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# THE QUARTERLY JOURNAL

OF

# INEBRIETY.

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

T. D. CROTHERS, M.D., Editor,  
56 Fairfield Avenue,  
HARTFORD, CONN.

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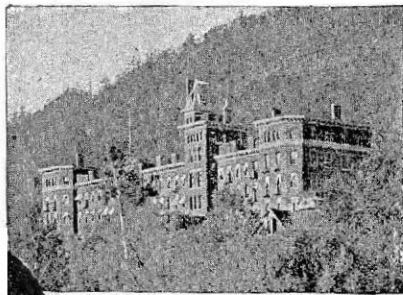
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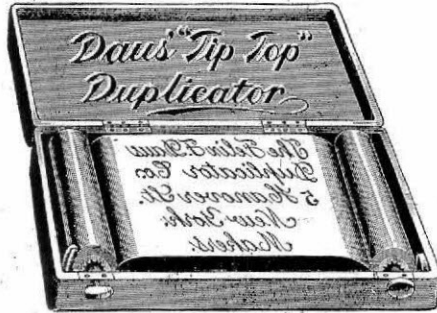
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This Journal will not be responsible for the opinions of essayists or contributors, unless indorsed by the Association.

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INEBRIETY A DISEASE.

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BY LEWIS D. MASON, M.D., Brooklyn, N. Y.\*

President of the American Association for the Study of Inebriety.

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Talleyrand defined language as that form of articulate speech that is given us in order that we may conceal our thoughts. Probably in diplomacy he who talks most and says least is the wisest man, and in this view of the case the prince of diplomats was right.

We must recall, however, the historic incident that when the human race, in the dim ages of antiquity, attempted in their impious zeal to build a "Tower of Babel," the result was a confusion of tongues, just because their language concealed their thoughts, and "A spade was not called a spade," the result being confusion and consequent disaster.

The language of practical life, of science, and nature, must be interpreted in clear, distinct, and significant terms. Precision of language is demanded, and it must be neither concealed nor disguised.

---

\*Delivered at a special meeting of the American Association for the Study of Inebriety. Held in "Harlem Lodge", Catonsville, Md., June 3, 1903.

Now what do we mean by the term inebriety? *Inebriatus*, in its strict definition, implies intoxication from any cause; used in a general or popular sense, we say a person is "intoxicated with success" or "delirious with joy," implying that by reason of certain conditions that have entered into his life, he is deprived for the time being of the natural and normal control of his emotional nature, or we may apply it to the effect of any drug or substance that has the property of producing intoxication.

We may, but we do not so use the term inebriety; we use the term in a conventional sense, and restrict its application to certain conditions only. Not because it can be only so applied, but because from common usage and acceptance it is recognized as applicable only to a certain condition or state. The term inebriety in its etymological sense or strict definition does not convey the idea that we desire it to convey; still, as we have said, by common consent we can interpret it, and use it as so doing, and because such condition does result from the excessive use of alcohol, and usually in those who are habituated to its use, we apply the term inebriety to a class of persons who are irresponsible, and who involuntarily, and not as a matter of choice, have become habituated to the use of alcohol in excess, either periodically or more or less continuously.

Much that is faulty and unsatisfactory in describing circumstances and conditions, is the fact that they are christened by ill-chosen terms or language, that cannot be properly construed, either in their etymological sense or strict definition, so as to apply to the existing condition, circumstances, or things we are attempting to describe, improperly labeled, so to speak.

But aside from this we do recognize the fact that custom or conventionality may and does permit of the use of certain terms, words, or names that in their etymological significance do not fully define or even partially describe the condition to

which they are applied, and whose meaning must be largely inferential, by a quasi interpretation rather than a literal one.

The study of terminology or of phraseology, the genesis of language, the anatomy and dissection of speech, might well employ the skill of one, like Trench, gifted in the study of the "origin of words" and their meaning.

And so all this to the point that when we come before you with the term "inebriety," and talk about the "disease of inebriety," we must define what we mean by the term, as it does not explain itself in the sense we propose to use it, and also determine whether or not such a use of it will be accepted by those who have a right to receive or reject it, or perchance who may offer us a better term or name to express the condition under consideration.

We use the term "inebriety" in a restricted sense, and apply it to a condition resulting from the involuntary and excessive use of alcohol.

We do not apply this term as a rule to other drug habits; we use the terms morphine, or opium habit, chloralism, bromism, etc., in cases where persons have become addicted to the use of any of these drugs. Narcomania is the general term used in this class of cases, and covers all drug habits as describing a condition, and narcomaniac as the person so affected.

By a process of exclusion, and by reason of common use and acceptance, the term "inebriety" has been appropriated by medical science, and by a sort of patent or copyright, claimed by it as peculiarly its own, to represent the condition specified.

And let me say when this term was so claimed and used, it brought with it hope for the victim of the alcohol habit, like the "bright and morning star" that indicates the approaching day, and before whose rays the shadows of night flee away; for it meant that he was to be taken out of the dungeon of despair, and that medical science had placed him, in some degree at least, upon her list of beneficiaries.

We define inebriety as follows: an abnormal physical condition in which the prominent symptom is an *involuntary* and insatiable demand for alcohol in some form, and that to more or less complete intoxication and loss of consciousness, the periods of intoxication occurring either periodically at stated periods, or being more or less continuous or irregular.

In the former case the term "dipsomania" is used as indicating a form of inebriety in which periodicity is a marked feature, and sudden, cyclonic, uncontrollable, insatiable, alcoholic desire another.

To the latter class the term "habitual inebriety" is applied, thus expressing the idea of continuity as opposed to the periodical form.

We exclude from the term inebriety all forms of accidental, occasional, or voluntary intoxication, when the subject of it is in an average normal condition, and the intoxication is not traceable to any inherent cause.

Distinction, separation, differentiation of the inebriate as a special class is important. "*All drinkers are not drunkards and all drunkards are not inebriates.*"

Diseased conditions also resulting from and dependent upon the habitual use of alcohol may occur, independent of absolute alcoholic intoxication, as alcoholic neuritis, etc. The term "inebriate" is not necessarily applicable to the victim of such manifestations where volition is not lost, and the will power is intact.

Conditions dependent upon inebriety or the habitual use of alcohol as a cause are specified by their own terms: Delirium Tremens, Chronic Alcoholic Poisoning (of Marcet), Alcoholic Epilepsy, Alcoholic Anæsthesia, Alcoholic Dementia, or other neuroses.

To use the term "inebriety" in any case we must recognize the entire absence of volition or will power to abstain from alcoholic beverages, as shown by the repeated failure of the subject to control himself in this particular.

There is a "vis-a-tergo" that pushes the helpless victim over the precipice into the abyss of moral and physical ruin, and subjects him to all forms of diseased conditions to which the inebriate is liable, and which are, so to speak, the offspring of his inebriety, and the natural and unavoidable consequences of the long continued and excessive use of alcohol upon the nervous, glandular, and the circulatory systems, due to degenerative changes, engendered and perpetuated by its use.

The primal cause of the involuntary, uncontrollable, and excessive use of alcohol we term inebriety, not that it locates the seat of trouble, nor explains the genesis of it, but for want of a better term; as is not infrequently the case in medicine, we christen the disease or name it after its most prominent symptom. And when we use it or apply it to an individual, and say such or such a one is an inebriate we know that we can also say, not in the best sense but in the worst sense, that the term covers a multitude of defective and diseased conditions.

We recognize the fact that there is a causal relation between the drink habit and something back and beyond it of which it is a mere symptom, and of value only in the line of symptomatology, and of significance only as indicating an abnormal and unnatural demand, dependent upon an abnormal and diseased condition somewhere in the body, a condition that the pathologist has not unveiled, the microscope has not revealed, nor clinical medicine yet demonstrated.

Pardon me if I repeat myself, but we desire to emphasize the fact that the drink craving is not the disease, but dependent upon a diseased condition. For example, in diabetes mellitus the marked symptom and distressing feature of the complaint is the insatiable desire for water, a thirst that is never satisfied.

Shall we call the diabetic an aqua maniac, a case of water madness, and let it rest there? Certainly not. Neither does the name diabetes (to flow through) convey the idea of the diseased condition lying back of the thirst symptom, any

more than the term dipsomania or inebriety does with reference to the cause of the alcoholic thirst or desire. Both are conventional terms, by which diseased conditions are designated by names applied to a prominent symptom. So glycosuria is merely a conditional term, but it leads us to the glyco-genic function of the liver which is at fault; thence we trace the origin of the sugar in the urine to an irritation of the floor of the fourth ventricle, and by irritation experimentally produce an artificial diabetes, and so confirm the matter; we know of no two diseases in which the symptoms are so analogous, and so marked as to similarity, as in the case of diabetes and dipsomania, the water craze and the alcohol craze.

Both have their origin in the nervous system, and are therefore to be classified among the neuroses. Both crave fluid as a prominent symptom, either water or alcohol, and that to excess. In both the desire and demand for fluid in some form is continuous and insatiable.

But while medical science has placed its finger on the seat of diabetes, it has not on the seat of dipsomania, or if so, only by inference and not by direct demonstration.

We recognize the etiology of inebriety as we do that of other diseases. It has its predisposing and its exciting causes, direct or indirect.

As to predisposition, heredity plays an important part. Inebriety is seldom acquired; it is possible, even probable, but we believe exceptional. It is true, also, that a person of normal constitution, with good heredity and personal history, may acquire alcoholic diseases that eventually may even prove fatal, as cirrhosis of the liver, etc.; and yet may not be an inebriate as we have defined the term.

Our impression, based on experience, is that the great mass of inebriates, like the great mass of the insane, have a bad heredity, some constitutional dyscrasia that they have inherited, with a family history of insanity, or inebriety in near

relatives. This class, those of bad heredity, are more susceptible to the exciting causes of inebriety, as disease, injury, or mental shock.

Even those of good heredity and personal history may succumb to some of these exciting causes, but are not as liable to as those with a bad heredity.

As exciting causes we may mention sunstroke, syphilis, blows on the head, concussion, fracture with depression, wasting or exhausting diseases, mental shock, etc. Tapeworm has been mentioned as a reflex cause.

We cannot dwell on the various pathological conditions incident to inebriety; fatty degeneration, and sclerosis, affecting the nervous, the glandular, and circulatory system; in fact, sooner or later, hardly any tissue is exempt from the ravages of alcohol, not even the bones; but we cannot even refer briefly to the etiology, symptomatology, or clinical history and pathology of the various diseased conditions we find in the confirmed inebriate.

The cause concerns us, what is the secret of the habitual or periodical, and excessive, involuntary, and uncontrollable use of alcoholic liquors?

Our intention is to make prominent the disease theory of inebriety as opposed to the views of legislators and moralists, and, we regret to add, many of the medical profession. We believe in the latter case it is due to indifference, rather than to a careful investigation of the facts of the case. Medical science has not studied the inebriate as a diseased person, nor applied the same care and research to his condition as has been done in the case of other diseases, and we are convinced that if the average physician would only investigate the facts that have accumulated for the past thirty odd years, under the auspices of the American Association for the Study of Inebriety, he would be fully convinced that the disease theory of inebriety is not a theory, but a very marked fact, easy of practical demonstration.

The chief reason why the medical profession have, until within quite a recent period, ignored the inebriate is that medical science has from time immemorial refused to admit that the inebriate is a diseased person, and that inebriety is a disease to be studied, but has turned him over to the law and the moralist; and latterly the moralist, and, in a measure, the law, has retired in favor of the charlatan, "whose tender mercies" are "even cruel," and to stock companies who proceed not to inject "gold" into the bodies of their helpless victims, but squeeze it out of their often slender financial resources.

And, be it noted, while the so-called "gold cures" are the very essence and quintessence of quackery, they have not been an unmixed evil, for they have brought to the forefront of public notice, at least, the disease theory of inebriety, and in this respect have done more than legitimate medicine has done with its vacillating and timid policy for more than an average lifetime.

Quackery has sought success, and endeavored to corrupt our profession by appealing to the lowest motive that can influence or actuate the professional mind, that of financial success irrespective of professional ethics and by the prostitution of all that is honorable, or dignified, or decent, not only in our profession, but in our common manhood itself. The "get rich quick" scheme, irrespective of the honor and dignity and honesty that should characterize the medical calling, overshadows everything else, and, while quackery has literally, in the language of the day, "worked the disease theory" for all it is worth, alas, members of the regular profession have fallen from their high estate, tempted by the gloss and the glitter of the "gold cure" specialists, and have vied with quackery, using the same methods and deceits, and thus tried to serve "God and Mammon," and so forfeited their own self-respect and the esteem and confidence of their fellow practitioners, and proven, alas, to their own mortification and social and professional ostracism, "that all is not gold that glitters."



Be it said here and now that this association will not receive or shelter under its wing any such irregular practitioner, nor in any way accept their interpretation of the "disease theory of inebriety," nor indorse in the slightest particular any concealed remedy or nostrum for the treatment of inebriety. Let it be understood once for all that this association stands for and demands that inebriety, as a disease, should be treated in accordance with the principles and practice that are applied to all other diseased conditions recognized by regular medicine.

Be it said to the shame of legitimate medicine, with the exception of the comparatively few pioneers in the field, it has practically ignored the inebriate; and the state, accepting the finding and assuming the indifference which the attitude of the regular profession engendered, has failed to respond to the needs of the pauper inebriate or give him the care and control which his case demands. The condition of the inebriate today, with relation to medical science, is but a trifle in advance of the treatment of the insane before the days of Pinel, that just, learned, and pre-eminently humane physician, who shines out like a star of the first magnitude as the greatest humanitarian of his age; he was a century ahead of his time. The insane "saw his day and was glad"; he came like a ray of sunshine in a dark place, and, with his own hands, unloosened the fetters that bound the insane; before his time the lunatic was shackled and chained to the wall in his cell, to rot in his dungeon; a common street dog was in paradise compared with him; he at least had his liberty and share of God's air and sunshine; not so the lunatic—filth and darkness, hunger and thirst and pain were his portion. The theory then was that the poor wretch was possessed of the devil, he was an incarnation of the devil, and therefore he was given over to the evil one, and his treatment was devilish indeed, but the trouble was that the devil of ignorance and the devil of superstition was in the doctors and the public of that day. It is not many years since that the inebriate was equally unfortunate; the club, the pump,

and the prison was his portion, and today, in the great empire state of New York, there is not a place for the pauper inebriate, no asylum, no retreat, no resource but the prison or the penitentiary, and, although his treatment is less brutal than it was some years ago, he is still a criminal in the eyes of the law and treated as such. There is no state provision for the pauper inebriate, no legislative grant for his care and control, and no general law for the committal of either class, rich or poor, and the secret of the whole matter is that the apathy and attitude of the medical profession towards the inebriate has been such as to educate legislators and the public who elect them into wrong ideas concerning the inebriate. The fault lies at the door of the medical profession, and will only be rectified when the profession as a whole assume their responsibility in the matter and insist upon the proper recognition of the inebriate as a diseased person and not as a criminal or moral delinquent. If the inebriate is a diseased person why should we not deal with him as such?

If the diabetic, the excessive water drinker, applies to you for relief you do not read him a moral essay on the evils of drinking Niagara dry, or the danger of impeding navigation by lowering the water ways of the land by reason of his excessive thirst imprudently gratified, and yet your action would be just as reasonable as to read a moral lesson to the average inebriate, and just as useful; in either case the thirst will remain.

The late Sir Andrew Clark of London, a physician, and a man without a peer in the great galaxy of English physicians, wrote me some years since asking when, in the case of an inebriate, does the moral responsibility end and when does the moral irresponsibility begin. My answer was that I would apply his question to the case of a syphilitic, where the disease was acquired through a vicious course of life. Heal first and then say, as the great physician said, "Go, and sin no more, lest a worse thing come upon thee." Heal first, moralize

afterwards, and you will have an attentive, an appreciative, and thankful audience. Reverse the proposition and you will discourse to a very indifferent fellow mortal, if perchance you have an audience.

Yes, the physician should be a moralist of the highest type, a moral man from all standpoints, need I add also, a follower of the great physician; but he should never forget that he is a healer as well as a teacher, and the better he heals the better he will teach. The medical profession has been looking at the inebriate from a wrong and unscientific standpoint; the unfortunate one has crossed his field of vision, but his vision has been distorted and clouded by the fog of prejudice, but the mist is lifting and the day is dawning when the medical profession and the intelligent public and the legislatures of our land will be alive to the fact that inebriety is a disease and the inebriate a diseased person, and that he requires medical care and treatment, hygienic surroundings, isolation, and restraint. In other words, medical science should recognize and treat inebriety just as other diseases are recognized and treated.

The time is not far distant when there will be a revision of our laws, when the law, six months for "habitual drunkenness," so called, and fines will be repealed and wiped off from our statute books and relegated to the dark ages with the chains and handcuffs and cruel treatment of "bedlam"; when the chronic pauper inebriate will be assigned, not to the penitentiary, but to the hospital or special institution for the care and control of the pauper inebriate, on a parity, at least, with similar institutions as are now appointed for the pauper insane; and the location of such institutions will not then be exceptional, as now is the case, but universally established.

Thirty-eight years of almost constant labor in this field has convinced me that only through the influence of the medical profession will the chains which ignorance, prejudice, and superstition have forged, be stricken from the hands of the inebriate.

It was a physician, the illustrious Pinel, who brought the insane out of his dungeon, loosened his fetters, and set the captive free.

In England, Dr. Tuke, the alienist, followed Pinel in this particular, and in our own land Dr. Turner attempted to do for the inebriate that which has been done for the insane.

Medical science must do for the inebriate that which Pinel did for the mentally diseased. It would be but a "golden dream" of the future unless, as medical men, we vigorously push the disease theory of inebriety to the forefront of public and legislative attention.

Every state legislature should be memorialized on the subject until the inebriate receives the attention his case requires, demanding in the name of humanity and common sense that the inebriate should be cared for as a diseased and irresponsible person, dangerous to himself and to others, and that laws should be enacted in every state for his care and control. In this appeal we base our claim to be heard not only from a social, an economic, and a humane standpoint, but first, last, and always from the fact that we are dealing with a disease, the *disease of inebriety*.

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If the recent views advanced by Dr. Sajous of Philadelphia are correct the Gardner's preparation of iodine and phosphorus is one of the most valuable remedies that can be given for debility and various forms of nervous exhaustion. If the adrenal system and the pituitary glands are all-important in the perfection of nutrition and resistance to disease, experiments have shown that hypophosphites and iodine are the great stimulants to increase the activity of this system. Perhaps this explains many of the excellent results which follow the use of Gardner's preparation of these drugs. In the exhaustion from drug and spirits poisoning these remedies are unrivaled.

ARE THE QUESTIONS RELATING TO THE NATURE, EFFECTS, USES, AND ABUSES OF ALCOHOL AS EXISTING IN FERMENTED AND DISTILLED LIQUORS POLITICAL QUESTIONS, TO BE SETTLED BY VOTES AT ORDINARY ELECTIONS, OR ARE THEY TRUE QUESTIONS CONCERNING THE PUBLIC HEALTH AND MORALS, AND THEREFORE TO BE DEALT WITH BY THE SANITARY AUTHORITIES AND COURTS OF JUSTICE?

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BY N. S. DAVIS, M.D., Chicago, Illinois.  
Honorary President of the American Medical Temperance Association.

