a defective heredity and a history of neglect, bad living, bad surroundings, bad nutrition. If to this is added inebriety, mental unsoundness is always present.

3d. The prisoner had used spirits for many years to excess, and although not often intoxicated, he would be under the influence and exhibit the effects of spirits nearly all the time. This of necessity would impair his sanity and render him more or less incapable of realizing the nature and consequences of his acts. Any man of average health who uses spirits continuously for years will have a defective brain power and brain control. Such men are practically suicidal dements, living along the border lines of pronounced insanity, and likely any moment to explode into wild mania. The paralyzing effect of alcohol, even in small doses, always breaks up normal brain control and conception. The terms voluntary intoxication, and free will to abstain at pleasure, are metaphysical delusions, contradicted by all scientific study of these cases.

4th. For the past four years Herman exhibited delusions of his wife's infidelity. This, all writers agree, is a characteristic symptom of alcoholic insanity, and exists with or without any reason or basis. These delusions had grown steadily with the increased degeneration from spirits. He had most naturally talked about it to his friends, threatening vengeance, and in his inebriate state saying many things which on the trial were considered evidence of long premeditation. He had frequent quarrels with his wife and had attempted violence on several occasions, but the fact that he was not stupidly intoxicated, was regarded as proof of

sanity, and such acts were called willful and signs of bad temper. In reality such persons are more insane, irresponsible, and dangerous than if stupid from spirits. The fact that when sober he did not complain of his wife, and was a good-natured, quiet man, and only irritable and suspicious of her when drinking, was strong evidence of his mental aberration.

5th. The fact of drinking to excess, with peculiar delusions of his wife's infidelity, was evidence of impaired and disordered brain. No apparent sane realization of his acts or conversation could alter this fact. Such cases not unfrequently exhibit a degree of mental soundness and premeditation in thought and act, which, from a careful study, are found to be only a mask. They are the really dangerous classes of the insane, because their mental condition is more or less concealed.

6th. Herman was using spirits to excess for a week and more before the murder, and on the day of the murder he was in a mental state fully prepared for some insane act. A quarrel with his wife was most natural, resulting in a murder committed in the way he had butchered animals before. Had he manifested a realization of this act, in trying to escape or conceal the crime, or given himself up with reasons and explanations, some sanity might have been inferred. On the contrary, he seemed profoundly oblivious to what he had done, and not only threw the body on the bed, but laid down and slept three nights with the corpse. He drank during the daytime, and seemed in no way disturbed or different from what he had been before. His conduct was unmistakably that of an insane man, and one incapable of realizing the nature and character of his acts.

7th. His conduct after the crime, in giving all the details of the act, and then, when he recovered, losing all memory or recollection of them, whether real or feigned, was not that of a sane man, or one who had any clear comprehension of the nature and consequences of his acts. Alcoholic trance was a condition likely to be present. The

character and manner of the crime would point to it, but his statements after, unless confirmed by other facts, would not be positive, but would only sustain a supposition of this state.

8th. His conduct and appearance in jail after the first few days might not give any indications of his real state. The absence of delusions, hallucinations, or any gross physical symptoms of insanity was by no means evidence of a sound mind or responsibility.

9th. The medical experts for the people assumed that the conduct and acts of the prisoner were sane, and that evidence of insanity must be found in his present appearance and conduct. His apparent sanity in act and thought and the general good physical condition sustained their views of full responsibility and mental health. These examinations were limited to one or two interviews of an hour or more, and were made with a view of finding some well-defined symptoms of insanity. No scientific study of the case seems to have been made. Each witness apparently brought to the case a group of symptoms by which to gauge the mental health of the prisoner. All previous conduct, unless marked by great mental aberration, was not considered.

10th. In reality, from a scientific study, if the facts of his inebriety were true, his brain was impaired. He was practically a lunatic, incompetent to judge of his acts, and his power of control and responsibility was certainly impaired. The crime and his conduct after sustained this inference. His general indifference of manner and interest in himself and future was further evidence.