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To the members of the American Medical Temperance Association I once more send greeting, and respectfully ask your serious attention to the following suggestions:

Why do a large majority of medical men, sanitarians, and the people generally refuse to apply the same methods of reasoning and the same experimental investigations regarding the effects of alcoholic liquors on the human system, as they uniformly use in relation to the effects of all other drugs? When it is found that the unrestrained exposure of arsenic, opium, morphine, strychnine, cocaine, and carbolic acid in drug stores and dispensaries results in an occasional death from the accidental taking of a dose of arsenic or strychnine, or a designed dose with suicidal intent, the unanimous expression is that they are dangerous drugs and their sale should be restricted. And when it is seen that the unrestricted sale of opium, morphine, cocaine, and carbolic acid

results in an occasional death from accidental doses, and a much larger number of deaths by their designed use for suicidal purposes, and that a much larger number still become habitual opium, morphine, or cocaine users, by which their health and self-control are entirely destroyed, the emphatic expression of all classes is that these drugs are poisons dangerous to the public health and morals, and their sale is rigidly prohibited, except on physicians' prescriptions, and then to be plainly labeled "Poison."

But when it is seen, day by day, that the daily use of alcoholic liquors, even in small quantities, soon creates, in a large proportion of those who use them, an uncontrollable desire for more, until their higher mental faculties of sense and propriety and self-control are paralysed and their physical functions disordered, in which condition they are far more dangerous to themselves, their families, and to the community at large than the most inveterate morphine or cocaine eaters, do the people, the sanitarians, and majority of physicians unitedly cry out that the alcoholic drinks that are constantly creating so many thousands of ruined and dangerous habitual drinkers are poisons dangerous to the public health and morals, and therefore to be added to the statutory list of prohibited poisons? Not at all. Instead of recognizing the alcoholic liquor as a poisonous drug, thus directly dangerous and destructive to both mental and physical health, and demanding its addition to the statutory list of inhibited poisons, and to be dealt with solely by the public health authorities and courts of justice, if referred anywhere it is to the general field of politics to be voted for or against at the next election. When the next election comes, those who are disposed to vote for political prohibition are told that prohibitory laws do not prohibit; that they are always evaded and inefficient, and therefore it is better to *regulate* the traffic by a system of *high licenses*, the revenue from which shall go into the public treasury as a saloon bribe for the public conscience,

and the terms of the licenses limit from selling to minors and habitual drunkards, and generally require closing up the last half of the night and sometimes on Sundays but permit the unrestricted manufacture of new drunkards all day and the first half of the night, accompanied by every species of vice and immoral devices, and this is called the regulation of the sale and use of those alcoholic liquors that are more destructive to human life, health, and morals, and productive of more poverty, degeneracy, and crime, every three months, than is produced by all the other poisonous drugs known, in a year. Consequently, if political prohibition by popular vote did not effectually prohibit, the regulation by high licenses does not *regulate*. For it is well known that not one in twenty of the saloons and other places licensed to sell alcoholic liquors are conducted in honest and faithful compliance with the terms of their licenses, and the work of manufacturing paupers, drunkards, criminals, and degenerates still goes on under high licenses with sufficient activity to keep every poorhouse, police station, free hospital, asylum for the feeble-minded, reformatories, and prisons well filled with their victims, which is abundant evidence that regulation of the evils of liquor drinking by licenses, whether high or low, is a most conspicuous failure.

Surely, then, if *prohibitory* laws should be abandoned because they do not prohibit, regulation by high licenses should be abandoned because they do not *regulate*. And even if the terms of the licenses were honestly obeyed by refusing to sell to minors and habitual drunkards, the unlimited selling to moderate drinkers the whole day and the first half of the night, for at least six days in the week, has proved amply sufficient to rob thousands of families of their legitimate support, and to equally rob a large proportion of their patrons of their sense of propriety and self-control, in which condition they return home only to abuse their impoverished wives and children, or drive them half clad into the street, or even shoot

them dead, and then complete the work of destruction by sending a bullet into their own alcoholized brains, as has been done again and again. Indeed, the number of murders, homicides, suicides, holdups, and highway robberies reported daily, as resulting directly from the mental and physical disorders produced by the use of alcoholic drinks, is such as to demonstrate that alcohol as it exists in fermented and distilled liquors is the poison by far the most dangerous to both public health and morals, and more destructive to human life than all the other poisons named in statutory list for rigid suppression. Then why do not the public health authorities and the courts demand that it be placed at the head of that list, where everyone who sells it unlawfully can be held responsible for all damages resulting therefrom? If all licenses were withdrawn and the traffic in alcoholic liquors left free to stand on its merits, with no license fees with which to bribe or sear the public conscience, ten years would not pass before every known liquor seller would have been indicted as a public nuisance and his liquors as a most dangerous poison to public health and morals. So long, however, as those who recognize the enormous evils resulting from the use of alcoholic liquors ignore their direct relation to the public health and morals, and look to the domain of politics for remedies in votes either for direct prohibition, local option, or regulation by some system of licensing, they not only choose a wrong basis for action but also a method which settles nothing permanently. For the same state, county, town, or precinct that votes for prohibition or no-license this year may reverse it the next, which has thus far practically resulted in excluding saloons from numerous small towns and limited residence districts, while they continue in the more populous places and commercial centers, from which all who wish to drink can obtain a supply. The contest is therefore not one directly against alcoholic liquor as a subtle poison injurious to every function of the living body, in both health and disease, but against the



liquor seller and his saloon as a political party, backed by all the wealth of the liquor manufacturers of the country, while the prohibitionist and local optionist are obliged to ignore any effectual vote on all the other political questions that divide the two great leading political parties at the same election. They cannot vote a prohibition ticket and the ticket of the leading political party whose political principles and government policies they approve. And for that reason thousands of good Christian citizens, who, in their churches and public assemblies, denounce all liquor selling or drinking as a sin, nevertheless, when election day comes, vote the ticket of the political party whose general principles and public measures they have been accustomed to approve, and thereby leave the true prohibition voters in nearly the same ineffectual minority from year to year. When an individual or a company erects a building in such manner that it endangers the health or life of its occupants, or allows its water supply to become dangerously contaminated, does anyone suggest referring to a vote at the next election for a remedy? Or do the health officer and chief of police proceed at once to demand such corrections in the building and water supply as will remove the danger to the lives and health of the occupants? If a house is opened in any community for the purposes of gambling and licentiousness, does anyone propose referring to the next election the questions of its suppression or its regulation by a high license by which the public treasury will be enriched and, according to the terms of the license, only the more respectable class of patrons will be permitted to indulge in the ruin of both their health and morals; or do the police and executive officers proceed at once to seize their gambling tools, arrest the occupants, and close the establishment as dangerous to the public health and morals?

That alcoholic liquors for sale and use, whether in saloons, dispensaries, and other licensed places, or clandestinely in local option or prohibited territory, constitute the agents

most dangerous and destructive to human health, life, and morals is demonstrated by their creating and perpetuating in our country alone many thousand drunkards, and as many thousand impoverished families. Their use is the direct and admitted cause of a large majority of the homicides, suicides, highway robberies, safe-blowers, holdups, and other acts of violence reported daily in the public press. In the language found over the signatures of more than one thousand of the more eminent physicians, both in this country and in Europe: "Experiments have demonstrated that even a small quantity of alcoholic liquor, either immediately or after a short time prevents perfect mental action, and interferes with the function of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgment and of the will, and having other markedly injurious effects. Hence, alcohol must be regarded as a poison, and ought not to be classed among foods.

"Further, alcohol tends to produce in the offspring of drinkers an unstable nervous system, lowering them mentally, morally, and physically. This deterioration of the race threatens us, and this is likely to be greatly accelerated by the alarming increase of drinking among women, who have been hitherto little addicted to this vice. Since the mothers of the coming generation are thus involved, the importance and danger of this increase cannot be exaggerated."

Alcohol has been proved to be just as much an anæsthetic or narcotic drug as is ether, chloroform, morphine, or cocaine; and when taken into the living body it impairs every function, and, if repeated daily, also impairs every structure of the body. That it impairs mental activity, muscular force, nerve force, heat force, vital or protoplasmic force, and the natural vital resistance to the influence of toxic agents and other causes of disease, in direct proportion to the quantity used, has been proved by the most varied and accurate methods of experimentation by men eminent in the profession, both in Europe and America.

That it is *the poison* most dangerous to the public health and morals is abundantly proved by the number of its victims who crowd our poorhouses, asylums for the inebriate and insane, police stations, and prisons, and the constantly increasing number of homicides, suicides, and crimes of violence committed directly under its influence that are daily reported in the public press. To my mind, there is no more obvious or easily demonstrated proposition than that which assigns the uses of alcoholic liquors and their control to the departments of public health and morals, instead of the ever varying and inefficient field of politics.

In claiming that alcohol as it exists in fermented and distilled liquors is a dangerous and most destructive poison, to be legally declared such, and to be sold only on legally qualified physicians' prescriptions, and plainly labeled "Poison," we will doubtless be told that "in moderate doses it is tonic," and "a conservator of tissue, and therefore a food," and "a poison only in large doses or too frequently repeated."

In other words, that "it is its *abuse* that causes all the evil and not its temperate use." But is not the fact that our almshouses, hospitals, asylums, and prisons are kept constantly filled with its ruined and dangerous *abusers*, all of whom commenced on so-called *temperate* doses, sufficient evidence that any doses if repeated from day to day are dangerous, both to the individual and the community? Does the daily use of bread, meat, or potatoes, or any other article of ordinary food convert one-half of those who use it into either paupers or criminals; or has anyone ever been found *abusing* the use of bread or meat to such extent as to convert them into either habitual paupers or criminals? Again, when it is found that so temperate a dose as a single mug of beer, or glass of wine, or one drink of whisky, perceptibly lessens mental activity and self-control, retards the transmissions of impressions by the nerves, diminishes muscular strength, impairs the corpuscular elements of the blood and the nerve

cells of the brain as seen under the microscope, retards tissue metabolism and excretion of waste products, and increases the liability to attacks of all infectious diseases, are not these indubitable evidences of a poison, which, if repeated from day to day, would endanger both health and morals?

The same methods of investigation when applied to ether, chloroform, morphine, or cocaine and to the whole field of etiology in the laboratories of chemistry, physiology, and bacteriology are fully credited and readily acted upon. Then why not in reference to alcoholic liquors? The answer is twofold. First, because the effect of alcohol in diminishing the sensibility of the brain directly destroys the ability of the user to judge correctly concerning his own ability or the nature of his impressions; and the second is because human greed for the pecuniary profits of the manufacture and sale of alcoholic liquors outweighs the regard for human welfare. So long as the contest can be kept in the field of politics these reasons will prevent anything more than temporary or partial success. But if it could be fully transferred to the departments of public health and morals, aided by the courts, a fair degree of success would soon result. I do not say that the success would be complete, because no penal laws have entirely suppressed the crimes against which they were enacted. The most efficient laws against murder, theft, adultery, etc., have existed since human history began, and yet these crimes continue to be committed, but far less frequently than they would be if instead of laws for direct suppression they were *regulated* by licensing designated persons to do all the killing, stealing, etc., on consideration of the payment of from \$100 to \$500 into the public treasury annually.

The Reading Railroad have issued an order positively forbidding the use of cigarettes by those employed in the passenger service of the New York division. The penalty for failure to obey this mandate is dismissal, and the reason given is this: "It is not safe to trust the lives of passengers in the hands of men who smoke cigarettes."

## INFANTILE ALCOHOLISM.

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BY DR. L. G. ROBINOVITCH, of New York City.

Editor of *Journal of Mental Pathology*, etc., etc.

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Two forms of infantile alcoholism may be recognized—hereditary and acquired. The hereditary form develops during foetal life, at any period from conception to birth. The factors in hereditary alcoholism are confirmed alcoholism in the parents, and the age of the foetus. The former is the chief factor. Probably a direct toxic action is exercised by alcohol on the reproductive elements. Testicular atrophy has been observed, and in women addicted to alcohol, menstruation ceases prematurely and the ovaries atrophy. A child born under these circumstances is a product of parents whose reproductive organs have suffered from chronic alcoholism, but is not a hereditary alcoholic in the proper sense of the word.

The subjects of hereditary alcoholism have symptoms from birth. Their general constitution is feeble, they lack resistive power to infection. They succumb easily to gastroenteritis, bronchitis, meningitis, etc. Some writers think that in large commercial and industrial centers fifty per cent. of the children die before the end of the third year, and convulsions is one of the most frequent causes. Parental alcoholism is the dominating cause of the enormous infantile mortality among the working classes of Russia, Belgium, and France. Those who survive the first few years of life generally show some marked defect—symptoms of digestive, respiratory, or nervous disorders, with consequent liability to

some forms of disease, such as tuberculosis or meningitis. In some cases of hereditary alcoholism, the more common characteristics of alcoholism may manifest themselves in the child, such as tremor and increased mucous secretion. Later in life hysteria, neurasthenia, epilepsy, and chorea are very prevalent. In regard to epilepsy, Bournville has observed that in 163 families in which either the father or the mother was addicted to alcohol, 244 children suffered from epilepsy, and Kovalewski has noted 100 epileptics in 60 families. Various forms of mental disease, such as imbecility, idiocy, feeble intellect and memory, are very common and even some forms of gross cerebral disease, such as malformations, hydrocephalus, microcephalus, etc., are observed. Later some of the more marked forms of mental disease, such as melancholia and mania, may be expected. The most common mental characteristics of such children are feeble memory, inability to learn, and a certain want of perception of the ordinary duties of life. A girl, aged 15, the child of alcoholic parents, could not go from one room to another to fetch some object without forgetting what she was sent for. Sleep is generally troubled by nightmare, dreams, night terrors, etc. According to Morel, idiocy does not appear till about the third or fourth year. In one case a drunken father had seven idiotic children. Dipsomania, as may be expected, is extremely likely to appear even at an early age. Thus the hereditary alcoholic becomes a drunkard. In such children juvenile crime is prevalent. In Switzerland, according to the investigations of the Federal Council, half of the children detained in houses of correction are the issue of alcoholic parents.

The most frequent source of acquired alcoholism is lactation. Alcohol is conveyed to the infant with the milk in proportion to the amount taken. The researches of Klingemann, Roemann, and Nicloux have shown that alcohol passes into the milk whatever be the quantity consumed. According to Vallin, it is common in Paris to give nursing women

a litre or more of wine, often of the stronger and more generous kind. Not infrequently in addition an unlimited amount of beer is given. It is supposed that alcoholic beverages consumed by the nurse impart strength and vigor to the infant, whereas the opposite is the case. In several countries, Belgium, Russia, and parts of France, it is the custom to soothe the cries of infants by giving them a piece of sugar steeped in kirch, eau de vie, or gin, and tied up in a piece of rag which they can suck. Sometimes a piece of bread or biscuit, steeped in some form of alcohol, is given in the same manner. In some parts the mothers give the children a teaspoonful of "grog" to put them to sleep. Wine is regarded as beneficial during dentition, and in some parts of Austria it is regarded as indispensable for teething children. The least indisposition, cold, colic, or headache is regarded by some as calling for alcohol. One source of infantile alcoholism is the consumption of fruit preserved in brandy, a favorite commodity in the towns and villages of France. The onset of puberty is sometimes signalized by dipsomania, which in some instances becomes chronic. The writer has observed this in both boys and girls; in the latter, the tendency sometimes disappears when menstruation has become established, but is apt to return at the menopause. The custom of giving boys wine or spirits is common in certain classes, and is a frequent source of early alcoholism.

The symptoms of acquired infantile alcoholism differ from those of the adult in the greater intensity of the toxic effect, especially on the nervous system. In the infant the alcoholism may be acute or chronic. The acute is generally characterized by epileptiform convulsions. A breast-fed child, aged  $2\frac{1}{2}$  months, was restless, and had intercurrent attacks of generalized convulsions. The mother took morning glasses of schnaps daily. She was ordered to take the child from the breast and to feed it on cow's milk. In a few days the convulsions ceased. The child was again put to the breast and

the convulsions recurred immediately. The child was weaned and there was no further trouble. Generally convulsive attacks of alcoholic origin can be distinguished from ordinary forms of infantile eclampsia by the absence of pyrexia and intestinal troubles. Sometimes the acute alcoholism of infants resembles meningitis. The writer quotes the case of a child, aged 2½ months, with stiffness of the neck, intermittent pulse, deep respiration, vomiting, hydrocephalic cry, etc. The wet-nurse happened to leave, and it was ascertained that she drank heavily and was intoxicated every night. The meningitic symptoms disappeared. Lastly, infants may manifest acute alcoholism in the form of simple drunkenness.

Chronic alcoholism is generally characterized by tremor, restlessness, crying, loss of sleep and of weight, all of which symptoms vary in degree according to the amount of intoxication. In some cases insomnia is absolute, and in these convulsions are liable to appear, accompanied by strabismus. Gastro-intestinal disorders occupy an important place among the symptoms, acute or chronic; gastro-enteritis may occur and cause marasmus. Polymorphus erythema is a common symptom. Boils and impetigo also occur. Maran has divided disorders of nutrition due to alcoholism into two periods. The first is characterized by nervous symptoms without digestive disturbance or alteration of temperature; the infant is soft and flabby, sometimes unduly fat. The second period is that of malnutrition as above described, ending in athrespia. These nutritive disorders undermine the child's constitution to such an extent that it becomes liable to various infective conditions. In the child a few years old acute and chronic alcoholism occur. In the former the symptoms are of the usual kind—excitation, inco-ordination, and in severe cases coma, the latter coming on more rapidly than in the adult; in fact, in some cases constituting the only symptom. In bad cases epileptiform convulsions supervene, and the child dies in a few hours; these symptoms are much more marked in the



case of children of neuropathic heredity than in others. In such, small doses of alcohol are apt to cause great excitement, disorder of movements, shouting, and even maniacal symptoms, with possibly acts of violence. In one case a child attempted to throw his little brother underneath the wheels of a tramcar. The depressed form of drunkenness is rare in children, and is liable to be accompanied by suicidal tendency. Chronic alcoholism in the child is characterized for the most part by the same symptoms as in the adult, except that those attributable to the nervous system are much more marked.

Thus, nightmare, sensory and motor disturbances, night-terrors, etc., are prominent symptoms, and when they persist should always raise a suspicion of alcoholism. Weakness of intellect and the appearance of convulsions in a child of five or six years of age are suggestive of alcoholism. Impetigo, eczema, and prurigo are met with in such cases. Growth is retarded and nutrition is poor. Thus a girl whose parents were confirmed alcoholists had consumed daily half a litre of wine since the age of three years. At thirteen she had ascites and other symptoms of hepatic cirrhosis. Her appearance was that of a child of eight or nine, and her development in every respect was below normal. In another case a child of fourteen, whose father and mother were confirmed drunkards, consumed daily from a half to a litre of wine since the age of two. After seven, Chartreuse and other liquors were also taken. At fourteen she had the appearance of a child of five or six, the limbs, especially the legs, were small, and the intelligence defective. The effect of alcohol on growth has been investigated experimentally by Frick. To puppies he administered alcohol daily. They showed marked retardation of development compared with others of the same litter, and some had epileptiform attacks and died. The pathology of infantile alcoholism does not offer any special features, the organ being affected as in ordinary cases.

Prognosis. According to Morel, hereditary alcoholism presents different degrees of gravity. The first generation, if placed under favorable circumstances, seem capable of improvement, and satisfactory results may be expected, provided every care is taken; but the children of the second generation are almost certainly incapable. The prognosis of acquired infantile alcoholism is variable, depending upon the acute or chronic character of the intoxication, and the means which can be employed to obviate the habit. The danger in such cases is of some intercurrent condition — such as tuberculosis and the many neuropathic accidents described above.

Treatment. Independently of state regulation of the sale of alcohol, especially to children, much may be done by the careful instruction of parents and by every effort to correct the widespread erroneous idea that alcohol is beneficial to children, and that the nursing mother requires to take it in some form. It is important to instruct newly married people as to the evil results of indulgence in alcohol. Mothers addicted to alcohol should not nurse their children, and in the upper classes a non-alcoholic wet nurse should be obtained. No child should be given alcohol in any form until the age of ten. From ten to twenty light wine with water has not necessarily any bad results, but it is unnecessary. Irritable, nervous children, especially those with neuropathic tendencies, should be total abstainers. In all cases of mental enfeeblement total abstinence offers the best chance of amelioration. — *Gazette des Hospitaux.*

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At a banquet given to Dr. Lorenz, the famous surgeon, wine was served. He pushed his wine-glass aside and called for a cup of tea. Some one inquired if he was a total abstainer. He answered, "I am a surgeon. My success depends on having a clear brain, a steady nerve, and firm muscle. No one can take any form of alcohol without blunting these physical powers; therefore, as a surgeon, I must not use any form of spirits."

THE CORRELATION OF ALCOHOLISM, CRIME, AND  
INSANITY.\*

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BY C. A. DREW, M.D.,

Medical Director, State Asylum for Insane Criminals, Bridgewater, Mass.

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On December 21, 1901, J. M., a smooth-faced boy of 17 years, of fair complexion, dark brown hair and blue eyes, was admitted to the State Asylum for Insane Criminals from the State Reformatory. The physician's certificate, upon which the commitment was based, reads as follows: "To His Excellency Governor Murray Crane: We have this day examined J. M., seventeen years of age, committed August the fourth, 1900, for larceny, sentence expires August 29, 1905, and would respectfully report: J. M. has been reported several times for being noisy at night; he has been five times reduced to the third grade. At one time he tried to escape, and was found with a club with which he was going to try to assault the officer. He was quite pleasant at our examination and announced at once that he was an anarchist, that he did not believe in society but was a society man. That eminent men in this state appear to him at night in the spirit form and threaten him with false charges, and it was not infrequent to have the spirits of some of the officers present at the same time; that he was going to kill all of them, as well as some people who were trying to cheat him out of a large farm in Texas that has been in his family for years. During the whole of the examination he would smile most of the time, but sometimes he would scowl and try to appear very earnest. His pupils are dilated, his pulse was small and irregular, and he has

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\* Read before the American Association for the Study of Inebriety in Boston.

lost fifteen pounds. There is much about him that is undoubtedly assumed, and nearly all the stories about his education and habits are false; he says he is a graduate of Harvard and was sentenced here for killing two Chinamen at Three Rivers; but he has been very persistent in his threats of killing, and he harps on the ghosts coming into his room at night, and has lost flesh, although he eats his rations all up. We feel that he has delusions of persecution that are more or less mixed with weak-minded ideas of anarchism, and advise that he be sent to the asylum for insane criminals."

It is in the records that this young man was found on examination to have a fairly well developed bony framework, but rather thin in flesh; cutaneous circulation sluggish, pulse small, regular, and easily compressed, heart and lungs, palate and ears normal; tongue protruded straight with no marked tremor, and no knee-jerk; the so-called "patella reflex" could be obtained.

Concerning the mental examination it is written that he was "moderately excited, silly, frequently making irrelevant remarks. Alternately scowling and grinning. Has considerable difficulty in collecting his thoughts, but memory appears good. Apparently has had delusions of various character for some time. Says that the officers made trouble for him and provoked him, that one of the officers beat him. Says he has been unable to sleep for some time, that he broke up the furniture. Says that he wanted to kill one of the officers there, and that when he gets a chance he will run a knife into him."

Concerning his previous history, as related by himself, he says: "He is twenty-one years old and thinks he was born in Worcester, Mass., but is not sure, as he was put into an orphan asylum when a baby. Father, Jeremiah, is dead. Mother, Ellen, married to M. L. B.; thinks he has one sister dead. Family history unknown. Has been smoking, chewing, and drinking since eight or nine years of age. Drunk 'lots of times.' Has been through the grammar school. Sent

to Oakdale Truant School at fourteen for two years. His first arrest was for stealing knives in Worcester, put on probation; next for stealing rubbers, probation; next for stealing a copper boiler. Spent about two months in House of Correction, Worcester, then discharged. Next arrested for stealing silk skirts. Sent to Lyman School. Assaulted an officer there with a base-ball bat and was transferred to Concord. While in the latter place has been frequently punished for breaking the rules, striking officers, and breaking furniture."

I read you the plain records of this case because this young man represents a class not small, numerically, among those admitted to the Massachusetts Asylum for Insane Criminals, and because his case embodies some facts and illustrates some truths related to the subject of this paper. There are phases of his case pointing to a bad heredity and certain symptoms doubtless depending on the direct toxic effect of alcohol on the cortical neurons of the cerebrum. An almost total absence of moral sense is not uncommon in patients whose father and mother were both inebriates, even though the patient has never used alcoholics. And we do occasionally receive a patient born of inebriate parents who is an abstainer from alcoholics, not for any moral reason, but seemingly because his embryo organism revolted from the alcohol in his mother's blood. Fantastic and irrational ideas, hardly fixed sufficiently to be called delusions, are common to the weak-minded offspring of such parents. It should be noted that our patient says he was put into an orphan asylum when a baby, and we have very little reliable information concerning his parents; but I would observe that it is not usual for a boy of eighteen or twenty-one, even, though he has been smoking, chewing, and drinking since the age of eight or nine years, to have progressed so far in the time unless a neuropathic or alcoholic heredity was his heritage. His claim of being an anarchist, that he did not believe in society, etc., was doubtless the fruit of his reading about the assassination of our recently deceased

president. The loss of knee-jerk, or patella reflex, as well as other nervous symptoms present on his admission, suggested a condition approaching multiple neuritis, of which alcoholism is the most important causative factor. Ordinary acute alcoholic insanity is curable, but moral imbecility or instinctive criminality, due to a neuropathic or inebriate heredity, is usually incurable, and I am not very hopeful concerning the future of our young friend J. M.

I would add that J. M. is not demented in the ordinary sense. On the contrary his mind is very active, and he looks you in the eye with a saucy, defiant smile. He is fertile in resources in attempting to change his dwelling place. He has slid down a dust shoot from a second story, climbed the face of a brick building by the aid of projections which a good sailor might have hesitated to utilize, passed hand over hand along telephone wires towards what seemed to him to be liberty until the wires broke, leaving him, after something of a fall, unharmed and still within a walled enclosure. Feigning a desire to have his windows closed he called a strong, experienced nurse into his room at night and attempted, by a sudden attack, to take the latter's keys, notwithstanding the nurse was forty pounds heavier and stronger than himself. Failing to get the keys he sprang quickly from his room, turned a lock from without, leaving the nurse a prisoner within, while he waited in the hospital corridor for another nurse to capture, perhaps feeling as proud as did General Funston after the capture of Aguinaldo. The other nurse captured J. M., but our hero was not discouraged; it is not in his mentality to be discouraged by creatures of flesh and blood. He is a favorite among his fellows and is as devoid of fear as the daredevil fictitious heroes of Anthony Hope or Richard Harding Davis. His social instincts are well developed, and let me say in passing that good men and women seem to be waking to the transcendent importance of the social instinct in the human animal. This seems to me to be among the most hopeful signs of the

times, for the social instinct, of which the procreative and maternal instincts are parts, is a living power, ever acting, leading to an earthly heaven or hell, according to which way is made the most attractive.

Turning from the concrete case of J. M. to the more general question of the correlation of alcoholism, crime, and insanity, a time limit alone would exclude all but a few of the pertinent facts which have come under the writer's observation. During the year ending September 30, 1901, cases were admitted to the prison department of the State Farm as follows: 1,118 cases for "drunkenness," 311 cases as "vagrants" or "tramps," and 29 as "vagabonds" or for being "idle and disorderly"; 18 cases were committed for other offenses, the majority of whom were transferred from other penal institutions that the prisoner might have the benefit of the hospital department of the State Farm. Of this total of 1,476 cases admitted within a year 691 had been previously committed. For 356 this was the second commitment, for 10 it was the eighth commitment, and for one it was the seventeenth admission as a prisoner to the State Farm.

During the past two years 154 cases were committed to the State Asylum for Insane Criminals and Offspring and department of the State Farm by due process of law. These 154 cases were from the various penal institutions as follows: 35 from State Prison, 35 from the several houses of correction in Massachusetts, 15 from the Massachusetts Reformatory, 10 directly from the courts or jail, not having received sentence, and 58 from the prison department of the State Farm. Twenty-three of these 154 cases were arrested for crimes "against the person," including 4 cases for assault with intent to kill, 2 cases for manslaughter, and 6 cases for murder. Breaking and entering was the charge in 24 of 154 cases. It is difficult to get a reliable family history from many of these patients, and almost impossible to get the truth from near relatives. These men usually talk frankly, sometimes boast-

fully, of their own shame. Many do not hesitate to tell the truth about a father's intemperate habits, but a mother's weakness is another question, and to lie boldly and perseveringly, lest a reflection be cast on her name, is an impulse native even to the typical insane. But, in spite of the difficulties, the painstaking efforts of my senior assistant have secured information in the majority of cases, in which such errors as exist will be in the minimizing of the facts pointing to a bad heredity.

Of the 154 cases admitted in two years 11, or 7 per cent., claimed never to have used alcohol as a beverage. Of these 11 three were epileptics and two were well-marked cases of imbecility. This will indicate how rare it is for one who is an abstainer from alcoholics and not an imbecile or an epileptic to be sent to the asylum for insane criminals in this state.

Ninety-six, or 62 per cent., of these cases considered themselves hard drinkers, the majority having been drunk many times. The remaining 31 per cent. considered themselves only moderate drinkers, or were too demented to tell, or for personal reasons refused to give information concerning their habits as to the use of alcoholics. Fifty-six, or 36 per cent., of these cases acknowledged intemperate fathers, while 21, or less than 14 per cent., acknowledged intemperate mothers. For many reasons it is impossible to say just what proportion of our patients are insane because of alcoholism, even more difficult than to determine just how much of the crime in our land is due to the same toxic agent. My observation leads to the belief that the offspring of sound, temperate parents are less likely to suffer from alcoholic insanity, though heavy drinkers, than the second generation, who may not drink half as much. I would agree with Berkley that pronounced alcoholism in the parents always means examples of mental disease and weak-mindedness in the children, provided the alcoholic tendency is not acquired somewhat late in life. An inebriate father is certainly a handicap and an inebriate mother is a



greater misfortune, but the offspring of an inebriate father and mother seems almost to be doomed from its birth. The question whether alcohol may be called a food, so much debated, seems to me to be mainly of academic interest, largely a splitting of hairs over terms.

I prescribe alcohol sparingly as a medicine, as I do strychnine, nitroglycerine, and digitalis, but almost never alcohol in case of young patients. But as a food, beef essence, cereals, and peptonized milk are much more reliable friends.

The pathology of alcoholism, criminality, and insanity each has a length and breadth of its own, and can hardly be touched upon in this paper.

The man who drinks because his comrades drink is not of a kind with him who yields to an impulse from within which has almost the resistless force of an epileptic explosion. The latter is just as truly the victim of a neurosis as the epileptic. The instinctive criminal, the habitual criminal, the occasional criminal, and the criminal by passion are not of a kind, although the lines of demarkation cannot be sharply drawn. In all these cases, however, alcohol plays an important causative role because, as Victor Horsley of England, Kraepelin of Germany, Berkley of Johns Hopkins, and others have affirmed and demonstrated, the oft-repeated presence of even a moderate quantity of alcohol in the circulation will cause marked changes in the cortical neurons of the brain, a change in the shape of the nucleus, the disappearance of the granular masses, and the shrinking of the protoplasm of the cell body are among the changes discovered by modern laboratory research. Because these cells are the material basis of man's moral sense and conscience, the physical representatives of his aspirations, his likes, his dislikes, his hopes, his fears, and his will power, their harm or immunity from harm seems to me a question before which the question of the food value of alcohol, or the effect of alcohol on stomach and liver even, is significant. It seems to be a law of nature that the most highly organized tissues suffer

first and most from toxic agent in the blood, and so it is that the moral and ethical sense suffers first and most, and is often the only manifest evidence in the first generation, of the baneful effects of alcoholics taken in moderate quantities, even as these attributes of mind are the latest developed and the crowning glory of men.

The widely-varying powers of resistance of toxic agents of the central nerve cells of different individuals and temperaments has given rise to extremes of opinion. The neurotic fall an easy victim to the direct action of alcohol, while to the more stable crime is apt to stand as the child and insanity as the grandchild of intemperance.

Concerning the relation of alcohol to insanity among the non-criminal insane in Massachusetts, the State Board of Insanity has embodied on page 81 of their report for 1901 the aggregate statistics from five state hospitals, and the Boston Insane Hospital for the two preceding years. These statistics embrace 4,437 admissions, and the cause of insanity in 14.88 per cent. of these cases is given as intemperance. This may be taken as the most reliable information we have on the subject, but it must be remembered that statistics concerning the causation of insanity are confessedly unreliable for many and manifest reasons. On the one hand, members of the family refuse to acknowledge a bad heredity, and the patient is inclined to conceal bad habits. On the other hand, a single factor is commonly recorded as the cause of insanity when many factors have been potent influences. A neurotic organization — degenerating nerve cells — may cry for the anæsthetic effects of alcoholics, even as alcohol may cause this same degeneration.

The statistics referred to include both men and women, while alcoholism, as a direct cause of insanity, is about three times more common among men than women. A study of the statistics of the Worcester Hospital for Insane, the reports of which evidence much pains in investigating causation, seem

to show that alcoholism has been a sufficient cause of insanity in about seven per cent. of the women and twenty-one per cent. of the men, and a casual factor in about ten per cent. of the women and thirty-two per cent. of the men admitted to that hospital. The poverty, overwork, stress and worry, blighted hopes and consequent ill health which follow in the wake of inebriety, are not debited to alcohol in these statistics. If these so-called "moral and mental" causes were traced back, the proportion of insanity charged to alcoholism might be much more equal between men and women. — *Medical Record.*

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#### ALCOHOL AND ACCLIMATION IN TROPICAL COUNTRIES.

The famous Dr. Wulfert has lately published a paper on the effect of alcohol on Europeans in tropical countries. It is more dangerous, he says, than malaria or climate fever, as it at the same time affects the digestive organs, the brain, and the nervous system. Every scientist who has spent some time in tropical countries agrees with the opinion that the digestive organs, the stomach, and the bowels easier get out of order in hot than in cold climates, and that the breaking-down effects of alcohol are considerably stronger in the tropics than in more temperate climates. A person addicted to the use of alcoholic liquors will there have his stomach entirely out of order in two weeks.

It is the same way with the nerves. The moderate use of alcohol continued with the heat causes an intolerable somnolence, weakness, heaviness in the limbs, difficulty of working, and low spirits. The effects on the brain show themselves by dizziness and in fits of bad temper that sometimes cause real madness. These effects of the alcohol show themselves especially during the rainy time, when the air is saturated with moisture. As a proof that these troubles really come from alcohol can be mentioned that the Hollanders in India, who do not use alcoholic beverages, are able to work hard either at mental or muscular labor even during the hottest times. — *B. E. Hockert.*

HYOSCINE IN THE TREATMENT OF MORPHINISM.

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BY T. D. CROTHERS, M.D., Hartford, Ct.

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The revival of hyoscine hydrobromate as a remedy to stop the suffering from the withdrawal of morphine or alcohol again brings into prominence a valuable but very uncertain drug. The claims that it is a substitute for morphine to prevent the suffering following the withdrawal of the drug, and that it is a safe and harmless drug, are not verified by careful study and experience. If the obliteration of pain and conscious suffering is the principal object sought in the treatment of morphinism, this drug will accomplish this purpose. If in securing this object a more profound toxic state is produced, prominent by prolonged delirium, stupor, and sense disturbances with collapse, hyoscine appears to be a very dangerous remedy. In both morphinism and alcoholism there are toxic states of the brain centers, together with anemias, hyperemias, and localized irritations. Any drug which intensifies these conditions is very unsafe. Drugs which diminish the power of elimination, increase the growth of toxins, and break up nutrition, are to be avoided. In all drug addictions there are toxic states with a tendency to delirium and convulsive activity which are to be avoided if possible. In the withdrawal of both alcohol and morphine this tendency to delirium and exhaustion should be prevented as far as possible by such measures and remedies as will encourage the elimination of the poisons and improve the nutrition.

Not infrequently in the withdrawal stage of both alcohol and morphine, mild states of delirium and dementia appear,

which if left to themselves speedily die out, but if treated with drugs which have a tendency to increase this condition, serious results follow. The withdrawal period in the treatment of drug addictions is usually regarded as the most important, when literally it is of little significance, compared with the after-treatment. The physician following the patient's exaggerated estimate of this period concentrates his measures and remedies on this event, which is in reality quite insignificant compared with other stages of the disease. The conditions which follow the withdrawal in proper surroundings are easily controlled by many simple and harmless remedies and measures, and it is difficult to understand why dangerous remedies should be used to accomplish what can be done so easily, and with as little risk. When hyoscine was first introduced, many very enthusiastic articles appeared, claiming that it was a substitute for the painless treatment of morphinism and of alcoholism. Since then it has been used by quack specifics in "quick-cure asylums," and when the patient becomes delirious and the symptoms alarming, hyoscine is withdrawn and morphine is given. In many instances the patient is sent out from the asylum as cured. He is given a tonic preparation of strychnine, hyoscine, and morphine to build him up. Later it is found impossible to be comfortable without this tonic, and after taking it for a time he gets discouraged and relapses.

A number of cases have come under my care in which morphine-takers, after being treated by irregulars, either at some "gold cure place" or by specifics taken at home, became delirious. The form of the delirium, with dilated pupils, and peculiar hallucinations, and excessive thirst, were strong indications that hyoscine had been used. I have made several tests of the effects of hyoscine in a number of cases of morphinism, and also of alcoholics, and always with bad results. The protracted delirium and pronounced exhaustion were exceedingly difficult to treat, and the recovery was slow and

unsatisfactory. It was given in small doses often repeated, and in large doses at long intervals, but the effects were practically the same. In each instance the morphine was withdrawn in a short time, generally the first day, and all consciousness of pain and suffering was obliterated after the first or second dose of the drug was given. In each case delirium with hallucinations and delusions came on after the second or third dose, and continued from two to four weeks. In three instances the delirium lasted two months, and in one instance the mind did not recover, and the patient was placed in an insane asylum, where he remains at this present time, two years later. Two alcoholics never recovered fully; while not drinking, they have become mild cases of dementia with great prostration. In all these cases the stupor, delirium, and general relaxation with extreme exhaustion was prominent. Excessive dryness of the throat and mouth lasted for a long time, the patient using large quantities of water, and suffering from profuse sweating, with irritation of the bowels.

In a comparison made with two cases taking the same amount of morphine, about the same physical condition, one was treated with hyoscine in large doses and the morphine withdrawn at once. The delirium and exhaustion lasted three weeks, and the convalescence extended over two months. In the other case the withdrawal period lasted five days, and baths, electricity, bromides, lupulin, and other mild narcotics were given to lessen the acuteness of the nerve irritation. There was no delirium, only general exhaustion, from which the patient rapidly recovered, and in two months resumed his business without any other symptoms except exhaustion from over-exercise.

A prominent physician, who was a morphine-taker, tried to cure himself by taking large doses of hyoscine. He died suddenly, and there were many reasons for believing that this drug was an active cause. A former patient of mine who had relapsed was treated by a physician with large doses of hyo-

scine and the morphine removed at once. The delirium continued for two weeks, then suddenly terminated in coma and death. The physician was very confident that the drug was the active cause of the final collapse.