The hasty trial, speedy execution, and failure to comprehend the criminal and the crime, and the pressure of public sentiment were all inimical to justice. The progress of humanity and the cause of truth gains nothing by taking the life of a poor alcoholic imbecile, while the intelligence of the age is outraged by the application of mediæval theories of human responsibility and divine vengeance. Whatever the



law may be concerning crime committed under the influence of spirits, science demands that its application shall be along the lines of natural law and observed fact. If Herman was of sound brain and capacity to realize the nature and consequences of his act, the punishment by the law was just; but if Herman possessed a defective brain and impaired consciousness of his acts, such punishment was a crime, as much so as the murder itself. Security to life and prevention of similar crime can never be secured by the injustice of taking the lives of irresponsible persons.

The hanging of insane and idiot criminals never checks the crime of such persons. Other Hermans and Ottos\* will go on committing crime just the same. The time has come for a change. The progress of science demands it. The confusion of courts, the uncertainty of juries, and the difficulty of physicians in deciding on the brain health of prisoners in a few interviews make it impossible to secure the ends of justice in such cases. Herman's case should have been the subject of scientific study before it was brought into court. The inebriety of the prisoner and the peculiar character of the crime called for a special study that could not be limited to a few observations by physicians, and also could not be decided under the pressure of public feeling. The conclusion is inevitable that the supposed justice of Herman's trial and execution was grave injustice, and was only another example of judicial murder, which, unfortunately, is not uncommon in this country. The trial and execution of Herman is beyond recall, but the failure to realize the true condition of the man and the crime may serve as a landmark and warning in future cases.

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\* At the time of the trial a poor lunatic, Peter Otto, was under sentence of death for wife murder, and, although bravely defended, was finally hung. The same strange medical testimony and misconception of the case prevailed. The strange delusion that both Herman and Otto were sane pervaded the court and community, and was a strong influence in both trials. Later reflection strengthens the conviction that both cases were sad judicial blunders, in which two irresponsible men were punished as sane and responsible.

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## Abstracts and Reviews.

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### EFFECTS OF TEA DRINKING ON THE NERVOUS SYSTEM.

Dr. Bullard of Boston, in a paper read before the Massachusetts Medical Society on the above topic, draws the following conclusions :

1. Chronic tea poisoning produces a condition of irritability or hyperexcitability of the nervous system, and does this both directly by the action of the tea upon the nervous system, and indirectly by the production of gastric derangement.

2. Tea taken directly and in moderate doses, for a considerable period of time, tends therefore to place the nervous system in a condition in which it is more nearly affected injuriously by slight external influences. It therefore favors the production of many forms of functional neurosis, and if such neurosis already exists, aids in their continuance.

3. There is no evidence that tea taken in the manner described, causes any organic nervous lesion, but it is probable that if such nervous lesion should exist, tea thus taken might tend to cause an aggravation and continuance of certain symptoms.

4. There is no evidence that chronic tea-poisoning produces unaided any serious functional neurosis, in a person not in any way seriously predisposed thereto. It does, however, in a manner above described, act as an important factor in the production of neuralgia, hysteria, and allied affections.

5. When taken constantly in very large doses, dyspeptic symptoms usually intervene before irreparable harm is done to the nervous system.

6. In hemicrania, and possibly some other functional neurosis, there is probably a craving on the part of the ner-

vous system for a slight stimulation, which is better afforded by tea, than by any other equally accessible article, and for this reason patients with hemicrania are so frequently tea-drinkers.

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### TOBACCO AMBLYOPIA.

The following extract is from Dr. Woods' late work on "Nervous Diseases":

"Toxæmic amblyopia is usually of organic origin, but as this lesion is directly produced by the poisoning and is likely to be recovered from, on removal of the poison from the system, the separation of toxæmic amblyopias is of practical importance. The most common, and the most important of the class, is the loss of vision produced by tobacco. In a large proportion of cases the excess in the use of tobacco, has been associated with an excess in the use of alcohol, and there has been much discussion as to which of these agents was the cause of the optic derangement. The amblyopia is frequently present in those who smoke excessively, but do not drink, and tobacco seems to exert the more potent influence. The victims of tobacco amblyopia shows no difficulty or awkwardness in going about, but especially complains that vision is very bad in direct sunlight. He almost invariably sees better on dull days, and in the early morning and evening. If this be not noted by the patient himself, it may be shown by testing vision with type in full daylight, and again in a darkened room. An examination of the visual field will show that a great functional defect is in the center of the field, occupying an oblong or oval patch, which extends from the fixing point (corresponding to the *macula lutea*), out towards and often immediately beyond the blind spot (corresponding to the disk). This central scotoma is relative, and not absolute; *i. e.*, loss of vision in it is never complete. It is especially marked for the perception, for green and red in particular; the former is usually described by the patient as "white" or "gray," and the latter as "brown" or "no color at all." In most cases the scotoma is smaller than the visual