No one man's experience is sufficient to decide authoritatively on the value of this drug. There are, no doubt, many cases in which it might be used to advantage, but as a rule I think it is very dangerous in both morphinists and alcoholics. In these cases there are so many unknown conditions, and states of poison and exhaustion present, that it is empirical to attempt to reach them by drugs of this class. Reckless medication in the treatment of these drug habitués is responsible for the death of a large number.

In a general way the action of morphine and alcohol is manifested by more or less uniform symptoms, but the real pathological condition varies widely; hence there can be no specifics, nor any remedies that approach a specific, which can be used in all cases. The withdrawal of one narcotic and the substitution of another can never bring about a cure, and the covering up of the craze for the drug is mere chemical restraint, which fails, and is followed by greater degeneration. To use one drug as an antidote for another in drug addictions is a very doubtful measure. From my experience I should never use hyoscine in morphine or other drug addictions, and I think further experience will sustain this opinion. — *Therapeutic Gazette.*

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M. de Tera, the general superintendent of the railroad system of Germany, has issued orders that all employees on the railroads who are not total abstainers will be discharged at the earliest possible moment. He asserts that no moderate drinkers will be retained in any position of trust. The orders end with this significant sentence: "Temperance men with clear brain and steady hands are the only ones who will be retained and who should apply for positions."

HISTORY OF THE INTERNATIONAL ANTI-ALCOHOL CONGRESSES AND THE TEMPERANCE MOVEMENT ON THE EUROPEAN CONTINENT.

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BY DR. A. FOREL of Switzerland.

Translated by B. E. Hockert of Hartford.

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At the end of the year 1870 Miss Charlotte Gray started a Good Templar Lodge in Antwerp, and in 1877 Rev. Rochat of Geneva started the Blue Cross Society in Switzerland. The temperance work on the British Islands and in the Scandinavian countries were almost unknown at that time, and had very little influence on the work in central Europe. But at this time a Doctor Alphons Moeller in Brussels, Belgium, became interested in the temperance movement. He and Miss Charlotte Gray succeeded in 1885 in organizing a meeting of abstainers at Antwerp against the abuse of alcoholic beverages. Mr. Houzsan de Lehais was president of this meeting. This was not a congress, but its intention was to introduce in central Europe the English methods of giving expression to the total abstinence movement. The fee was very low and invitations were sent to everybody who was interested in the anti-alcohol movement. The eleventh of September, 1870, the meeting was opened with a great number of English representatives, a few prominent men from Holland, Belgium, and Switzerland; America, Sweden, and Germany were also represented. This was literally considered the first anti-alcohol congress. Dr. Moeller, in company with Dr. Vanderoy, published the proceedings in a volume of 160 pages. It contains almost exclusively orations and appeals, but no scientific



papers. It was a protest meeting only, but an interest was awakened, and it was decided to hold another meeting in Zurich in 1887. The work of preparation was left entirely in the hands of Prof. Aug. Forel and Miss Gray. After hard work Forel succeeded in forming a committee and invitations were sent to all parts of the world. Prof. Forel tried to get many scientific papers and something more than orations. Ten countries were represented officially. The number of delegates was 322. At this, the first congress, the moderatists of Germany and Austria had a strong fight with the total abstainers from Sweden and the English speaking countries. It was at this time that central Europe first learned that such a thing as a scientific and sociological study of alcohol questions existed in other countries. The proceedings contained 275 pages. It was not all scientific papers, but of much more real value than the first. This congress had some practical results. The International Anti-alcohol Union was started; the Sanitarium for Inebriates at Ellikon was established; a temperance movement in the schools in Switzerland was provided for; a social and hygienic temperance movement was introduced in central Europe. It was decided to hold the next gathering in Christiana, Norway, so that the members could get an opportunity to study the temperance work in the Scandinavian countries. After much hard work in preparations this congress convened at Christiana, September 3-5, 1890. The name "congress" was here first applied to the meeting, and it was called the Third Anti-alcohol Congress. The majority of the members were total abstainers, and moderatists were in a helpless minority. The proceedings formed a book of 417 pages and contained a great amount of statistics of much value. From the efforts of Dr. Granfelt of Helsingfors, Finland, this congress decided to start "The International Magazine against the Drinking Habit." This is yet published in Bâzel, Switzerland, and is considered the best publication of its kind in the world. The fourth congress was held in

Hoag in 1893. The ex-Secretary of State Decmskerk presided. Here the battle between moderatists and total abstainers was renewed, and every effort was made to drive the latter from the field. But the moderatists were too much in a hurry to get to their beer glasses and, as usual, the total abstainers were left as victors on the field. The proceedings formed a book of 371 pages. The next congress took place in Bazel in 1895 and was of the greatest importance for the anti-alcohol movement. It was here that Drs. Smith and Turer first published their great discoveries of the effects of small doses of alcohol on mental work. The number of delegates were double of that in Zurich, and the proceedings filled 562 pages. But this congress was of importance even from another side. For the first time festivals and social parties were arranged without wine or other alcoholic beverages. The greatest joy marked those socials and the most pleasant time was spent at them. At this time the moderatists had to keep quiet, for they found at last on which side the power and the enthusiasm was.

The next congress, the sixth in order, was held in Brussels, August 30 to September 3, 1897, with Secretary of State Le Jeune as president. If we read the three volumes of the proceedings, 724 pages, we find at once the enormous advance in the anti-alcohol movement made during the twelve years since the first meeting convened in Antwerp. The spirit of the congress at Bazel ruled here and gave its color to the Brussels congress. The membership was about the same as in Bazel, and the large number of official delegates proved that those congresses had won the confidence and respect of the governments.

For Belgium this congress became of the greatest importance, as it was the starting point of a strong total abstinence movement in that country. In the name of the French government Dr. Legrain invited the next congress to meet in Paris in 1899, and the invitation was accepted with enthu-

siasm. This congress convened in April and lasted five days. It was of the greatest importance, thanks to the work of Dr. Legrain. The press and the public opinion were greatly influenced by it. On a motion of Dr. Legrain the name was changed to Anti-Alcohol Congress, thus giving more acknowledgment to the total abstainers without entirely excluding the moderatists. This congress became the starting point for a total abstinence movement in France. The number of delegates was over 1,100, and the proceedings are two volumes of 1,237 pages.

The eighth congress, in Vienna in 1901, was a larger step forward. The president was Dr. Gruber. This congress was divided into sections as the sixth; the number of delegates was over 1,300, and many prominent persons were present at every meeting. The whole press of Austria-Hungaria gave the greatest attention to the congress. The social-political side of the question came to the front, and never has the alcohol question been treated with more enthusiasm, but at the same time in a more scientific and complete manner before. The secretary of state, Dr. Harte, was honorary president, and Minister Van Korber delivered a remarkable address. The minister of education in Hungaria took an active part in the proceedings. Never before had such a representative gathering brought out the exact facts concerning alcohol. The Vienna congress left a great impression and will be of enormous importance for Austria-Hungaria. When we look backwards on the seventeen years since the first "Meeting against the abuse of alcoholic beverages" convened in Antwerp to the Vienna congress its importance cannot be overestimated. These congresses have built up in the public opinion a strong total abstinence sentiment, and at the same time been an encouragement for all friends of the cause all over Europe.

Those who were there have gathered new strength and enthusiasm for the work. The steady decline of the modera-

tists to the total abstainers is so clear that everybody can see it. Now nobody tries to defend moderatism except those for whom the question is new or those who know very little about it. These congresses can be divided in five distinct groups:

(1) An experiment and a fight between the total abstinent English speaking and the moderate from central Europe — Antwerp.

(2) The movement gains ground on the Continent and the scientific side of the question is recognized — Zurich and Hoag.

(3) A congress of study — Christiana.

(4) Total abstinence victorious, the congress was recognized and become mostly scientific — Bazel, Brussels, and Paris.

(5) The social-political side comes to the front, government and country showing the highest interest — Vienna.

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The Registrar's General Report of the mortality figures for 1890 and 1892 gives the cause of death of active mayors in the professional service of life. Lists of clergymen, lawyers, teachers, and medical men are given, that of clergymen shows 2 per cent. due to alcohol, 69 per cent. to nervous diseases, and 7 from suicide; of lawyers, 12 per cent. are due to alcohol, 104 to nervous diseases, and 18 to suicide; of teachers, 8 per cent. to alcohol, 71 to nervous diseases, 15 to suicide; of medical men, 14 to alcohol, 122 to nervous diseases, and 41 to suicide. These are cases where the causes were beyond all question and could not be concealed; that there was a much larger percentage due to the same causes which were concealed. The excess of the inebriety among medical men corresponds with the observations made in this country: it indicates that education in physiology and hygiene does not prevent the outbreak of inebriety. Physicians through the strain and worry of professional work are greatly exposed to the dangers of drug and spirits taking, and should receive special training in early life to guard against this condition.

TOXEMIAS AND THEIR RELATIONS TO ALCOHOLISM, NARCOTIC INEBRIETY, AND AUTO-INTOXICATION.

We take pleasure in presenting the following extracts from a book in press, on the chemistry of vice and crime, by the well known Dr. J. Frank Lydson of Chicago, Ill. The graphic character of presentation and the startling original views presented in this work will be apparent from the following quotations. They are presented in a disconnected way, giving an idea of the original point of view of the writer, rather than any connected study. It is very evident that the action of toxins upon the nervous system produces abnormal conditions, both functional and organic, which are very influential in the conduct of the individual. The general principles governing the physiologic and pathologic action of various poisons, organic and inorganic, hetero-genetic or auto-genetic, are the same. Each of them has a pacific effect on the nervous system often manifest in perturbations of temper, will, and moral responsibility. The most important of these toxins is alcohol, which is primarily and secondarily a toxine pure and simple. Usually the effect of alcohol falls most heavily on the nervous system and the circulation. The laity have the fallacious idea that inebriety can be studied solely from a moral point of view. Persons who advocate such views are the lineal descendants of a long line of bigots and sophists whose baneful influence has been marked by trails of human misery. The intolerance manifest concerning inebriety as a physical disease is an illustration of the intellectual reversion and modern dead sea atmosphere which obstructs every advance. The moral factor in inebriety bears no more relation to its causation than it does to typhoid fever.

The moralist who claims that the inebriate wilfully took the first drink, hence is responsible, is as logical as the accusation would be of the typhoid fever patient who voluntarily drank water containing the germs of the disease. Admitting that in certain cases an insatiable craving for spirits is a result and not a cause of inebriety, the physician must accept the conditions as he finds them. Whether the inebriate was primarily predisposed to drunkenness or not is a secondary matter. No logical physician can treat such cases on moral grounds. The craving for spirits or drugs is a disease, no matter what the condition may have been primarily. The effects of alcohol are most marked in the liver. As a consequence of long-continued irritation produced by the alcohol, new tissues are formed, and fibrinous deposits, which impair the size and capacity of the liver to act normally. The biliary and renal secretions become toxic and actually poison the organ and functional working. This same condition exists in the blood-vessels of the brain, where the walls are all apparently paralyzed and relaxed by the action of alcohol; the uniform circulation being disturbed, the structure is deranged and its action weakened. In all cases of inebriety there is primarily a weakened will power, incidental to unstable nervous equilibrium. This may be due to acquired organic disease or to heredity, or may be peculiar to the individual himself, and bear no relation to heredity or disease. Its recognition is imperative if we would cure the disease. It certainly should be considered in studying the general relations of alcohol to crime, for it is the key to the situation.

The question of heredity in alcoholism is important. Whether the acquired drunkenness of the parent may be transmitted to the child has been seriously questioned. Probably in most instances a bad nervous heredity in the parent is responsible for his own and his child's inebriety, but I firmly believe that indulgence in alcohol in one generation may appear as neuropathy and inebriety in the next, or perhaps in

several succeeding generations. Whatever the explanation, a considerable proportion of the children of inebriates become themselves drunkards. Example and early training, of course, often play a subordinate rôle here. That a primary predisposition to drunkenness underlies many cases of inebriety is easily shown. We will take for illustration half-a-dozen individuals of average physique and degree of intelligence—men who present no striking difference, intellectual or physical. Subject these persons to the same environment, social influences, and facilities for indulgence in liquor; give them from the beginning the same amount of liquor for a certain length of time, and observe the difference in effects. One subject becomes moody and taciturn, another quarrelsome, another maniacal, another garrulous, another overflows with good nature. A certain proportion become confirmed inebriates. There must be some primary difference of physical constitution in these individuals to account for the wide variation in results. A and B, perhaps, indulge in a social glass of champagne. Mr. B finishes his wine and goes quietly home. Mr. A, however, goes on a drunken debauch, which is the forerunner of many more. There is surely some primary structural difference in these two men to account for the difference in actions.

Practically, then, inebriety means degeneracy, the subject being primarily defective in nervous structure and will power. If he was not so primarily, he has become so by the action of the drug habit. It is a noteworthy fact that the family histories of dipsomaniacs are largely tinged with nerve disorder. Hysteria, epilepsy, migraine, and even insanity are found all along the line. In such cases inebriety is but one of the varying manifestations of bad heredity. The degeneracy of nerve structure and function, with the correlated defective will, may develop criminal or depraved instincts, as already remarked.

Let us revert again briefly to the action of alcohol upon the nervous system. We will begin with the premise that a maintenance of nervous equilibrium is absolutely essential to right thinking and right acting — this from the physiologic, not from a moralistic viewpoint. If this be true it is obvious that anything which seriously impairs nervous physiology must necessarily impair the individual's conception of his proper relation to his community. Granting that this is not seriously impaired, but is overbalanced by animal impulses, all that is necessary to impel to criminal or vicious acts is a corresponding inhibition of the will.

That the sense of moral responsibility can remain unimpaired by the use of a poison which seriously disturbs all the viscera, and particularly the brain, is impossible. The defenders of alcohol must admit that a drug which impairs brain functions down to the point of coma is not likely to leave the moral sense unscathed.

Not only is degeneracy a cause of narcotic habit through lack of will power to resist the temptation to use the drug, once its fascinations have been experienced, but it causes degeneracy in the offspring of habitués, as well as accentuating any primary degeneracy that may be transmitted by the parent. Children born of opium eating mothers are afflicted by nervous symptoms, such as convulsions and delirium, and are likely to die unless opium be administered to them. Should they survive they are distinctly neuropathic and their longevity is short. In a manner they resemble the children of alcoholics, save that the immediate results are not so prominent in the latter.

Modern investigations of the bio-chemistry of the animal body and of auto-intoxication in general have developed some of the most interesting and valuable of the recent additions to medical science. That organic and inorganic poisons of greater or less degree of toxicity are developed or retained in the human body as a consequence of perverted metabolism, improper food, defective respiration, faulty elimination, de-



ranged glandular action, or bacterial action in the tissues and viscera, especially in the gastro intestinal tract, is now generally accepted. The application of the various toxemias thereby produced to the etiology of vice and crime would seem at first sight rather far-fetched, but tolerant and critical reflection puts the matter in a very logical position. The physiologic or pathologic effects of poisons vary both in degree and kind, but in sufficient doses they are sure and certain.

Granting that what has been said of alcohol and narcotic poisons in general is true, the logic of the position which I shall assume regarding auto-toxemias can hardly be disputed, for there is no essential difference between the action of auto-genetic and hetero-genetic poisons. The tissues and organs do not discriminate between them. Each class acts more or less definitely upon the economy, albeit in its own characteristic fashion. We may, therefore, reason from the known effects of alcohol, morphine, cannabis indica, cocaine, and other narcotics upon the brain, nerves, and viscera, to the effect — both known and presumed — of auto-genetic poisons upon the same structures. Structural disease and degenerate conditions of the nervous system underlie most of the phenomena of vice and crime, but the functional integrity of these structures has a basis which is largely bio-chemical. In many instances, where no organic disease of the central or peripheral nervous system exists, neuropathic phenomena, both psychic, sensory, motor, and reflex are produced by auto-toxemia. Unstable will and emotions, erratic impulses, acute mania, perhaps of the homicidal variety, hyperchondriasis, melancholia, suicidal tendencies, convulsions, delusion of persecution, folie du doute, etc., have long been known to be produced by organic poisons introduced from without. Modern science is gradually developing the fact that they can be produced by poison elaborated in the body.

In a general way the following propositions are safe, viz. :

- i. Nerve degeneracy or disease produce instability of will

and perversion of the moral sense. 2. These neuropathic disturbances are the basis of vice and crime. 3. Anything which will produce neuropathy bears a cause and relation to vice and crime. 4. As auto-toxemia is productive of neuropathic conditions its etiologic relation to vice and crime is proven.

That poisons are normally elaborated in the performance of the physiologic functions of the animal body is well known. They are products of retrograde tissue changes. When equilibrium of the functions is maintained, these poisonous normal products are harmless. The conditions which make them harmful are: 1. Their elaboration in excess. 2. Imperfect elaboration, resulting in exceedingly toxic intermediate or by-products. 3. Imperfect elimination. This may be due to excessive formation or to defective excretory organs. Exercise and alimentation are all important as bearing upon the formation and retention of toxic material.

The relation of auto-intoxication to murder, suicide, and crimes of impulse in general seems definite enough. It may not be often effective in persons otherwise sound, but in nervous defectives the dangers of auto-toxemia are sufficiently obvious. The predisposition existing, auto-intoxication does the rest. In the case of suicides, especially the complete overthrow of mental equilibrium by auto-intoxication in subjects of primarily unstable mentality — whether congenital or the result of acquired disease — can be readily understood. Alcohol might act similarly if taken for a long time and to excess. Even here auto-intoxication is a powerful factor. It is always a factor in alcoholism. An attack of the "blues" is bad enough in well-balanced subjects. In degenerates or sufferers from disease, it may precipitate the unstable brain into psychic suffering for which only the open door to the Great Beyond seems to offer relief.

Methods of treatment of the inebriate that do not take into account the physical side of the question are irrational. I

make this assertion despite the fact that psychic impressions have many cures to their credit. Many subjects have been cured by powerful emotional impressions. Religious emotion and psychic element is always to be considered, for without its coöperation treatment is futile. The much-vaunted Keeley cure probably depends largely upon psychic impressions and suggestions. The regular life imposed at the various institutions have much to do with modifying the physical condition of the drunkard. I am not in a position to speak of the Keeley remedies, as they are secret. There are certain drugs, however, which, as is well known, are valuable adjuvants in the treatment of inebriety.

Whatever may be said to its discredit, the Keeley cure has impressed the laity with the physical aspect of inebriety, and has popularized medical and institutional treatment. Institutional treatment by means designed to build up the general health, such as hydrotherapy, electricity, dietetics, exercise, and massage, brings about the best results on the average. Nervous equilibrium is often restored thereby, with resulting improvements in will power. The keynote of the inebriety treatment is prevention.

The attitude of municipalities on the liquor question would be amusing were it not disgusting. A license is given to the dealer in liquor, which ostensibly puts him upon the same moral plane as that occupied by other licensed occupations. He pays dearly for his license. A heavy special tax is thus put upon his business, which is immoral and subject to blackmail. In some communities the fashion is to stamp the liquor traffic as legal, blackmail it heavily, and then compel the dealer to close his place of business on Sunday, often the most profitable of his business days. And this passes for an attempt at reform, protection of the public, and regulation of the liquor traffic. I make no comment save that the discrimination against the dispenser of alcoholics is absurd. A traffic that is moral and legal on six days of the week is not illegal

nor immoral on the seventh. If the law of supply and demand justifies a traffic of any kind seven days in the week, there is no reason why it should not continue, once it is licensed, unless the license is restricted in its scope to week days. This latter plan is the only logical solution of the Sunday liquor problem.