field for central colors, green and red, and hence a zone is present beyond the scotoma in which these colors are observed. This is especially the reason that the patient will recognize the color of a large body, and mistake that of a very small one. The scotoma of tobacco amblyopia is invariably automatically symmetrical, occupying exactly the same position in each retina. It is believed by oculists to be chiefly due to the change in the peripheral portion of the nerve-axis. It has been asserted in the rare cases in which the scotoma is central and surrounds the fixation spot equally on all sides, that the cause is alcohol. Dr. Edward states, however, that in all cases of such scotoma which he has seen, the patients were smokers. And Dr. G. De Schweinitz has reported an example of such scotoma in a woman who used neither alcohol nor tobacco, but made cigars,—and in whom the eyes became normal after she left the occupation. In investigating it should be remembered that chewing tobacco is more injurious than smoking.”

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#### THE MEDICAL ASPECT OF INEBRIETY.

The failure of prohibition to prevent drunkenness must be generally admitted. Neither the enactment of constitutional amendments, the appointment of special police, nor the multiplication of temperance societies, has brought to the world or to any community that decrease and disappearance of inebriety which the advocates of these measures have promised.

This failure to prevent inebriety by legislative enactments is due to a total misconception of the nature of the evil which it is desired to eradicate. Drunkenness is still looked upon and treated by the law as a vice, just as it has been in all ages since it has been looked upon as an evil at all. But in the medical mind there has been gradually growing the conviction, that even while it may be too broad a generalization to say that all drunkenness is disease, nevertheless it is undoubtedly true that most habitual drunkards are diseased, and should be sent to the hospital instead of the jail.

Take the commonest form of inebriety, for instance, that of the periodic drunkard, and compare his case with one of recurrent mania or of epilepsy. There is the same interval between the attacks when the subject is to all appearances in perfect health, his behavior as correct, and his moral sense as sharp as that of any man; during this interval he may drink, but his appetite is as much under control as that of any moderate drinker, and he avoids excess. Then comes the attack, often preceded by a well-marked aura. The unfortunate victim is then seized with an uncontrollable desire, not to drink as is often represented, but to get drunk. It is the end and not the means which is uppermost with him; indeed the taste of liquor may be even disagreeable to him, and lead him to pour the drink down his throat with as little taste as possible. When the desire for intoxication is exhausted the paroxysm ends.

The close relationship of insanity, epilepsy, and inebriety is also strongly shown by the remarkable manner in which, through heredity, one form of disease may pass into another, as where drunkenness in one generation is followed by epilepsy or insanity in the succeeding generations. This indicates clearly a similar cause in the existence of a morbid condition of the nervous centers, although the changes have so far escaped the microscope. This pathological condition is spoken of by writers on inebriety as the "neurotic diathesis," or an "alcoholic neurosis." Although we do not know exactly in what the change consists, we can recognize its consequences, and feel sure that in the determination and abolition of its causes lies the true and rational treatment of inebriety.

The signs of the times all point to the rapid approach of the recognition of inebriety as a disease, and our descendants, in the next century, will no doubt denounce the cruelty of our present treatment of the inebriate with as much energy and justice as we condemn the use of the scourge and chains in the treatment of the insane a hundred years ago.—*Editorial in Northwestern Lancet, of St. Paul, Minn.*

**DISORDERS OF MEMORY AND CONSCIOUSNESS.**

The following extract is very suggestive in the pathology of alcoholic trance: "All functional acts are accompanied by, or dependent upon, a nutritive disturbance. It matters not whether the functional act is connected with thought, consciousness, or secretion, the generation of nerve force by the ganglionic cell and its transmission by nerve-fibre are accompanied by nutritive changes in their bodies. A nutritive act, although temporary, has a distinct tendency to impress permanently the part implicated, and this tendency is especially pronounced in nervous tissue. All nervous tissue is, therefore, liable to be permanently affected by its own functional actions. This, it must be remembered, applies equally to normal and to pathological activities. Thus the child in learning to walk by repeated efforts trains the lower nerve-centers until, in response to appropriate stimuli, a definite series of nervous discharges and transmission occur independently of the will, and walking becomes automatic. This, in short, is the history of all training, mental and physical. All nervous tissue, therefore, have memory, *i. e.*, the faculty of being permanently impressed by temporarily acting—stimuli, the thing remembered, being in fact the functional excitement. The recognition of the universality of memory in nerve-tissues is of great importance in the consideration of treatment of disease. Thus an epileptic fit is produced by a peripheral irritation. If that peripheral irritation be at once removed, the fit does not recur, and the patient is cured. If, however, the irritation be not soon taken away, but produce a series of convulsions, the fit may continue after the removal of the irritation, simply because of the permanent impression which has been made upon those cells in the brain cortex, whose discharge of nerve-force is the immediate cause of the epileptic paroxysm. The nutrition of the cells has been so altered that at irregular intervals they fill up and discharge nerve-force, owing to



this power of memory a physical habit may become so permanently engrafted upon the nervous system that the patient is unable to control it. An example of this is seen in the so-called habit-chorea, movements at first controllable, mere bad habits, become at last fixed, not to be altered by any power. The hysterical woman who gives way to hysterical nervous impulse, thereby strengthens their hold upon the system so that in time she may lose all power of control over the lower nerve-centers. What is true of the lower nerve centers and fibres is true of the upper ones. Intellectual acts, or thoughts and perceptions, tend to stamp themselves upon the centers connected with them, and when the function of the nerve-cell is connected with consciousness, the changes which occur in the nutrition give origin to conscious memory, *i. e.*, to memory in the usual sense of the term."—*Dr. Wood in Nervous Diseases.*

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#### THE ZURICH CONGRESS ON ALCOHOL.

A large gathering of statesmen, philanthropists, and physicians discussed the subject of alcohol in all its phases at Zurich, Switzerland, last August. On the question of the food value of alcohol, a unanimous conclusion was reached denying all nutrient value. On the medicinal value of alcohol in the sick-room, no agreement was reached. One physician urged vegetarianism as the best means of preventing excess in spirits. Temperance societies were considered as doing great work. Coffee-houses and halls were also urged as valuable. The valuable influence of these various movements were mentioned in the pressure on the various governments, raising the tax on spirits, and forming more stringent laws for the control of the sale of spirits. Dr. Kerr of London, sent a paper on Inebriate Asylums, which was read. The official report when published, will, no doubt, bring out many new facts.

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Opium and alcohol should never be given as a medicine long to children who are feeble-minded or of weak, unstable organism.

*Environment.* A story of modern society, by Florin Thayer McCray. Funk & Wagnals, publishers, New York city. 1887.

This story is chiefly of interest from the fact that the heroine is an inebriate, a lady in good society whose drinking is concealed, and who finally recovers. The author is evidently a wide reader of fiction, but not a close student of human nature. The picture of an inebriate woman is more ideal than literal, and the views of inebriety and its treatment urged by her characters are open to very serious objections. The tone and style are markedly that of an amateur. Yet the author and her book is to be commended for this first attempt to portray the rapidly increasing class of inebriate victims in high life. Other and more accurate studies in this field will bring enviable fame to this author. The publishers have issued an attractive volume.

*Maternity, Infancy, and Childhood,* by Dr. John M. Keating. J. B. Lippincott & Co., publishers, Philadelphia, Pa., 1887.

This is a most excellent hand-book of practical lessons in nursing, written by an accomplished physician in a vein of clear, strong common sense. It is a book that can be placed in the hands of laymen with great satisfaction and profit. This book contains 225 pages, being pleasantly divided into chapters and headings that greatly facilitate the pleasure of the reader.

The *Science Weekly* is one of the best journals that a scholar can have to keep abreast with the times. It is edited with great scientific skill, and its pages are thoroughly reliable. No more acceptable present could be made than a year's subscription of this excellent journal. The subscription is \$3.50 a year. Address publishers, 47 Lafayette street, New York city.

The *Journal of Morphology* has appeared, devoted entirely to zoological literature. Ginn & Co., of Boston, are the publishers.