In my opinion the remedy for inebriety lies in the physical training and education of the masses. Every child should be taught at least the rudiments of physiology and chemistry. The properties of alcohol should be taught for what it really is, a poison, which is not only unnecessary to the human economy, but injurious in varying degrees — but always injurious. Children should understand that alcohol is a drug which is useful in the arts and manufactures, and sometimes of service in the treatment of disease, but one which ought to be taken into the human body with the greatest circumspection and under medical advice. An appeal to the selfishness of the individual by exalting physical perfection and showing that the use of alcohol is incompatible with it should always be made. There is but little use in laying stress upon the evils of alcohol from the moral standpoint alone. Youth is imitative, and the object lessons afforded by its elders, who conform with social customs, are more powerful than preaching. A youth may possibly be convinced that his father is mistaken in his ideas and customs, for youth has an intensified *ego*, but any effort to prove the evil of his father's ways will not only be lost upon him, but doubtless will serve only to arouse his antagonism. I do not say that moral and religious persuasion is not in a measure deterrent of the liquor habit; the Sunday-school has its sphere of usefulness, but it should occupy a position subordinate to the rational education of youth in the physical evils of alcohol. The general results of moral influence have not been what they should be, because of the lack of scientific materialism behind it.

Physicians can do much to discourage the alcohol habit, by promulgating sound knowledge of its evils among the laity. They can also do much good by prescribing liquor as rarely as possible, and with discrimination in all cases. In many instances the physician should know at a glance that the given individual courts danger when he takes alcoholics, even as a medicine.

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It is a pleasure to note the activity of the English Society for the Study of Inebriety. The new secretary, Dr. Kelynack, has taken hold of the work with great enthusiasm, and expects to establish a journal for the publication of its transactions. We extend our heartiest congratulations and confident hope that we may have a companion journal in this field where for twenty-seven years we have been alone. The JOURNAL OF INEBRIETY appeared first in 1876, and has been going out to the world regularly from that time without a rival or even a friendly companion in any language or part of the world. Most of the temperance journals have been cold and distant, and most of them believed that our work was wrong, that the approach to the successful treatment of the inebriate could only be made from the moral side. Over quarter of a century has added a great deal of evidence and substantial proof to our position, and while most of the old pioneers who stood behind us at the beginning are gone another generation is coming up who have clearer views on these great questions.

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The plan of treating inebriates in Iowa in insane asylums for the last eight months is very promising. A ward of the insane asylums is set apart for those cases who are committed for one year and are required to work on the farm and about the institution, then are sent out on parole if they appear restored. About fifty per month have been admitted so far, and the improvement of this method over the ten days in jail is apparent to all.

THE ANNUAL MEETING OF THE AMERICAN TEMPERANCE ASSOCIATION.

The eleventh annual meeting of this association was held in the parlors of the Young Men's Christian Association, at New Orleans, May 8th and 9th. The president, Dr. W. S. Hall presided. The honorary president, Dr. N. S. Davis, presented an address which was read by H. O. Marcy, M.D., which appears in the columns of this JOURNAL. Dr. H. O. Marcy, vice-president, read a paper, "Table Wines: are their uses to be encouraged?" This paper will appear in a future number of the JOURNAL. After some discussion the society adjourned. The next morning the society convened, and the president, Dr. W. S. Hall, read an address, "On a Critical Review of Dr. Read's Book on Heredity and Alcoholism." This paper will appear in the JOURNAL. Some discussion followed this paper. Papers by Drs. Didama and Shepard were read by title, and referred to the committee for publication. The report of the secretary for the year was read, after which the committee on nominations reported and moved the reelection of the present officers of the association, which was carried. A vote of thanks was passed to the Young Men's association for the use of their parlors, and also to the daily press for their courtesy in publishing the papers. The society then adjourned. The secretary reported that over a thousand persons in this country had voluntarily signed the manifesto concerning the use of alcohol, showing very clearly that the profession has at last taken up the subject of alcohol in earnest. The suggestion was made that the time is not far distant when this subject of alcohol and its abuses will become prominent in a special section of the American Medical Association: This has already been apparent for several years past.

This year the section on *Materia Medica* had a symposium on the use of alcohol as a medicine; the frequent references to alcohol and its dangerous influence mentioned in other sections show an increasing interest in this subject. There can be no question that the work of this association will occupy a very prominent place in the near future.

At the present it is evidently passing through a formative stage, in which many persons in thorough sympathy with its work are afraid to become identified as active members. In all the large cities there are leading physicians who express great sympathy and interest in the purposes of the association and yet decline to join and help on the work of the study of alcohol in health and disease. The liquor interests are so thoroughly organized and the popular prejudices concerning spirits are so deeply rooted that it is unpopular to attempt any innovation or change.

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A recent railroad accident in which twenty persons were killed brought out a very striking illustration of the need of total abstinence in the train service. After the excitement from the accident has subsided it appeared that the engineer who was killed at the time of the accident had been intoxicated the night before. The workman at the water tank, where the engine stopped to take water a short time before the accident, noted that the engineer was half asleep at the time the train stopped, and during the lull fell asleep in the cab and was awakened by the fireman to start the engine. It appeared, further, that the engineer attended a wedding the night before the accident, drinking very freely of spirits, and was taken home by his friends in a state of partial stupor. The next day before going out on his trip he drank, and was known to have spirits with him on the train. These facts were not made public. The accident was ascribed to other causes, but the superintendent of the road knew that the engineer's condition was the real and primary cause. A few months after this same road issued orders that all engineers not total abstainers could not expect to retain their positions unless they gave up all use of spirits while on the road.

QUARTERLY MEETING OF THE ASSOCIATION  
FOR THE STUDY OF INEBRIETY.

Upon the invitation of Dr. Richard F. Gundry of Catonsville, Md., a quarterly meeting of our association was held at his sanatorium, a few miles from Baltimore, on the afternoon and evening of June 3, 1903. A number of prominent physicians from Baltimore were present, together with the officers of the association and others; after a very bountiful lunch the meeting was opened in the music hall of the sanatorium. Dr. Gundry introduced the president, Dr. Mason, who called the meeting to order. The secretary explained the object of the association and gave some historical facts of its growth and progress. The president then read an address on the "Disease of Inebriety," which is published in this number. Very interesting discussions followed, in which Drs. Preston, Blackford, Clark, Gundry, Whittlesey, Price, and others of Baltimore took part. Dr. Crothers read the next paper, on "The Pathology of Inebriety"; this also brought out an interesting discussion. The third paper was read by Dr. C. H. Shepard of Brooklyn, New York, on "Dr. J. E. Turner and his Work in Asylums." Dr. Elliott read a paper on "Some New Phases in the Treatment of Inebriety." Interesting remarks and discussions followed the reading of these papers. The society then adjourned and a tour of inspection was made of Dr. Gundry's Home, after which the society sat down to an elaborate dinner. In the evening a second session was held. Papers by Dr. N. O. Bradner of Philadelphia were read by title, "On Miss Dorothea L. Dix, her Work for the Insane," and also a paper by Dr. E. A. Rodebrough of Columbus, Ohio, on "The Legal Status of Inebriates." A general discussion followed, after which Dr.



Shepard offered the following resolutions, which were unanimously passed :

Whereas, The American Association for the Study of Inebriety has been the recipient of the warm hospitality of Dr. and Mrs. R. F. Gundry: Therefore, be it resolved that in behalf of our association and particularly of the officers and members present, we extend our most cordial thanks for the courtesies received on this occasion, and also our best wishes for their personal prosperity and the excellent work done at their beautiful home, and that this record be placed on the permanent minutes of this association. It is a pleasure to note that Dr. Gundry's sanitarium was unanimously conceded to be a most attractive home in situation and appointments, and equal, if not superior, to any other private asylum in the country. The situation, in a park near Catonsville, a few miles from Baltimore, combines quietness with all the comforts of a city residence, to a very high degree. Our association will long remember with pleasure this occasion, and Dr. Gundry's excellent home and hospitality.

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Children of alcoholic parents inherit nervous instability, if nothing else. Often they show great extremes of activity and prostration. While neurotics, they are often brilliant, lead in their classes and are prematurely developed. All such children show great extremes of energy and exhaustion with faintness and debility. Their training should be very careful. No tea, coffee, meat broths, or alcohol should enter into the diet. No attempt to treat every symptom of exhaustion by drugs or foods. They are very precarious in their nervous organization, and unless brought up in the most careful manner will become inebriates.

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Dr. Hewitt of London advises that all alcoholics to whom ether is given for surgical operations require larger quantities of the anæsthetics and are more likely to die from its effects; he has found that excessive smokers of tobacco are with difficulty made insensible from ether or chloroform; he advises that all subjects for operation who are alcoholics or excessive users of tobacco should be warned of the danger of sudden death following the use of anæsthetic agents.

## Abstracts and Reviews.

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### DRINK AND INSANITY.

The *Medical Record* of New York, in an editorial, summarizes the facts of the situation of the drink problem in the following very suggestive manner: "Almost every country of the world is taking up the drink question. The authorities in some lands have become seriously alarmed at the inroads which the unbridled consumption of alcohol has made and is making into the prosperity, health, and morals of their people.

"In France the unrestricted sale of alcoholic beverages has already brought forth dire results. Prominent French physicians have begun a crusade against the drink habit. In Russia the excessive drinking among the peasantry has impelled the government to step in and take control of the sale of spirituous liquors. Although in America drinking has never been so common nor carried to such extent as in Europe, yet even here statistics tell us that there has been a decided increase in the consumption of alcohol. Great Britain has always had an unpleasant reputation as a country whose good people were addicted to strong drink on a large scale, and it still, in this respect, maintains its position in the front rank."

Dr. Robert Jones, medical superintendent of Claybury Lunatic Asylum, London, published a short time ago a paper treating of drink with regard to the production of insanity. Referring to statistics bearing upon this matter, he said: "There are probably at the present times no less than 110,000 certified insane persons in England and Wales alone, of whom approximately about 50,000 are males and 60,000 females.

If the Lunacy Commissioners' Blue Book for England and Wales be consulted, the proportionate percentage of instances in which alcohol has been assigned as the cause of insanity to the yearly average number admitted into asylums in the five years, 1895-1900 inclusive, is 21.8 for males and 9.5 for females — the proportion is much higher in Scotland — and after allowing for the deaths of those whose form of insanity is more immediately fatal than those caused by alcohol, there are, I believe, upon the lowest computation, remaining in asylums, at the present time, no less than 10,900 males and 5,800 females who are mentally decrepit through the effects of alcohol. During the time that the London County Council's Asylum at Claybury has been opened, from 1893 to the end of 1901 — a period of less than nine years — 8,493 patients have been admitted, of whom 21.2 per cent. of the males and 12.6 of the females were definitely ascertained to owe their insanity to drink, a total of over 800 men and 594 women who were thus rendered incapable of productive work through their own acts. For the whole of London, during the period of 1893-1901, 2,662 men and 1,677 women were received into asylums who owed their insanity to alcoholic intemperance."

Chronic alcoholism, according to Dr. Jones, implies an altered nutrition of all the tissues, particularly parenchymatous elements and epithelium, such as that of the blood-vessels, causing thickening and ultimately fibroid changes. It has been stated to be one of the special causes of dementia paralytica. It certainly is one of the most important elements in the strain which predisposes to this breakdown, and it is a most fertile source of nervous disease. The degeneration of the tissues consequent upon the altered nutrition is so general and far-reaching that the resulting symptoms are of a most protean nature. Attempts have been made to differentiate these according to the particular form of alcohol taken, such as wines, beers, spirits, liquors, etc., but the distinction is less psychical than physical, and the symptoms consist in the

greater frequency of convulsive discharges from such as absinthe, of analgesia from wines, and of hyperalgesia from essences. The liver of the spirit drinker is familiar, as also the gross fatty changes in beer-drinkers.

The writer points out many different considerations presenting themselves in regard to symptoms, such as: (1) the diathesis, idiosyncrasy, or the inheritance of the individual. An inheritance of insanity is found in about 33 per cent. of all such cases admitted into asylums. Persons of neurotic inheritance are predisposed to the incidence of delirium, small doses of alcohol giving rise to marked unsteadiness and other functional disturbances; in others the nervous system almost entirely escapes, and the stress is left upon the liver and kidneys. (2) Sex appears to have a marked influence, for although alcoholic indulgence is most common among men, women recidivists are more common and less curable. (3) Elimination is a personal factor dependent upon the activity of the various excretory organs, such as the skin, kidneys, lungs, etc., in any particular individual. (4) Exercise appears also to influence the symptoms, as life in the open air favors tolerance. Both men and women of sedentary habits suffer in comparison to the more active, and the more frequent incidence of peripheral neuritis in women is probably due to their indoor life. (5) Age is a modifying factor. The period of greatest incidence to the pernicious effects of alcohol corresponds closely with that upon which falls the greatest mental strain. Males between twenty-five and thirty and those between thirty-five and forty appear to be, according to Bevan Lewis, more susceptible to alcohol than those of any other age. The former is a period peculiarly characterized by intellectual advance, and one during which the habits tend to become independent and fixed; the other is an epoch during which the struggle for existence makes itself felt in the fullest force, and it is also an age during which, as Lewis points

out, the feeble and indifferent organisms often feel the want of artificial stimulus, to the use of which they often succumb.

The relation between drink and insanity is far more intimate than it was at one time believed to be. Perhaps the assertion that drink is the most potent cause of mental disorders would now pass without cavil. Certainly the brain is the organ which is most disastrously affected by excessive indulgence in alcohol, for although other organs may be seriously injured, the outcome of the habit is more frequently mental dissolution.

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#### ALCOHOLIC HYPNOTISM.

The following very interesting study occurs in Dr. Macdonald's address before the judiciary committee of congress in a plea to establish a laboratory for the study of the criminal, pauper, and defective classes of Washington, D. C.:

"But alcoholism also develops criminal tendencies in certain individuals, which they seem to be unconscious of. We refer to criminal acts committed in a condition of alcoholic hypnotism or somnambulism.

"Somnambulism may be one of the deeper stages of hypnotism; it may be regarded as autohypnotism, where the subject is acting out his dreams. Somnambulism may be defined as the condition of an individual who seems to act in a normal manner, who performs acts relatively complex, but has no knowledge of what he does, or at least does not preserve any memory of it. As everyone knows, this state is met with either under color of an accident in some sort of idiopathic condition, as natural somnambulism, or one is under the influence of hypnotism or hypnotic somnambulism.

"Alcoholic somnambulism is important from the legal point of view. That alcohol in certain quantities can produce at least a fleeting oblivion, an eclipse of memory, is a fact demonstrated by daily experience. Everyone has heard it

said, if he has not proved it himself, that, when intoxicated, a man goes home, opens the door, and goes to bed — all this without the least consciousness or slightest remembrance of it. This same forgetfulness is shown in alcoholic delirium. The phenomena of amnesia are much more common than it is thought. Vetault gives a number of facts to show that this is the rule under the influence of profound alcoholic intoxication. When there is violent delirium or an approach of noisy alcoholic frenzy, when homicidal impulses of irresistible brutality have sway, there is, upon awakening, no remembrance of the acts. The forgetfulness is as complete as that which follows the paroxysm of epileptic fury, with which the paroxysm of alcohol fury has numerous points of resemblance.

“Francotte says he has examined several accused persons who, having acted under the influence of alcoholic delirium, affirmed that they had retained no memory of the incriminating act. Their recital and the circumstances surrounding the deed, tended to demonstrate their sincerity.

“In the case in point the phenomena of drunkenness and the symptoms of alcoholic delirium are a proof, or at least an exterior manifestation, of psychic trouble which has given place to forgetfulness.

“We give a number of cases illustrative of alcoholic somnambulism. The first is a case of amnesia, whose genuineness cannot be suspected. P., 28 years of age, was brought to an asylum on Wednesday, in the afternoon. The police found him on Tuesday, in the morning, at a public place in the city. He had amused himself some time by playing on the doorsills of one of the houses with his watch, with pieces of money, and other small objects. In spite of all efforts to induce him to speak he did not reply to a question. He seemed to have lost completely the use of speech and hearing. He had the appearance of an idiot. The physician called declared that the subject appeared not to hear what was said to him.

It was impossible to draw from him a word; general sensibility seemed abolished.

"Neither the police nor the physician thought the affair a case of intoxication. There was nothing characteristic in his manner of walking. He was sent to the asylum. On his entrance the brother guardian did not suspect him of alcoholism. The patient could not speak or see. They thought he was blind because his pupils did not stir when a handkerchief was waved before his eyes; his look was fixed; his expression lifeless. They offered him something to eat. At first he refused without speaking or otherwise expressing anything. When they prevailed upon him to drink a cup of coffee and eat a little bread he seemed to wake from a dream, demanding where he was.

"On Thursday he was perfectly himself. He said that on Monday, having already drunk a good deal of alcohol, in the evening he entered a café in a street. There he found a friend, with whom he took several drinks. He left the café, not knowing how, and from that moment memory failed him.

"Consciousness only returned Wednesday afternoon. He remembered what had happened since then and previous to that time. It was in vain they sought to awaken any remembrance. Memory preserved not the least vestige of any event occurring between Monday evening and Wednesday afternoon. The subject declared that for a long time he had been given to alcoholic excesses. At the beginning, especially, he had had frequent attacks of the 'drink fever.' He had been drunk two hundred times, he said; but nothing like this had ever happened to him. He persisted in the belief that his companions had put something foreign into his drink. It had never made him seriously ill nor caused any trouble. His complexion was anæmic. There was a slight trembling of the tongue and hands. He showed different signs of degeneracy: Ill-formed skull, unsymmetrical ears, etc. There was no notable point of anomaly in his mental state. One of his

sisters had been in the asylum, where she died. She was insane and had nervous attacks.

"Here was a state of unconsciousness, of amnesia, brought on by alcohol, and lasting nearly forty-eight hours. Certainly this case had nothing to do with somnambulism. The appearance of the subject was far from being normal. He was in a kind of a stupor. But, on the other hand, he did not present the appearance of a drunken man, and he had preserved a certain motor activity.

"We give below a number of examples of alcoholic somnambulism:

"A certain man was accused of cheating, committed under the following circumstances: Several times, and in different localities, he entered an inn or café, ate and drank, and then went away without paying his bill, or he refused to acknowledge his account when it was presented to him. His father was a drunkard. At the age of fifteen years the son began to drink and indulge in many excesses. From the beginning, after these errors, the patient had, he himself said, 'trouble thoughts.' He was conscious of this, but, not being incoherent in writing or speaking, no one perceived it.

"Later he showed such marked mental troubles that they thought of sending him to an asylum. It was utterly impossible for him to recall what he had done for fifteen days. He remembered only that at this period of his existence he dreamed of riches, of treasures which he would discover. After still greater excesses—he told of them himself—he was tormented, disturbed, preoccupied. He imagined people followed him. At last, one lovely day—he could not recall whether it was evening or morning—he set out for the city where he was to spend the night; then, always possessed by the thought of people following him, he took at the dockyard a ticket for the first station on the road.

"He did not stay there, but went to the country home of his father, where he gave himself up to drink. He could



not tell how long he remained there. He stayed with a paternal aunt, who drank also. It was, so to speak, a hereditary habit in his father's family. He could not recall how he left his aunt; and from that moment memory completely failed. He could not recall what had happened, and no matter how he was pushed or questioned, having returned to his senses, he did not vary in his statements.

"As to other places where they accused him of having been and left without paying what he owed, he invariably affirmed that he had no remembrance of any such thing. 'I do not deny it,' said he, 'since the justice says so; but I do not recollect it at all.'

"It was impossible for him to recall how he got to a place. He found himself in prison, and from that moment his memory was a little better. His previous life he related quite well. Persons who had seen him during the period when the incriminating acts had taken place had noticed no sign of mental trouble. During his sojourn at the asylum there was evidence of special hallucinations of a terrifying nature, and ideas of grandeur and wealth.

"According to Lentz, epileptics, after violent fits, talk in a coherent way, conducting themselves with every appearance of reason, and yet there exists at the same time absolutely no inward consciousness. Their conduct is only a succession of actions entirely automatic, in which consciousness has no part, but which, as in somnambulism, still preserves some connection and seems at first the result of determinate intellectual combinations.

"As an example, we give H., a case of Lentz, aged twenty-three years.

"The father of H. almost constantly drank; his mother was irritable and violent.

"With a companion he spent the whole night going from saloon to saloon. The next day they went to the country. They met a woman seated on the roadside. He drew a knife

which he had been using to clean his pipe. 'Woman,' he cried, 'I kill you; save yourself, woman, or I will kill you.' The woman was saved; but at the same moment three workmen appeared at the turn of the road. Henry threw himself on them and struck them successively with the greatest rapidity. After this murder Henry was calm. He walked on, and, turning to his companion, said to him: 'Are you going?' But upon cries of murder and assassin he threw away his knife, ran from his pursuers, fell an instant before an obstacle, rose, entered the town, went to his home, and there in the greatest confusion undressed and went to bed. Being awakened from a deep sleep he replied with strong protestations and violent despair.

"Henry was not arrested until the next day. He manifested the greatest astonishment and complete forgetfulness of all that had transpired since he left the last alehouse. He was condemned to ten years of solitary confinement.

"In all these observations we notice the presence of somnambulistic elements, unconsciousness, amnesia—activity relatively complex joined to a normal appearance. If we closely examine the observations we find the indications of certain anomalies of conduct and character having existed during the somnambulistic state. Doubtless the subject would reveal disorders more marked still if he could be examined closely by a competent person. Simple somnambulism itself resembles very imperfectly an individual awake and of sound mind. What characterizes it especially is immobility of countenance, fixed look, haggard and dim eyes. Similar peculiarities are found among hypnotized somnambulists and probably in all forms of somnambulism. Those who have had occasion to observe subjects in a state of hypnotic somnambulism must have been struck by the transformation which the countenance undergoes, the general surprise at the moment of passing from the hypnotic state to a waking condition.

"It is not less true that the appearance of the somnambulist is that of a man awake and conscious. But in legal medicine, the expert not being present at the moment of the crime, we must be satisfied with the deposition of witnesses usually not at all familiar with such delicate observations. It is necessary to be certain; for these normal appearances by no means excluded unconsciousness, forgetfulness, and consequent irresponsibility. A man who acts reasonably does not necessarily act rationally or consciously; he may be in a state of somnambulism. It is true that the effect of intoxication may always be one and the same; that the man who stands straight, walks, and performs certain acts with the appearance of reason cannot be essentially troubled in his consciousness and free will, and should be regarded as responsible for all his actions.

"Forgetfulness does not necessarily imply unconsciousness. Observation of facts concerning sleep demonstrates the contrary. We are conscious of having dreamed. If we fix our attention and immediately recall these memories we can often put together the fragments of the dream. On the contrary, if upon awaking we follow our occupations, the light traces left in the memory by the subconscious activity of sleep are effaced by the conscious acts of waking. In making judgments of such cases one must take account of previous attacks of somnambulism. All incriminating circumstances should be carefully established. In questioning the witnesses the slightest signs of mental perturbation, such as expression of countenance, look, and attitude, should be noted."

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#### ALCOHOLISM.

Dr. MacDonald, in his very graphic plea for a laboratory for the study of the criminal, pauper, and defective classes, before congress, makes the following reference to this subject:

“Alcoholism may be considered briefly, first, in its general bearing, and, second, as a form of insanity. The relation between alcoholism, crime, pauperism, and charity is most intimate. For example, a certain young criminal, who tried to kill an aged woman without provocation, said that when he was six years of age his father used to return home drunk, striking his mother and throwing sticks of wood at him. He stood it for a while, but afterwards left home, and, though not a thief, was compelled to steal for a living; was sent to a juvenile asylum, and, after leaving, went among farmers to live under their care, being kindly treated by a very few, whipped and otherwise roughly treated by many. Remaining a month or so with different farmers, he finally developed into a tramp, and, leaving all farmers, wandered two years, stealing, eating, and sleeping wherever he could. Thus alcohol gave the initiatory to thieving. Charity endeavored to counteract these effects (result of six years of unfavorable surroundings) in two years, but the evil forces acquired by early treatment had gained too strong a foothold, and the following stages were tramping, pauperism, and crime. Such cases are typical, and almost wholly the result of evil surroundings, for which society is culpable, and for which she suffers dearly, both morally and financially. The alcoholic may be a good workman when sober, but from irregularity he loses his position and gradually becomes a pauper. A sad fact in connection with alcoholism is that often the kindest and most genial natures are for this very reason ruined through the unintentional influence of friends, for they are unable to resist the so-called feeling of good-fellowship when drinking together.

“From the ethical point of view it is questionable whether one has the right to take the chances of causing another to fall. It is better to forego the physical, intellectual, or social pleasure of indulging in any luxury or necessity than to aid in the physical, moral, or social ruin of a fellow-being.

"The relation of ethics to all these forms of abnormal humanity is as direct as it is diversified. It is ethically questionable whether it is right to give to beggars; for by so doing we encourage them by virtually paying them to beg, and if not already paupers they can be made so by mistaken philanthropy. It is a common saying and practice of Americans traveling in Europe to give beggars 'a cent to get rid of him.' This, of course, has just the opposite effect.

"All these abnormal forms of humanity are different degrees of evil or wrong, the highest of which is crime. They are all links of one chain. This chain is that which we denote by the words evil, bad, unjust, wrong, etc.

"These forms, to wit, criminality, alcoholism, pauperism, etc., may all be considered under the head of 'charitological.' Thus the different institutions, such as prisons, insane asylums, inebriate and orphan asylums, institutions for the blind, deaf, and dumb, and defectives; hospitals, dispensaries, relief for the poor in any form; church missions, and different forms of philanthropical work are, of course, charitable in their purpose. The difference between these institutions is one of degree, as an examination of the inmates would soon show. The pauper may be or may have been a criminal or insane or alcoholic, or the criminal may be or may have been a pauper or insane or alcoholic, and so on.

"The close relation of alcoholism to insanity is shown by the statement of a specialist (Krafft-Ebing) that all forms of insanity, from melancholia to imbecility, are found in alcoholism. It is artificial; it begins with a slight maniacal excitation; thoughts flow lucidly, the quiet becomes loquacious, the modest bold; there is need of muscular action; the emotions are manifest in laughing, singing, and dancing. Now the æsthetical ideas and moral impulses are lost control of, the weak side of the individual is manifested, his secrets revealed; he is dogmatic, cruel, cynical, dangerous; he insists

on his sanity. Then his mind becomes weak, his consciousness dim, illusions arise; he stammers, staggers, and, like a paralytic, his movements are uncertain. The principal character of these mental disturbances consists in a moral and intellectual weakness; ideas become lax as to honor and decorum. There is a disregard of the duties of family and citizenship. Irritability is a concomitant; the slightest thing causes suspicion and anger which is uncontrollable. There is a weakness of will to carry out good resolutions, and a consciousness of this leads some to request to be placed in an asylum, for they are morally certain in advance that they cannot resist temptation. Thus one has been known to have his daughter carry his wages home, as he could not pass a saloon on the way without going in if he had the money with him. Now it is a weakness of memory, a difficulty in the chain of thought, and a weak perception, until imbecility is reached.

“There may be disturbances in brain circulation, causing restless sleep, anxious dreams, confusion, dizziness, headache. Such circulatory disturbances in the sense organs can give rise to hallucinations. There is a trembling in hands, face, lips, and tongue. In short, there is a gradual mental and bodily degeneration.

“From the medical point of view, a cure is generally doubtful, for in private life total abstinence is impossible. The patient must be in an insane asylum, or better, in a hospital for inebriates, where total abstinence can be enforced. Patients with delirium tremens especially need the most careful hospital treatment. The principal directions are conservation of strength and cerebral quiet, strong, uniritating diet, and mild laxatives, etc. Such in general is considered to be the best medical treatment. A certain French specialist (Magnan) says that a dipsomaniac is insane to drink; but the drunkard is insane after he has drunk.”

THE ACTION OF ALCOHOL ON PSYCHICAL  
PROCESS.

Prof. Kraepelin in his recent treatise mentioned the following:

“Two subjects of experiment, an abstaining and a moderate drinking physician. Dose, eighty grams (about three ounces by weight). Order, six days without alcohol, twelve with, five without, two with, two without. The alcohol was given before going to bed, and the result tests from 9 to 11 A. M. next day. These researches in general confirmed the previous results of Smith's experiments. There was found (1) a gradually increasing paralyzing effect on the different forms of mental action; (2) a partial and gradual resemblance to the alcohol days on the following abstaining days; (3) a suddenly great effect during the second alcohol period. The persons experimented on were here also unconscious of the falling off of their powers.

“In addition, in both persons, first a slow and then a quick depreciation of power took place (in one of them twenty-five per cent.); still more in learning figures (as much as forty per cent.), though with one of them there was an occasional improvement at the commencement of the alcohol days. The number of ‘associations’ in one of them fell off in the first alcohol period at first suddenly, then gradually (thirty-one per cent.), but no resemblance to this occurred in the alcohol-free days. The ‘inner associations’ were specially affected. The experiments on perception showed in both an increase of omissions and in one of misreadings also under alcohol.

“The authors emphasize that the chronic effect of alcohol follows the same course as the acute and that it is nothing other than the after-effect of the intoxication which is established and increased by the repeated doses of alcohol. Only the psychomotor excitement is less pronounced and an increase of sound-associations is especially not demonstrable.

“The experiments throw light upon the effect of habit, but, according to the view of the authors, the habitual condition, just as in the case of morphia, presented a kind of chronic morbid condition. They sum up thus: A single dose of eighty grams of alcohol does not pass off quickly and perfectly, but leaves behind an after-effect which lasts more than twenty-four hours. If this dose is repeated in twenty-four hours, a gradual increase of effect is produced, which we must designate as the commencement of chronic alcoholism, and this is already very evident after twelve days' action, by a depreciation of faculty to the extent of twenty-five to forty per cent. Hence we have a scientific definition of the alcoholic, much better than any popular one: The drinker is he in whom a continual effect of alcohol can be demonstrated; in whom, also, the after-effect of a dose of alcohol has not disappeared before the next sets in.

“The learning of numbers was more influenced than addition, and it is probable that more difficult exercises are more affected by alcohol than easy ones.

“The injury at first produced by alcohol passes off only slowly, and apparently the slower the longer the supply of alcohol has lasted. After longer taking of alcohol there remains, in spite of succeeding perfect abstinence, a great susceptibility to alcohol, and the poisonous effect sets in more strongly and quickly. This continuance of the action of alcohol, which, in bad cases, perhaps, never quite passes off, is the reason for the generally received requirement, that permanent recovery of the drunkard can only be obtained by total abstinence.”

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#### PROHIBITION AND THE ALCOHOL QUESTION.

The following editorial in the *Medical Times* of New York is an excellent presentation of the facts:

“The problem of the food value of alcohol does not seem, after all, to have been finally resolved by Prof. Atwater. A



German physiologist of high standing, Prof. Kassowitz, has lately published the details of an experimental investigation which has led him to precisely the opposite conclusion. A certain number of dogs were given definite amounts of food, some with and some without alcohol, and required to take a stated amount of exercise each day in a running machine. These trials and several others of a like nature were repeatedly carried out, and it was found that the recorded results were uniformly against the alcohol-fed dogs, both as to the amount of work accomplished and changes in weight. The author is of the opinion that no food material can be used in the body without being first converted into protoplasm. Since alcohol, being a stimulating and poisonous substance, destroys the highly complex and unstable protoplasmic molecule, it cannot at the same time be assimilated by it, consequently it cannot act as a food and poison simultaneously. After a comparatively short period, alcohol paralyzes the center of innervation of the muscles and, therefore, by diminishing the amount of muscular action, the secretion of carbonic acid is lessened. The diminished secretion, consequently, means no saving of the tissues of the body, but is a direct result of the poisonous action of alcohol. Kassowitz is convinced that under no circumstances can alcohol act in a nutritive manner. Such is the latest authoritative pronouncement on this subject from the world's scientific center. What do we learn from the facts of human experience? Daily observation shows that all men who drink do not become drunkards. Those who are thus unfortunate are not so because they are weak in will or morals, for men of the highest character have become inebriates. A man is a drunkard because he has a nervous system that is peculiarly susceptible to the poisonous qualities of alcohol. No young man, when he begins the moderate use of alcoholic beverages, knows whether or not he belongs to the class that can drink without danger. He can find this out only by experiment, and after

the experiment it is likely to be too late to avert the disastrous results, against which strength of character and will is no safeguard, any more than it would be against smallpox. Therefore, strict avoidance of alcoholic beverages is the only logical conclusion, if the gravest perils are to be avoided. This position conceded, it follows inevitably that the sale of alcoholic beverages ought to be restrained by law. But it is now declared in certain quarters that prohibition, after being tried in several states for many years, has been found to aggravate the very evil it was designed to cure — besides fostering the added vice of hypocrisy. In Maine, for instance, the great mass of the male population, we are assured, persist in regarding it as 'no crime to take a drink whenever they want to.' Why, then, do they not rise in their might and wipe out the useless and obnoxious statute? The true reason, probably, is given by the *Maine Journal of Medicine and Science*, the official organ of the Maine Academy of Medicine and Science, and the only regular medical journal published in the state, when it says that prohibition does prohibit, if there are only zealous and faithful officials to enforce the law. That the law can be enforced was shown, it says, by the late sheriff of Cumberland County, and a notable diminution in the demands on the poor fund was an immediate result. It cites, further, the experience of the city of Quincy, Mass., which for twenty years has been without the open saloon. During that time it has doubled its population, tripled its valuation, and increased its savings bank deposits over four-fold. All this is not so remarkable as the additional fact that while the population has doubled, the amount required for poor relief has diminished by a notable percentage. This is testimony from an apparently competent witness on the ground, and must be accepted until rebutted by other facts. It is undeniable that we cannot absolutely prevent illegal liquor selling any more than we can robbery and murder or less criminal acts,

but this truth does not warrant the commonly repeated assertion that 'prohibition does not prohibit.' The real difficulty undoubtedly is that the people concerned cannot or will not often enough elect officers who, sworn to enforce the laws, will not perjure themselves. That any community is better off without the free and open sale of liquor needs no argument; and it is, to physicians at least, an established fact that all consumption of alcohol in the healthy organism is bad, and has only occasional value as a medicine in pathological states. It is a fact not often noticed, yet none the less striking, that all this is beginning to be found out, even in states which newspaper paragraphers have long been in the habit of classing as hopelessly addicted to the flowing bowl. A large part of Kentucky is at this moment under local prohibitory law, and the New Orleans *Times Democrat* states that Texas is already on the verge of prohibition. If we compare the population of the wholly 'wet' counties, we shall find that three-fourths of Texas is actually under prohibition. Finally, as in Mississippi and other states, the prohibitionists, having carried a majority of the counties, have decided upon appealing to the legislature for a state election which would pass on the liquor question for the entire state. A few years ago prohibition would have been voted down in Texas by an overwhelming majority, but the movement is so strong now that saloon people are afraid of the election and are working to avoid it. This does not look much like that reaction which the advocates of moderate indulgence would fain persuade us has set in and is bound to prevail against the pernicious ascendancy of 'Neal Dowism.' Rather does it point to a universal popular recognition in the near future of the fact that the liquor dealing element everywhere is hopelessly in conflict with civic welfare, and must either rule or ruin, or be utterly suppressed."

## ALCOHOLIC HEREDITY.

In the annual address before the Medico-Psychological Association, the president, Dr. Wigglesworth, on the subject of heredity made the following statement:

"Here I shall merely refer to one or two acquired constitutional states which have special reference to mental disorders. I think that those of us who have much to do with the insane look upon alcoholism in the progenitors as a fruitful cause of the manifold mental disorders from which our patients suffer. Alcoholism is, of course, frequently associated with mental disease in the family histories of our patients, but for the purpose of this inquiry it is necessary to take only those cases in which alcoholic excess stands by itself, uncomplicated with recognized mental disease. It is not possible, within the limits at my disposal, to do more than give the results of my own statistics. Out of the 3445 cases which form the basis of the foregoing analysis, a definite history of alcoholic excess unassociated with insanity, in one or both parents (I have excluded more remote relatives) was found in 578 instances, a percentage on the whole number of 16.77. Separating the sexes, we find that the male patients show the higher figures, these amounting to 327, giving a percentage on the total number of males of 19.31, while the females (251 cases) give a percentage of 14.32. Doubtless some few of these cases of alcoholic excess may have been veritable examples of dipsomania, which may be regarded as itself constituting a neurosis allied to insanity; but as most of such cases usually show definite mental disorders at some period or other of their course, the majority of them will have been included in the foregoing tables of hereditary insanity. These figures do not give so high a percentage of alcoholic excess in parents as has been published by some observers, and, in my opinion, they undoubtedly understate the case as regards alcohol, for excessive indulgence in this way by the parents of patients is frequently denied when

collateral evidence has proved it incontestably. Moreover, opinions differ so much as to what constitutes 'excess,' that only gross and palpable instances of it are here included. I think, however, that, excluding insane heredity, it would be difficult to find any single antecedent in the parents of our patients which would in frequency reach the figures here set forth, which are certainly such as to strongly suggest some causative relation between the two. While on the one hand, therefore, our experience leads us to believe that there is a causal relation between alcoholism in the parents and insanity in the children, we have been told in the controversy that has arisen on the subject that it is impossible that this should be so, since acquired characteristics are not inherited. If this were indeed the right way of presenting the facts, those of us who adopt the Weismannian position might find it a difficult matter to reconcile theory and practice. But in truth, in my opinion, the particular case we are now considering has nothing whatever to do with the inheritance or otherwise of acquired characters. What we are here concerned with is a direct poisoning of the germ plasm itself by means of the alcohol circulating in the blood, and consequent direct injury to the delicate cells of which this structure is composed, which by virtue of this injury are thereby prevented from developing into a stable organism. I think that perhaps we do not sufficiently realize the extraordinary active growth displayed by the germ plasm during the whole sexual life of the individual. Continually being shed and again formed anew, the delicate cells of the germ plasm are in process of perpetual growth and development, and are consequently exposed when in a very susceptible condition to all nutritional influences which affect the soma generally. But what are the conditions prevailing in the system of the person who indulges in alcohol to excess? The blood and lymph become more or less charged with this agent, which is thus conveyed into every tissue and organ of the body. The germ plasm offers no exception. The nutrient fluid which bathes the cells of this

tissue, and conveys to them the nourishment by which alone their active growth and development becomes possible, carries also with it the alcohol which is circulating in the blood. It may be said, indeed, that the development of these cells takes place in a weak solution of alcohol. It might, indeed, be argued that the alcohol is too much diluted to be capable of doing much harm; but I do not take that view. Very dilute solutions of this agent have been shown by Ridge and others to be inimical to protoplasmic growth, whether vegetable or animal, and when cells are in process of development they are, of course, more susceptible to morbid agents than when fully formed. A general agent of this kind, acting indiscriminately, might be expected to affect most the molecules of the cells which control the development of the nervous system, and more particularly those latest formed portions of it which, being the last to be developed in the course of evolution, are on this account the most unstable and the most liable to give way or to exhibit defects and abnormalities when the nutritional environment is adverse. A morbid character may thus become stamped on the germ or sperm cell before the union of these two elements, which if not counteracted by a healthy condition of the other of these two, will cause the organism to develop on certain lines from which there is no escape. If the alcoholic poisoning has reached a certain degree of intensity, idiocy or imbecility may be expected to result; while if of less degree the injury may manifest itself in the various forms of adolescent or other insanity when adult life is developing or has been attained. Of course, if the mother be alcoholic, whatever injury may have been done to the germ will be added to and reinforced by chronic alcoholic poisoning of the nervous centres of the embryo during the whole period of intra-uterine life. I think, therefore, that to this toxic agent acting on the idioplasm of the sperm or germ cells, especially during the susceptible period of development, can be traced in not a few instances the mental disorders from which our patients suffer."