The *Scientific American* grows in interest each month, until it takes rank, as a need to every thinking man, with the great dailies of the world.

The *Open Court* is a journal published in Chicago, in which all phases of religion and science are discussed with charming frankness and dignity.

The *Demorest Monthly* comes freighted with a rich table of contents, to an ever increasing army of readers. Its influence for good is in pleasing contrast to many more pretentious rivals.

The *Climatologist* is a quarterly, published in Baltimore, Md. The editor, Dr. Rohe, brings to this new field a rare experience and culture, giving success to this journal from the beginning.

The *Electrical Engineer*, published at 115 Nassau street, New York city, is a monthly review of theoretical and applied science in electricity. It is a journal of great value to all scholars and thinking men.

The *Homiletic Review* is a theological monthly, edited on a generous, broad plane, appealing to scholars and thinkers of all classes by its vigorous, stirring thought. Funk & Wagnals are the publishers, New York city.

The *Humboldt Library*, published by J. Fitzgerald, 24 East 4th street, New York city, is a great educational work, placing the best scientific works of the age within the reach of the masses. Send for a catalogue.

The *Popular Science Monthly* has published some of the most important contributions to science this year. The September and October numbers are volumes in themselves, which should be read by every student of science. D. Appleton & Co. are the publishers, New York city.

*Medical Classics*, a monthly devoted to a study of the writings of the fathers in medicine, is a most commendable effort to place the views of antiquity before the modern English reader. The two numbers before us give great promise for the future. It is published in New York city, at one dollar a year.

## Editorial.

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### THE INTERNATIONAL MEDICAL CONGRESS ON INEBRIETY.

This year will be eventful in medical history for two widely different gatherings of physicians, whose work and influence will go down into the future, long after the participants are forgotten. The congress at Washington was devoted to all departments of medicine, and called together a large number of physicians; was opposed, criticized, and sneered at; yet, in character and spirit, it marked the beginning of a new epoch in the progress of medical science. The papers and discussions of the American physicians at this congress, not only exhibited an aggressive energy and restless freedom from prestige and theory, but a practical application of the laws of prevention and cure of disease beyond all comparisons by any old-world standards.

The congress at London was for the study of the disease of inebriety, and was the first international convention of a little band of medical explorers who had crossed the frontiers of a new borderland realm of disease. Less than a hundred physicians and friends gathered and listened to the reading and discussion of twenty or more papers. The session terminated with a banquet, in which over two hundred leading men of all professions expressed their warm sympathy in the effort to study these cases; the daily papers gave brief notices of this congress; the temperance weeklies published full reports, and the medical journals gave abstracts; and thus the event passed into history. No loud voices of praise or criticism was heard. In this country — except a few brief notices in the medical press — no reference was made to it. In reality, it was among the most important medical events of the century. It was, practically, the first general recognition

that all this great tide of evil, coming from the excess of drink, was under the control of law, which could be understood and prevented by the scientific study from scientific men. The central idea of this congress, that inebriety was a disease and curable in hospitals, is the beginning of a great revolution and evolution in the science of medicine. The vast army of inebriate defects are to be transferred into the realm of medical science for study and treatment. The temperance theories and efforts to reach the inebriate, will disappear in the evolution of a broader, clearer knowledge of the nature and causes of inebriety.

This congress marks the beginning of a new era, in which the complex forces of heredity, surroundings, food culture, mental and physical strain and drain, with all the vast ranges of causes now unknown, will come into the realm of scientific study, and be known with all the means of cure and prevention.

The congress at Washington was a record of the advances in the general science of healing; the one at London was the formal opening of a new realm and territory for medical research. It announced that the intimations and statements of a thousand years ago, concerning inebriety, had been practically tested in the last quarter of a century, and were found to be true, in a wider sense, than ever before conceived. That the vast armies of inebriates were diseased and curable, and this great borderland region of disease was to be reclaimed from the superstitions and theories of the past. Sixteen years has passed since our association for the cure of inebriates was organized, and this congress was the first world-wide endorsement of our work and its objects. The confidence and faith which has inspired the members of this association these years, receives a grand uplift from this event.

Inebriety, its study and cure, is carried by this congress beyond the monopoly of any society or individuals. It is the world's great new field for the prevention and cure of human ills and human sufferings.