## ALCOHOL AND INSANITY.

An editorial in the *Medical Press and Circular* of London, England, has the following:

"The fact that a very large proportion of the persons who find their way into our lunatic asylums have been addicted to the abuse of alcoholic beverages is not of itself conclusive proof that alcoholism is an etiological factor of overweening importance in determining the loss of mental equilibrium. The more closely we study the personal and family history of the chronic inebriate the more apparent does it become that the habit is the consequence rather than the cause of the mental weakness, a view which has not been without influence in recent legislation. This displacement of the popular relationship of cause and effect is even more marked when the history of the alcoholic insane is inquired into. A very large proportion of the victims come of a neurotic stock; many of them live, so to speak, in an atmosphere of physiological misery, and life is more or less a burden to them; hence the willingness with which they fly to alcohol.

"For a brief period the stimulating action of the alcohol restores the balance of the cerebral circulation, and remedies the cerebral anemia which renders the conditions of life insupportable. The normal man, under the impulse of a fit of despondency due to overwork, misfortune, or unrequited love may go and get drunk, but resumes command of himself so soon as the external depressing influence has been withdrawn. The abnormal individual lives his whole life under these depressing conditions, and the resumption of consciousness coincides with a return of his morbid unhappiness. No doubt indulgence in alcohol accentuates the pre-existing mental weakness and precipitates the ultimate decadence, but in the cases under consideration it is merely an accidental, and not an essential factor, which is to be found in heredity and unfavorable social conditions. It is important that the precise bearing

of the alcoholic indulgence on the production of insanity should be determined, if only to emphasize the fact — for it may be justly so described — that inebriety is a disease and not merely a habit. The strain imposed on the nervous system by the conditions of civilized existence in large towns tends to the production of symptoms of depression consequent upon the exhaustion, which are comprised under the term neurasthenia, and a craving for stimulants is one of the most constant manifestations of the victims of nervous exhaustion. Much the same condition of things may be brought about by extreme monotony, the mind becoming atrophied, so to speak, a state of things by no means limited to those who dwell in the country, far from any source of amusement or intellectual occupation. Excessive mental stimulation and inadequate mental excitement both tend to bring about a condition favorable to habitual recourse to intoxicants. The special point to which we desire to direct attention is that alcoholism but rarely determines insanity in the absence of a neurotic predisposition. The presence of a certain proportion of alcoholics among the insane might just as well be taken to show that people predisposed to insanity are specially addicted to intemperance. After all, only about thirty per cent. of the admissions are directly ascribed to this cause, and when we bear in mind the peculiar mental instability of the patients included in this percentage, one can hardly experience surprise at a habit which may fairly be classed as a symptom rather than a cause of mental breakdown.”

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*The Homiletic Review* for July contains several most timely and interesting discussions. One on the Apotheosis of Emerson, by Dr. Gregory, is a study of great value, another on the Literature of the Hebrews and Babylonians is of unusual interest. No other monthly publishes so high a range of current religious thought. Funk & Wagnalls Co. are the publishers, New York city.



The *Popular Science Monthly* presents each month a table of contents that are practically short treatises on great topics, yet put in a popular form to be understood by all intelligent readers. Its editor, Dr. Catell, is a genius in grouping topics that have a current interest and are vital in the everyday history of events.

The *Public Health Journal*, a new series, appears as a booklet, and contains a great variety of useful information. The publication office is at 18 East 17th Street, New York city, and it is only fair to say that it is the most useful publication that is received at the office of a physician.

*The Scientific American* deals with practical subjects, and some of the later numbers contain very interesting summaries of the automobile wagons. No physician who contemplates buying these wagons should fail to read this journal and its account of the progress in this direction.

The *Review of Reviews* is one of the great journals for the center table of every scientific and literary man. All the late issues are libraries of current history of unusual interest. Its brief accounts of great historic events are very welcome to all intelligent readers.

## Editorial.

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### A NEWER CONCEPTION OF THE PATHOLOGICAL EFFECTS OF ALCOHOL.

Dr. Sajous, in the recently-published first volume of his work, "The Internal Secretions and the Principles of Medicine," reviews at length the lines of investigation which have led him to conclude that the ductless glands are endowed with functions of the highest physiological importance. His conclusions, sustained by convincing experimental data, are briefly as follows:

The thyroid gland secretes, as is well known, a substance which contains iodine in organic combination. This substance, the author ascertained, is taken up by the blood circulating through the thyroid, and, once in the general circulation, has for its main purpose to maintain the functional activity of the anterior pituitary body. The latter he found to be a sensory organ in the sense that it reacts to the effects of the iodine-compound, or any other stimulating agency, or toxic, present in the blood-stream. The anterior pituitary body was also found to be connected with the adrenals through the sympathetic chain of ganglia and the splanchnic nerves, and to govern the functions of these glands, *i. e.*, their secretory activity. The thyroid gland, the anterior pituitary body, and the adrenals thus proved to be intimately linked, forming what Dr. Sajous has termed the "adrenal system." The vital importance of this system becomes apparent when the identity of the adrenal secretion is recognized as the agency which, in the pulmonary air-cells, takes up the oxygen of the air, and which, furthermore, as a constituent of the hæmoglobin of red corpuscles and

of the plasma, carries this gas to all parts of the organism. The functional activity of all cellular elements being normally dependent upon the amount of oxygen carried to them, the "adrenal system" thus becomes the governing factor of all metabolic processes, *i. e.*, of vital activity.

While the iodine of the thyroid secretion normally stimulates the anterior pituitary body (the center of the adrenal system) and *physiologically* augments the activity of general metabolism, thus giving rise to no particular symptom, various other agents or toxics, including *alcohol*, also stimulate this organ, but with abnormal violence, and excessive oxidation of all tissues, including those of the cerebro-spinal axis, follows.

Acute alcoholism probably typifies, better than any condition brought on by poisons, the result of the primary intense erethism of the cerebral circulation brought on by overactivity of the adrenal system. "The cheerfulness and the gestures of the inebriate often reach a stage of incoördinate excitement, mental and physical. If deterioration of the cerebral cellular elements have occurred through previous excesses and delirium tremens appear, the delirium is attended with terrors and frightful visions; if mania à potu prevail, the patient — perhaps gentle and kindly disposed normally — becomes furious, wild, shouts and strikes, often with homicidal intent, him or her whom he probably most cherishes."

When the critical stage is reached another morbid effect appears: the anterior pituitary body is overtaxed, overwhelmed, and finally yields, and *insufficiency* replaces *overactivity*. Reason, will, and consciousness fail and insensibility soon follows. There occurs a marked fall of blood pressure, and the pulse becomes rapid, thin, and compressible — the identical symptoms in animals experimentally deprived of their adrenals. The lower limbs, early in this stage, have first shown their inability to support the body. "In the majority of careful examination cases the lower limbs are affected before the upper," wrote Norman Kerr several years ago, though not

aware that in this statement he pointed to a primary sign of adrenal insufficiency. The dead-drunk is naught else than a man whose adrenal system has lapsed into this stage.

The kinship with the effects of other drugs is easily discerned. Opium, we know, first stimulates mental activity and procures sensations of well-being. Simultaneously, muscular activity is increased — slightly in man, markedly in animals. In the latter, particularly, tremors and cramp-like contractions — true tetany — are sometimes witnessed. The vascular pressure is raised, the face is congested, suffused, and sometimes cyanosed, the skin being dry and warm. The heart's power is increased and the pulse is correspondingly full and strong — all symptoms that experimental injections of adrenal extract likewise cause. When the adrenal center (the anterior pituitary) is overwhelmed, drowsiness lapses into deep sleep, from which the patient is roused with difficulty. The vascular pressure is lowered; pallor and cyanosis attest to imperfect oxidation; and respiration has become distant, feeble, and shallow. The heart's action is depressed and weak, the temperature low, and the skin cold and moist — all signs of failure of the adrenal system.

*Cannabis indica* is an interesting drug in this connection, in that it seems to stimulate the adrenal system just sufficiently to awaken purely psychical phenomena. Exhilaration, revery, ecstasy, hilarity, visions, exaltation, etc., account for the attraction possessed by some Hindoo natures of all these phenomena. This does not prevent, however, the most commonplace evidence of organic disturbance: tonic contractions, local spasms, a flushed and warm surface, heightened reflex activity, a full and strong pulse appear here as well as after poisonous doses of other drugs. When the crisis occurs, unconsciousness, paresis — beginning also in the lower extremities — a feeble and rapid pulse, attest to the overwhelming effects of *cannabis indica* or hashish upon the adrenal — again those that ensue after removal of both adrenals.

Briefly, in the light of Dr. Sajous's views, we have in the phenomena of alcoholism manifestations similar to those produced by many poisons, the earlier exaltation of the mental faculties, the sensation of well-being, etc., being but prototypes of like effects by drugs that stimulate the adrenal system to a corresponding degree. This does not mean that all drugs act *only* upon the adrenal system. He lays stress upon the fact that, in accord with prevailing views, each drug is endowed with a specific action and that it acts also upon tissues other than those concerned in the adrenal system. These questions are to be discussed, however, in the forthcoming second volume.

But why the craving of inebriates, of drug habitués, for the toxic of which they have become the abject slaves? Dr. Sajous clearly explains this all-important clinical feature: repeated and excessive stimulation of the anterior pituitary body exhausts the adrenal system, lowers all oxidation processes, saps life's own energies. More alcohol, more opium, more cocaine — anything that will stimulate the adrenal system — until, finally, it yields to rise no more!

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#### TEA AND COFFEE INEBRIETY.

Many years ago we called attention to this distinct form of inebriety coming from tea and coffee and characterized it as a well marked disease. This statement was denied and excited some ridicule. Even the cases which we published in support of our statements were not accepted as evidence. Within the last two years several obscure cases of nervous troubles due to these beverages have been published, and the authors were forced to recognize the reality of a distinct neurosis from this source. A recent editorial in the *Medical Press and Circular*, a leading London weekly, discusses this subject as follows:

"Text-books on the practice of medicine and on nervous diseases are curiously silent on the morbid effects of excessive

indulgence in tea and coffee, and the literature of the subject in general is very scanty. This must be due to the fact that practitioners are not sufficiently imbued with the importance of the subject and are consequently not on their guard to recognize the symptoms and warn their patients against the dangers associated with repeated and habitual indulgence in such powerfully stimulating beverages as tea and coffee. Both of them contain comparatively high proportions of physiologically active ingredients, and when taken in excess they determine a well marked deterioration of functions, especially the digestive and the nervous systems. Although thein and caffeine are stated to be chemically identical, the effects of the beverages are by no means the same. This may be explained by the presence in tea of a higher percentage of tannin, and in coffee of certain empyreumatic and volatile substances known collectively as caffeine. The action of these alkaloids is to stimulate the cerebral cells, inducing wakefulness and an ephemeral increase of mental activity, the spinal reflexes being at the same time enhanced, showing greater excitability of the spinal cord. The heart's action is at first strengthened, then rendered rapid and irregular, an effect which is thought to be due to their action on the medulla. Arterial tension being heightened, increased diuresis is produced, the increase bearing on the solid as well as the liquid constituents of the fluid. Thein is said to cause a reduction of temperature, while caffeine raises, and thein, moreover, possesses local anæsthetic properties from which caffeine is free. The tannin exerts its recognized astringent effects on the digestive tract, and unquestionably hinders digestion and assimilation. The physiological effects of the alkaloids when taken with excess, and the margin is not very wide, are: insomnia, headache, mental depression, palpitation, and general debility in association with chronic dyspepsia. The number of patients presenting a mild degree of intoxication is very large, and unless the cause of the mischief is recognized, treatment will not afford more than passing benefit.

Practitioners are alive to the injurious influence of alcohol and tobacco in men, but they are curiously tolerant of excess in respect of tea and coffee, tea inebriety, in particular, being apparently regarded as a venial physiological sin. The robust and otherwise healthy adult may be able to take tea without obvious ill effects twice a day, but even this quantity, moderate as it would appear to many, is sufficient to cause symptoms in persons addicted to sedentary pursuits and already prone to dyspepsia, such, for example, as typewriters, post-office employees, and the like. What then is to be expected when we find the average female taking from five to ten cups at odd hours throughout the day, especially as the appetite soon fails, and a positive distaste for substantial food is created. Tremulousness, associated with digestive disturbances in the woman, is in the great majority of instances directly attributable to undue indulgence in tea. The susceptibility to this form of intoxication varies according to age, sex, occupation, and individual temperament. Although it leads to no characteristic organic disease as does alcohol, tea inebriety is destructive of health and is unquestionably responsible for a large proportion of the cases of neurasthenia met with in women, whose nervous systems, naturally more amenable to excitants, suffer more from constant stimulation than the comparatively resisting nervous organization of the males.

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#### ALCOHOL IN THE FUTURE.

Every year the fact is becoming more apparent that alcohol is far more valuable in the arts than as a medicine. It has been found to be a very cheap source of energy for power, also for light and heating purposes. It is far superior to petroléum or any forms of gas which are made from this substance. Recently it is found to be of great value with incandescent mantles as a light, and also in cooking it yields more

heat, is more easily controlled, and without odor; as a motor power for engines, motor wagons, and farm work it exceeds any other force, even electricity. The great obstacle to its practical use in this direction is its expense. In Germany, where petroleum is expensive, alcohol from beet roots is found to be cheaper and far more valuable as a fuel. When free from taxation in this country it can be used to compete with all forms of petroleum. Already inventors are turning their attention to this most promising field for light and power. The German experience gives promise of great activity in this direction. It is already used in power stations as a fuel for the manufacture of electricity, and in this country one or two motor wagons have appeared with this as a fuel. Alcohol cannot be banished, but it will come to be used as a light and power producer and for the purpose of heating our homes, and not, as at present, on some mythical theory of its value in human economy.

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A prominent physician declared that without exception the only reformed drunkards he had ever seen who were saved had been by religious influences and not by medical means. This statement has been frequently quoted as an authoritative one, while in reality it is a most lamentable confession of the ignorance of the author. It is only the common, vague language of a person unacquainted with psychological medicine, and not that of a physician who has had any practical knowledge of the alcoholic subject. To call an inebriate reformed when he stops drinking implies a belief that the use of alcohol is a mere matter of will power, and that drunkenness is only a moral lapse. It would be equally irrational to call an epileptic reformed during the free intervals of his paroxysm, or assert that in any of the recurrent neurotic diseases, when the acute symptoms subsided, reformation had taken place. Strong religious and emotional influences may often check the craze for spirits in inebriety at the time, but this is not a cure, or a removal of the



degenerative changes of the arteries and nerves, or stopping the palsies of the brain centers. The drink symptoms disappear with and without an appeal to the emotions or will power. Many inebriates stop all use of spirits without knowing why, then realizing the mystery of this act, look about for some cause to explain it. Hence the prayer, the pledge, the council of a friend, or some common event which has happened many times before is credited as the final cause of restoration. The cessation of the drink symptom is not the cure; it is only a halt and remission in the progress of the disease, which will return or appear in some other states of degeneration and disease. Any emotional impression from shock, excitement, or fear may check the craving for alcohol, but no one can tell whether this will be a permanent or transient change. Some disturbing condition of the brain centers provokes the depression and irritation which calls for help, and alcohol by its narcotic influence meets this want at once; in like manner opium when given for pain checks this symptom but does not remove the cause. Alcohol is both a narcotic and a toxine; the one suppresses the pain symptom, and the other disturbs the nutrition and diminishes the control of the nerve centers, increasing the condition which for a time it conceals. In a very large number of inebriates there are inherited degenerative tendencies with enfeebled vigor, unstable brain control, and low power of restoration. Such persons often suffer from defects of early training and nutrition, with faults of environment and other conditions, making them ill-adapted to bear the stress and strain of life. While alcohol is a grateful sedative, it paralyzes the vaso-motor centers, deranging the circulation of the blood as well as the nutrition, and practically starves the nerve centers. In many instances the disappearance of the alcohol symptom is followed by other diseases, of which tuberculosis, epilepsy, and paresis are common, also acute inflammatory diseases which end fatally. The complexity of the causes, progress, and development make it impossible to understand or apply reme-

dies that will reach every condition present. When recovery takes place it is clearly due to a great variety of causes and influences which are unknown, and no drug, or appeals to the emotion, will power, or nutrition can be called specific. It is profound ignorance of the causes which makes it impossible to prove that the cure comes from any one means or measure of treatment. For this reason inebriety occupies a mythical and half moral place in the minds of many physicians. This journal has long ago pointed out the impossibility of the treatment of this disease by the use of any specific or moral remedies. The experience of more than a quarter of a century has given some outline facts of the vast realm of this border-land disease, which, while curable as other diseases are, can only be so by a most exhaustive study of the conditions prominent in each case.

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The forty-fifth annual report of the Washingtonian Home at Boston, Mass., for the year 1903, is of great interest. This is the oldest institution in the world for the treatment of inebriates. It was organized as a home for street drunkards in 1857. Two years later it was incorporated and began a more serious work of treating inebriates of all degrees. There has been from the beginning a marked evolution in its progress and growth. For many years the moral treatment was most prominent; this has gradually passed away, until now, under the care of Dr. Ellsworth, it is a most excellent hospital, giving exact medical care and treatment. Last year 632 patients were admitted, which is the largest number that have been treated in one year; 57 of this number were suffering from delirium tremens; of the whole number 25 were physicians, 15 were lawyers, 5 were clergymen, and 6 were dentists. Other statistics of unusual interest are given. The whole number of patients treated since the beginning of the institution is 14,098. The institution has been successful financially. It has a small

income from some invested funds, but depends largely on the income from patients to pay its expenses. Dr. Ellsworth's report is very interesting and points out the possibilities of successful treatment and cure of a large proportion of these cases. This institution has had a long struggle against very serious difficulties, which it has been able to overcome, although they threatened its existence many times. Fortunately its superintendents have been diplomatic, cautious men, who tried to lead public sentiment rather than to oppose it. The late Dr. Albert Day, who was identified with this work a long lifetime as superintendent, and his successor, Dr. Ellsworth, have both managed the interests of the institution with great care and good judgment.

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The following very interesting statistics have been collected from an examination and study of 150 inebriates in an insane hospital with a ward for that class at Mount Pleasant, Iowa. Of this number only one was colored and six were women; the average age was 40 years. The maximum age was 84, and the minimum was 18. Two began to drink spirits under 15, 62 began from 15 to 25 years, 10 began over 50 years of age, 88 had a common school education, and 21 had been through college, 85 drank spirits, and 21 used other drugs, and only eight cases used morphine alone, one cocaine, and one chloroform taker. In only 25 cases were the parents temperate. In the next table 81 are put down as having no family neurosis. In the next table only 10 are noted as having no evidence of insanity. Affections of the nervous system are credited with 84 cases. It will be interesting to know the real condition of the 46 cases who were supposed to have no nervous trouble. The diseases of the vascular system were found in 110 cases. Here again the same query occurs, what the condition of the 40 was who were supposed not to have any vascular trouble. Other tables of various conditions are given, which show evidence of limited

knowledge of the disease of inebriety. We hope that as the years go by the inquiries will take a wider and more exact form, and include many of the leading facts necessary to determine the degree and progress of the disease of inebriety.

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The two addresses of Drs. Davis and Mason appearing in this issue are very timely, suggestive studies of alcohol and inebriety. They indicate very clearly the scope of the two societies before which they were delivered and show that the work is one in purpose and spirit. Public sentiment concerning alcohol is changing so rapidly and revolutionizing all the previous theories that capital invested in the spirit traffic is alarmed, and the interest in the outcome of this agitation is growing more and more intense. The startling advances in sanitary and psychological science have brought the inebriate and his malady into increasing prominence. A noted author asserts that alcohol and heredity are the two most active causes of insanity and nervous diseases, and this impression is recognized as based on sound evidence by many persons. At all events accurate scientific studies of the causes of disease show that alcoholism and inebriety are very intimately associated with many of the great evils and diseases of modern times. These two societies, which are practically one, are leading public sentiment along the line of accurate researches in this field, and this subject will come into great prominence in the near future.

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The deadly parallel column appears in the following. Dr. B., very eminent, and a good scientific man, wrote as follows: "The fanaticism of temperance reformers is the most serious obstacle to all progress in this field. Nothing can be accomplished by wild, unreasonable statements, and no reform is ever helped on by zealous, exciting statements." Five years later he wrote as follows: "The public apathy of the danger from the

use of alcohol is startling. If these perils could be realized as they exist there would be a grand uprising and tremendous sentiment, which would instantly close up the saloons and force the inebriates to go under medical care and be housed and protected. There would be no lukewarmness of sentiment, no fears of hurting the feelings of anyone. What we need is a reformer and reformation that is positive, aggressive, and conclusive."

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The liquor traffic is feeling the influence of reform so sharply that it is forced into the field of advertising in the great monthlies. The decline in sales along customary lines forces them out, and, curiously enough, many of the great monthlies accept this kind of advertising. One of the advertisements announces that their particular brand of whisky is saving many lives yearly, and that it is a supporter of old age and always renews the vigor of the person using it. This is very refreshing news and is certain to find welcome defenders among the readers. The editor, who shows great anxiety for fear his contributors should make an error in date and statement, has no hesitation in permitting his advertising pages to be filled up with the most fraudulent and dishonest representations possible.

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Dr. T. J. Mays, the well-known consumptive specialist of Philadelphia, has recently published a very interesting study of fifty-five cases of consumption treated by silver nitrate injections. The results were very marked in the cessation of all the acute symptoms and improvement of the patient. The conclusions from this and other studies made by this author show a decided antagonism to the pathological process of consumption by the silver nitrate injections. These pioneer studies are very promising and anyone interested should write the author for this most valuable contribution.

The American Electro-Therapeutic Association meets in Atlantic City September 22, 23, and 24, 1903. This association is devoted to the discussion of electrical means and measures, particularly the X-Ray and other appliances. It is evident that electricity is a very valuable remedy in the treatment of inebriety and nervous diseases. Hence this association and its work promise to throw much light on some of the disputed problems in the field of inebriety.

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It is always a hopeful sign when some Solon of wisdom denies emphatically some well-established truth. If the evidence on which it is based is wrong a new study will be made; if it is right the opportunity for confirmation and re-examination of the evidence fixes it more firmly in the public mind.

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We take pleasure in referring to Dr. Punton's private home for nervous invalids in Kansas City, Mo. We expect in a future issue to give some details of many of the excellent private institutions where alcohol inebriety and nervous diseases are treated.

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The unusual demand for copies of the JOURNAL during the last six months has necessitated the printing of a larger edition; and we desire to call attention to Dr. Turner's book, advertised on the cover of the JOURNAL, of which we have a few copies left. They are invaluable to all persons who treat inebriates.

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The *Jackson Sanatorium* at Dansville, N. Y., has been prominent for over forty years as a beautiful home for the treatment of nervous and nutrient diseases. Such a place needs no praise; it stands on its merits.

## Clinical Notes and Comments.

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### THE INFLUENCE OF ALCOHOL ON THE PERCEPTIVE FACULTIES.

Kraepelin's work containing studies on the action of alcohol gives the following interesting statement: In experiments made with one fluid ounce of alcohol to determine the accuracy of perception it was found that the number of mistakes following the use of alcohol compared with those made while abstaining scarcely double (mounting from 115 to 202), the number of omissions was fifteen-fold (from 5 to 78). The common simple mistakes (where only one letter was read wrongly) showed a smaller increase under alcohol than the multiple mistakes (where several letters were read wrongly). Normally, the first letter was most frequently mistaken, and this was also increased by alcohol; so also the third letter received less attention with alcohol. The misreadings were more numerous with one than with two-syllable words and approached those of meaningless syllables, with which they were most numerous. The obscurity of the perception showed itself also in the manner of reading, as the inclination to rhythmical resemblance of the mistaken words, and indeed in the preference given to the first, third, and fifth letters in two-syllable words, showed itself especially on the alcohol days. A similar obscurity of perception was exhibited by paraldehyde, but the disturbance is greater and passes off more quickly than with alcohol, with which it sets in more slowly but lasts longer.

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One of the two sanatoriums for treatment of inebriety in Sweden, Sans Souci, at Upsala, that has government aid, has

sent out its annual report. It is a small institution, having only twenty patients during 1902. The average number was eleven, the cost per day for each was about seventy-five cents, but the fee was only sixty or fifty cents a day, including all accommodations.

The Grand Lodge of I. O. G. T. has during the year granted the institution a loan of \$1,200 without interest.

Most interesting is to read about the results of eighteen patients that have been discharged during the year; fourteen are now well and everything indicates that cure will be permanent. One case was especially of very great interest.

He was thirty years old and was brought up in a home where he, from his earliest days, heard that alcoholic liquors were necessary. At fifteen he already needed large quantities every day to satisfy his cravings. Since that time he has practically been going in continued intoxication and was unable to do any work of any account. A hard alcoholic dyspepsia set in and at times a strong melancholy, especially if he did not have his usual stimulant at hand. He had several times had delirium tremens. Sometimes he fell into a condition of somnambulism lasting from a few hours to several days. During those spells he could do his work very well, sometimes better than in his natural condition, but he did it in a mechanical way and did not know anything about it when he came out of the spell or trance.

After thus having suffered from alcoholism and inebriety for over twenty years he entered the sanatorium Sans Souci. When he entered the institution he was just on the verge of having the delirium tremens again. At this time he had an attack of melancholy, which ended with somnambulism. During this he had pneumonia; after three weeks he recovered, but could not remember anything that happened during this period. He remained six months in the institution and behaved very well during this time. In the business college at the in-



stitution he learned to keep books and after returning home he helped his father in his business.

His father was an inebriate. His mother and mother's mother and an uncle on his mother's side have died of inebriety, and another uncle on his mother's side died of epilepsy.

"I have especially mentioned this case," says the physician at the institution, Dr. T. Brunnberg, "as it gives a very fine example, a possible power of resistance that sometimes may be found in the human organism against a continual intoxication with alcohol, and that even when very bad hereditary conditions are at hand. This man had practically, during his whole life of thirty years, used and abused alcohol, gone through almost every stage of alcoholism and suffered from several of the complications following it, and yet he made a fair recovery from it. Health and strength returned after a few months of total abstinence and at present he appears well."

*Miner*, a scientific temperance paper published in Sweden, from which we have translated the above, adds that it is rather early to judge about this case. — *Translated by Hockert.*

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To say that drunkenness is due to drink may be quite true as far as it goes, but it is a long way from making clear the many different influences which play a determining part in the etiology of this disease. Too little attention has in the past been given to the consideration of the many predisposing and exciting causes of inebriety. They have been called individual characteristics and said to depend upon some connection with the environment. Nothing can be done to practically understand the inebriate and his condition except from a sound and comprehensive study of all the agencies contributing to the causes of inebriety. Physical repair and physical recreation are necessary before any positive restoration can be expected. Homes and retreats may for a time bring palliative measures

and relieve the disease by removing some of the active causes, but unless they are managed with the view to build up and strengthen both the physical and nervous system little permanent good can be expected. All secret specific drugs and preparations claiming to cure persons in a few days or weeks are to be condemned; nothing but harm can be expected from measures of this kind depending on mystery and faith. — *Dr. Kelynack.*

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A free temperance school for inebriates has been started in Germany, in the city of Duben am Main. In this the inebriates, without restriction or force, will be taught only by training their will power to resist the craving for alcohol. The institution will accommodate 900 patients from 18 to 70 years of age. No attention is going to be paid to nationality, religion, or social conditions; all are to be treated alike. The treatment will take three months. Reformed drunkards are to be employed as teachers. The institution is not to be a business enterprise, but entirely a charitable undertaking.

The manager is Dr. E. Wulff of Berlin. The emperor, many princes, teachers, physicians, etc., are interested in the undertaking. — *Hockert.*

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The New Voice Company are preparing a standard encyclopedia of temperance and prohibition. This will be the most exhaustive study of the entire field of temperance reform which has been made. Every phase of the work, both in ancient and modern times, concerning the drink evil and the effort to correct it will be treated in the most authoritative ways by both statistics, records, history and biography, all written by experts. The work will comprise three large volumes containing over three thousand pages, with maps, portraits, and drawings, and will be ready in 1904. John G. Wooley is editor-in-chief. The company offer great reduction to those

who subscribe for the first edition. Address the New Voice Co., Hyde Park, Chicago.

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Of a total of 138 cases toxic amblyopia from all sources collected by de Schweinitz, I find upon analyzing them that 40 per cent. were due to alcohol, 16 per cent. to tobacco, and 32 per cent. were due to the combined action of tobacco and alcohol. Thus 94 per cent. are due to the wilful abuse of alcohol or tobacco, or both. The remaining 6 per cent. are distributed among a long list of substances, such as carbon bisulphide, iodoform, iodine, potassium iodide, potassium chlorate, dinitro and trinitro-benzol, benzine, hydrocyanic acid, potassium, hydrocyanide, coal-tar products, anilines, arsenic, mercury, lead, phosphorus, and several mineral acids. — *Dr. Sherer in Philadelphia Medical Journal.*

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PAIN AND ITS REMEDY, by J. D. Albright, M.D., Phila., Pa. . . . Believing that the bar in the way of the profession, in the use of opium, is its tendency to evil after-effects, and the harum-scarum idea that a little opium will induce the habit, and those terrible concomitants (?) I wish to call their attention to a preparation that I have long been using, and have not yet seen one case in which the habit was formed, nor ever had any complaint as to evil after-effects. This remedy is *Papine*, a preparation of opium from which the narcotic and convulsive elements have been removed, rendering it a safe remedy for children, as well as for those of mature age. . . . Up to a year ago I always gave chlorodyne tablets and viburnum for after-pains. Then I came across a case that refused to yield to them in the time I was accustomed to have them do so, and I concluded to try papine. Its results, to make the story short, were such that I now never give anything else for after-pains, and they yield in about half the time that was required with the above-named remedies. — *Medical Summary.*

Many of the genito-urinary diseases, which have heretofore depended for a cure upon the different salts of lead, zinc, copper, or silver, now yield permanently and promptly to S. H. Kennedy's extract of *Pinus Canadensis*. In all inflammatory processes, in fact, whatever may be the stage of the malady, this remedy in pyrosis, acid stomach, colic, diarrhoea, and dysentery. it lessens the caliber of the arterioles, minute vessels and ducts, favorably influencing their secretions, and rapidly bringing about resolution. Even in rheumatism and in various other conditions requiring an external stimulating application, it is a very superior therapeutic agent, and internally it is an efficient remedy in pyrosis, acid stomach, colic, diarrhea, and dysentery.

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SEVERE REFLEX PAIN. J. H. Tilden, M.D., of Denver, in the June number of the *Chicago Medical Times*, in an article advocating the use of tampons in gynæcological practice, reports, among others, a case which was characterized by severe reflex symptoms and which had not yielded to the treatment accorded by two other practitioners. Dr. Tilden's procedure was the introduction of a glycerine tampon and the administration of *Antikamnia* in ten-grain doses (two five-grain tablets) to relieve the pain. The tampon was removed each night at bedtime and followed with hot water injections. The patient, on being discharged, remarked that since following this treatment she could run the sewing machine without the usual pain and tired feeling.

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*The Dial* is a semi-monthly journal of broad literary criticism and discussion of books. It is a very valuable journal for a busy man, and gives one an excellent idea of the literary world. We commend it to our readers as a very frank, broad presentation of current views on books. It is published in Chicago in the Fine Arts building; our readers are advised to write for specimen copies and judge for themselves.

*The American Electro-Therapeutic and X-Ray Era* is a monthly journal published at the Masonic Temple, Chicago, Ill., and is a pioneer in this field, giving all the latest researches. It is one of the best journals for all persons who use the X-Ray, and we urge our readers to take this journal and thus keep in touch with all the new advances in this field.

*Bovinine* has come into great prominence as a remedy to feed the blood and increase vitality. Theoretically its value is very evident and practically its use is followed by some very remarkable results. It has been on the market for a number of years and retained its place as a remedy for low vitality, nervous exhaustion, and nervous diseases.

The value of persistent advertising, particularly when the remedy presented to the public has a permanent value, is well illustrated in *Fellows' Syrup of Hypophosphites*. This formula is a combination of well known remedies that are used by the profession, hence this form of hypophosphites is very valuable.

The *Sphygmomanometer*, manufactured by Eimer & Amend of Third Avenue, New York city, is a very simple, accurate instrument for measuring arterial blood pressure and is one of the most valuable additions to the instruments for accurate diagnosis in the study of inebriety.

The Antikamnia Chemical Co. of St. Louis have published for free distribution a very practicable reference chart, giving names, symptoms, and treatment of a great variety of diseases, which will be sent free to all who request it. [See advertisement in this issue.]

We have found *Somatose*, a new preparation of chloral, to be a most valuable narcotic. In many instances it is superior to other narcotics on the market; we urge its use as a harmless and comparatively safe narcotic in many cases of neuralgia.

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We call attention to the *Chattanooga Vibrator* advertised in this issue. Its value is beyond question as a massage machine and one for the production of muscular movements of a pleasing character.

*Horsford's Acid Phosphate* is manufactured by the hogshead and sold in quantities to the profession and at soda fountains. It is one of the most pleasing medicinal beverages that are used.

Dr. McMichael is superintendent of a special private asylum for inebriates and nerve-exhausted persons at Buffalo, N. Y. [See advertisement.]

The *Daus Tip Top Duplicator* is a very great help in every office for the purpose of duplicating cards and letters sent to firms. See note in the advertising pages.

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(William H. Burt, M.D.—Physiological Materia Medica.)

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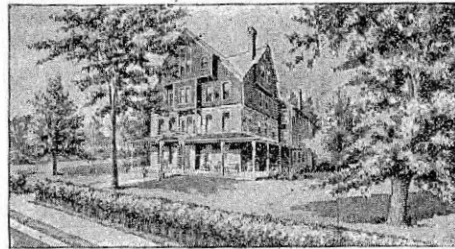
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The object of this Association is to promote the scientific study of Inebriety from alcohol, opium, and other drugs, and to encourage special legislation for the care and control of these neurotics. It also aims to organize all legitimate asylums to follow some general principle and method of practical work. Every hospital and institution in the country should join this Association and assist to rescue the treatment of Inebriety from the realms of quackery, and place it on the same level with the treatment of other neurotic diseases and thus secure the same medico-legal and institutional recognition which is given to the Insane Asylums. The membership fee is \$2.00 a year, which includes the annual subscription to the JOURNAL OF INEBRIETY, the organ of the Association. All communications should be addressed to

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BY

THOMAS D. CROTHERS, M.D.

Superintendent of Walnut Lodge Hospital, Hartford, Conn.; Editor of the *Journal of Inebriety*; Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, etc.

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The special object of this volume has been to group the general facts and outline some of the causes and symptoms common to most cases, and to suggest general methods of treatment and prevention. The object could not have been better accomplished. The work gives a general preliminary survey of this new field of psychopathy and points out the possibilities from a larger and more accurate knowledge, and so indicates degrees of curability at present unknown.

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—*The Lancet*, London.

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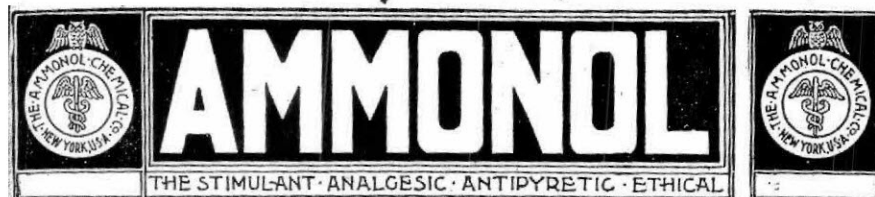
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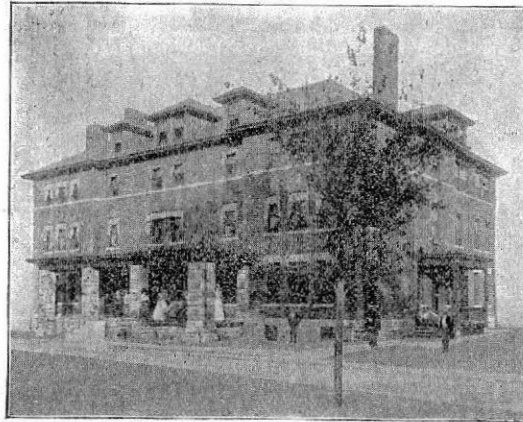
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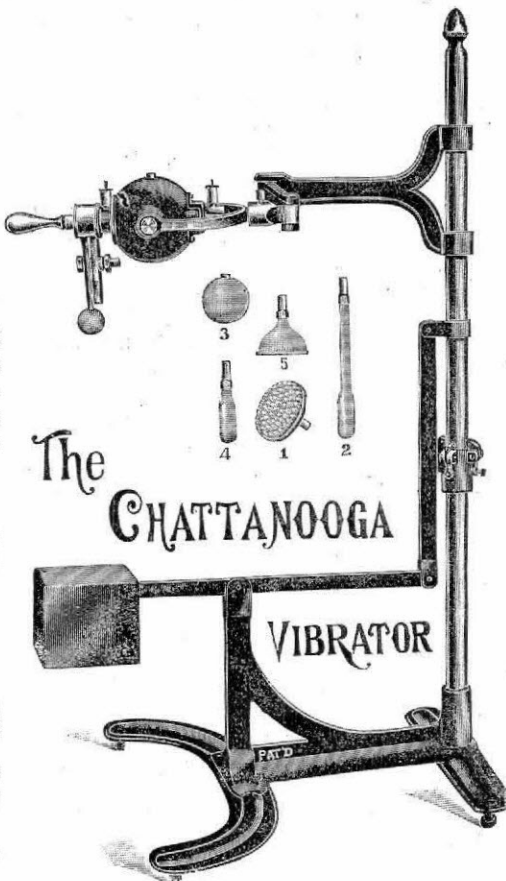
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