**SEXUAL INSANITY IN INEBRIETY.**

The psychical paralysis of the higher brain centers which appear early in all cases of inebriety, are often associated with the most extraordinary sexual perversions and insanities. In most cases these morbid impulses follow after the inebriety has been established, and seem to be the result of some central nerve irritation. In other cases it precedes the inebriety and dies away when the drink paroxysm is fully developed. Here it seems to follow as a reflex irritation of some unknown state. In a third class, some congenital condition predisposes to morbid sexual impulses which merge into inebriety, and afterwards, when one is active the other is unnoticed, and vice versa.

In the first class, most commonly noted, after inebriety has begun, sexual irregularities appear. Thus, a man previously moral will consort with the lowest women, or have a mistress and pursue a line of most unusual conduct, irrespective of all social and family relations. The boldness and impetuosity of this conduct suggests disease and failure of the brain to realize the nature and consequence of acts. As an example, a man of excellent character, married, with fine family, became an inebriate, dating from an obscure brain injury. Suddenly he became a constant visitor to a house of ill-fame, appeared in public with the inmates, and gave no reason for this. A professional man of high standing became an inebriate, and began to keep mistresses and associate with fast women. In these cases such conduct indicates a sexual delirium and degeneration associated and following inebriety that is very grave. It is more often noticed among the steady and constant drinking inebriates.

In the second class, where sexual exaltations precede the drink paroxysm, there is always a marked neurotic element present. Such cases are often periodical inebriates. Thus, in a case under observation, a man of correct habits will, for two weeks before drinking, manifest almost ungovernable sexual impulses. He will consort with many women each day, have sexual dreams at night, and conduct himself in a

very unusual way. Finally he becomes intoxicated, and the sexual impulse dies out. Long intervals, sometimes months, follow before it returns, during which he is entirely abstinent. In other cases this impulse will begin with intrigues with women, and secret journeys to large cities, visiting bad houses, and show itself in voluble conversation on these topics. A female inebriate, occupying a high position in society, exhibits this erotic impulse before the drink paroxysm, by the most scandalous stories of sexual wrongs, that are always creations of her imagination.

In the third class, where sexual perversions have appeared from childhood, both congenital and acquired, founded on a neurotic constitution, inebriety seems to be only another phase of the diseased state. Often in these cases there is a strange periodicity, in which the sexual impulse is dominant for a time. Such cases go from one house of prostitution to another, rarely drinking anything. After a time they begin to use strong spirits, become intoxicated, then this sexual impulse dies away. The history of such cases are often marked by masturbation, intense sexual activity early in life, and other irregularities. The inebriety is paroxysmal, and seems to have grown out of the surroundings, and the sexual impulse seems to gather and explode like nerve storms of epilepsy or hysteria.

In all of these cases delusions of the infidelity of others are marked symptoms. A husband suffering in this way will always suspect his wife, or those about him of the same immorality. In some cases the capacity to gratify this impulse becomes paralyzed, but the mind exhibits a delirious pleasure in dwelling on the details of such acts.

The sexual crimes committed by inebriates have always been regarded as entirely within the control of the person, yet when carefully studied appear like the acts of a maniac, controlled by a blind irresistible impulse. Practically, a knowledge of these associated insanities throw much light on inebriety and its treatment.

These facts are presented as only hints and suggestions of an unknown field that comes under almost daily observation.

*The Dalrymple Home* at Rickmansworth, England, under the charge of Dr. Branthwaith as superintendent, is undoubtedly one of the best equipped inebriate asylums in Europe to-day. Situated in a rich farming country a few miles out from London, it has many attractions. This with the admirable plan of management, tone, and spirit of the place, may serve as a model to be copied after. Dr. Norman Kerr is consulting physician. This, in itself, is an evidence of the thorough scientific treatment of the inebriate, above all levels of faith and superstition. The Dalrymple Home is really a modern hospital, where the disease of inebriety is studied and treated with the best means and appliances known to modern science. It is practically where the splint and bandage are applied until the poor fractured inebriate recovers. The cheerful quiet and seclusion of a large park, bounded by a river on one side, and overlooking a fine farming country, add greatly to the beauty of this place. The superintendent is one of those cheery scientific men, whose presence inspire confidence and respect everywhere. There is probably no new work in all Europe upon which more interest is centering, than on this Dalrymple Home. On its progress and success the future treatment of inebriety in Europe will turn very largely.

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Dr. Norman Kerr of London, England, is one of the most advanced students and writers on the subject of inebriety in Europe. His papers and addresses have become authority, and are copied very widely all over the world. Mr. Chang Luei of the Chinese Embassy at Washington, has translated parts of his late address before the International Congress of Inebriety, for the special notice of the Chinese Emperor.

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A study of the nature and causes of inebriety shows clearly that, to a large degree, it is as positively preventable as small-pox, typhoid fever, or diphtheria.



The theorists are unwilling to acknowledge that inebriety is a disease, after having so long denied this fact, so they seek a compromise. They must save their old theories, by showing that they were half right. Hence they assert that all cases are at first sin and vice, but later may become disease. This is a repetition of every dying theory, seeking to live on the fact that they were partially right. Precedent history, and the Bible, are called in to sustain the old dogma, but, like the horns at Jericho, the louder they sound the more perfect the destruction of the walls.

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A young man with an unstable nervous organization becomes reduced in health and is subject to contagion of drinking companions, uses spirits to intoxication; the result is, his physical system takes a diseased tendency, which quickly develops into inebriety. No matter what the surroundings may be, he is under the control of diseased impulses, which carry him farther from health and sanity.

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The vaso-motor paralysis, following the use of alcohol, interferes with the venous circulation. The blood returning from the extremities, fails to bring all the carbon and other excrementitious matters. The exchange of oxygen is interfered with, and a species of oxygen starvation comes on, resulting in fatty degeneration. Atrophy, inflammation of the nerve extremities, called neuritis, comes on.

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In the treatment of inebriates, it should always be remembered that they are sick people with damaged brains, which are more or less capable of being repaired, such repairs being a slow process, requiring a combination of physical and mental remedies, and long time with rest. If they cannot be cured, they can at least be improved, and should always be treated as wards of society instead of its enemies.

Epilepsy which develops after the thirty-fifth year of age is frequently due to some organic disease of the brain caused by alcohol.

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Dr. Webb asserts that only ten per cent. of the distilled spirits consumed in this country are used for medicinal and manufacturing purposes, the other ninety per cent. being used as a beverage.

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“The study of inebriety from a scientific standpoint is a matter of the utmost consequence, of immensely greater importance than any amount of so-called temperance agitation.”  
—*Editorial in Northwestern Lancet.*

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Dr. Holmes's remark that the patient might have been saved if the physician had been called two or three generations back to treat his forefathers is a fact that every specialist in inebriety will most heartily endorse.

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The study of inebriety to-day is largely the record of the facts, a description of cases and phenomena which they present. Later comparisons of these facts and records will be made, and the laws which govern them will be deduced.

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In a case of death from chronic alcoholism, after life had become extinct the temperature of the body was observed to rise to 110° and remain there for some time. A correspondent asks if this has ever been observed before? also, what explanation can be given of it?

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Lindsay & Blakeston's Visiting List for 1888 is out, and may be said to be one of the best in the market.

The Association for the Cure of Inebriates will hold their semi-annual meeting in Brooklyn, N. Y., Nov. 2, 1887. Besides the president's address, papers will be read by Dr. Kerr of London, Drs. Wright, Day, Searey, Mason, Mann, Crothers, and others.

The New York Medico-Legal Society will discuss the Medical Jurisprudence of Inebriety at their regular meeting, Nov. 2, 1887. Papers on the medical side of this topic will be presented by Dr. Kerr of London, Drs. Wright, Parrish, Mann, and Crothers of this country.

*Horsford's Acid Phosphate* is a preparation of the phosphates of lime, magnesia, potash, and iron, with free phosphoric acid. For the various disorders incident to wasted or prostrated energies, weakened vitality, exhaustion, headache, nervousness, dyspepsia, etc., etc., it will be found incomparable, giving almost instantaneous relief, and producing refreshing, dreamless sleep.

George Stinson & Co. of Portland, Maine, are the great Art Publishers of America. Their steel plates are the finest sold in this country. Send for a price list before the holidays, and take advantage of the reduced rates.

The *Anglo-Swiss Milk Co.* of New York city, are pioneers in placing within the reach of every physician this most excellent food, which has an international reputation, and is used in all civilized countries.

*Colden's Beef Tonic* has been used as a substitute for spirits in cases of inebriety with most excellent results.

*Bromidia* and *Papine* have become household remedies in many cases of inebriety and insomnia. They are specifics in the hands of many physicians.

*Lactopeptine* has won a permanent place among the remedies whose value is universally recognized. It is a nutritive tonic. In all cases of debility its effects are very marked.

*Peptonized Cod Liver Oil and Milk*, by Reed & Carnrick of New York city. In alcoholic phthisis this is a most admirable remedy. In the convalescence from pneumonia its effects are very marked.

*Maltine*, with the iron and vegetable tonics combined, should be among the remedies in the office of every physician.

*Murdock's Liquid Food* has steadily grown into great popularity. As a nutrient tonic in old cases of stomach and brain disorder, it is invaluable.

*Lactated Food*, by Wells, Richardson & Co., according to a local paper, is selling over five thousand bottles a day of their famous food. This is unmistakable evidence of its practical value.

*Fellows' Hypophosphites* is a most excellent nerve remedy. In many cases it is very nearly a specific, and should be used in all cases of brain and nerve debility.

*Coca Cordial*, by Parke, Davis & Co., has been found of great value in cases where alcohol is suddenly removed from from inebriates. It relieves the shock and depression, and saves the patient much suffering.

Established 15 Years. OBSERVE THE NAME. Beware of Imitations.

# COLDEN'S Liquid Beef Tonic.

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"Colden's Liebig's Liquid Extract of Beef and Tonic Invigorator."

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### Differs Essentially from all other Beef Tonics.

**COLDEN'S Liquid Beef Tonic** is endorsed by scores of physicians, who are growing to realize more and more its importance in repairing, in accordance with the principles of dietetics, the **waste which disease entails**. It consists of the extract of Beef (by Baron Liebig's process) spirit rendered non-injurious to the most delicate stomach by extraction of the Fusel Oil, soluble Citrate of Iron, Cinchona, Gentian, and other bitter tonics. An official analysis of this preparation by the eminent Chemist, ARTHUR HILL HASSALL, M. D., F. R. S., and an endorsement by the late SIR ERASMUS WILSON, F. R. S., are printed on the label of each bottle.

As a **nutrient**, and a **reliable tonic** in all cases of debility and weakness, Malarial Fever, Anæmia, Chlorosis, Incipient Consumption, etc., it is the best preparation ever used. It acts directly on the sentient Gastric Nerves, stimulating the follicles to secretion, and gives to weakened individuals that first prerequisite to improvement—an appetite. It strengthens the nervous system when unstrung by disease, and has been employed with remarkable success as a remedy for Drunkenness and the Opium Habit.

### Its Range of Action Embraces all Cases of Debility.

In order that physicians may form some idea of the nature of its ingredients, I will upon application in person, or by letter (enclosing a card), send a sample bottle of **COLDEN'S LIQUID BEEF TONIC** to any physician in regular standing, in the United States. Please ask your Dispensing Druggist (if he has not already a supply) to order it. In prescribing this preparation, physicians should be particular to mention "**COLDEN'S**"—*viz.*: "**Ext. carnis, ft. comp. (Colden's)**." It is put up in pint bottles, and can be had of Wholesale and Retail Druggists generally throughout the United States.

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ALL physicians know that *skin diseases* are more or less constitutional, or dependent upon some specific poison in the blood, which, if eradicated by internal treatment, needs something to remove its appearance from the surface. Experience has proved that the best possible aid in the accomplishment of this end is obtained by the use of **Sulphur in soap**. GLENN'S SULPHUR SOAP is the best combination of its kind, and the one now generally used. It is for sale by all Druggists, at 25 cents a cake, or 3 cakes for 60 cents.

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Has been on trial among physicians for very many years as a Toilet Soap and Healing Agent, and its superior virtues have been unanimously conceded in all cases where the use of tar is indicated. Unsolicited expressions of its excellence have been received from the Medical Faculty generally. IT IS THE BEST TAR SOAP MADE. None genuine unless stamped "A. Constantine's Persian Healing Pine-Tar Soap." For sale by all Druggists.











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