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THE QUARTERLY JOURNAL

OF

INEBRIETY.

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

Vol. V.

1883.

No. 1.

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

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

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January, 1883

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THE TEMPERANCE CAUSE, AND ITS DEPARTURES.

BY JOSEPH PARRISH, M.D. BURLINGTON, NEW JERSEY.

In all great reformations of popular sentiment, especially in its relation to public morals, there seem to be certain periods or *crises*, that are distinguished by departures from the thought or idea which originally imparted inspiration to effort. Each such departure does its share in determining the issue that lies at the end, and each tends to the perfection of the cycle in which the movement completes its career.

Perhaps no effort of modern times has commanded more attention, or no one been marked by more frequent and decided critical periods, than what is popularly known as the "temperance cause." Taking fifty years ago as a starting point, we may trace marked changes in its platform or code, both as to principles and methods, that have not only been numerous, but sometimes very sudden and imposing.

One epoch had scarcely been completed, before another would be projected, so numerous have been the factions that have disturbed the unity of the cause; and it may be

ceaseless activity forces the mind to unresting labor. To such, indeed, alcohol seems a needed and abiding friend, and notwithstanding the subsequent pains and troubles inseparable from excessive alcoholic indulgence, the wearying stress of an over-active mind, recurring again and again, will induce a resort to the temporary respite afforded by the anæsthesia of alcohol. For alcohol by its anæsthetic property, brings intellect and morality alike into a condition of impotence and weakness. Whatever may be the abstract nature and power of the human mind, it is a recognized fact that the normal display of its faculties can only be brought into exhibition, with relation to its material surroundings while in the body, through the intervention of *excitation*.

Anæsthesia in a degree more or less complete, is a general if not universal accompaniment of intoxication. But there can be *no complete or neuritic sensation* when the nervous functions are obtunded by alcoholic influence; and it is a principle thoroughly established that *sensation is the basis of perception*. When sensation is abolished there is no true perception—dreams only, and mental wanderings, without relation to passing facts and present surroundings. So also when sensation is impaired and perverted, perceptions must be dwarfed and indistinct, and the whole train of mental function is hindered in power, and dignity, and activity. Thus the victim of neurotic mental sensibilities gains rest from alcohol.

These considerations bring into notice large classes of men who, although not affected with any constitutional neuroses, are, by the force of circumstances, placed in positions of mental distress analogous if not identical with those of the true neurotic. Anything which tends with irresistible force to the establishment of a prolonged state of mental anxiety, may also become the cause of such intolerable weariness of mind and nerve that the repose and change proffered by the anæsthetic property of alcohol are most welcome. The disasters incident to human life, and especially civilized life, are innumerable. The continuous anxiety attending important and

tedious litigation, as every observing person has seen, is liable to lead to intemperance. The suspense imposed in view of impending calamity—as, for instance, chronic and malignant disease in the family, or the agony of threatened social degradation from criminality amongst kindred—is either of them a prolific cause for seizing upon inebriety to obtain some reprieve from consuming trouble. The incitement to drunkenness by *force of adversity* has been so well delineated by Dr. Crothers in the *Journal of Inebriety* for October, 1882 that a farther consideration of the subject in that aspect is not called for in this place.

I do not think it is essential to the perfection of the present discussion to adduce a number of illustrations to establish the doctrines already advanced. They are, in fact, in the sight and knowledge of every one. They furnish the example so commonly noted, however, of which it is usual to exclaim: "He would be a remarkable man if he would let liquor alone." Whereas the truth is, he indulges in liquor because he is already a remarkable man. *He thinks* until he is wild with nervousness and mental pain; and he drinks for relief. He is like the restless victim of some consuming fever, with thought incessantly crowding thought in helpless stream and flow, being without the nervous strength and capacity to stop. How the mind careers and tumbles in endless troubles and wild imagery! How the remorseless *time* sings and sings, hours in and out, and for days together, in the tired brain, the pulsation in the morbidly sensitive ear keeping the monotonous time beat!

But the neurotic thinker—the man who, from the constitutional debility of his inhibitory nervous faculties, cannot control the limits of his mental activity—needs not the intervention of fever to produce the conditions above described. Any cause of nervous prostration—not of a force sufficient to produce special influence upon the ordinary mind—any serious loss of rest, or a slight cold, or a temporary indigestion will induce in him an irresistible avalanche of mental labor, with the attending tiresome tune and tedious arterial beat of time.

There is also a class of men who, in the pursuit of honest but exacting mental labor, become so exhausted in nerve function that a resort to alcohol becomes a source of relief. Statesmen, in the proper sense of the word, men who labor in the solution of great problems involving the well-being of a nation, and indeed of nations, become of necessity so absorbed in the study of intricate and interwoven questions and interests that the mental powers are prostrated, and repose, or at least change is sought in the lethal power of alcohol. The examples of this fact are too many and too conspicuous to require specification.

In view of what has been advanced it is quite conceivable that circumstances might possibly arise of such a character that a whole community, or even an entire nation would become the victim of inebriety. Imagine a nation of high-spirited people so placed geographically that it becomes the policy of a neighboring government of superior strength to keep it repressed. Suppose this policy is imperative from motives of self-preservation in preventing a base of attack from falling into the hands of enemies. It is easy to see that such a policy, sternly enforced for years, and in truth for centuries, would become intolerably galling. It is easy to see that resistance and insurrections must ensue—not once, but repeatedly, as generations come and go—and it is easy to see that at length the insidied, the repressed, the robbed and impoverished nation of people, starving and naked, in the agonies of defeat and disappointment would turn for relief and rest to the use of alcohol. Generations pass by. The same causes produce the same effects. What was at first individual becomes national. What was personal becomes herd-farious. In such event the characteristics of humanity, both good and bad, are exaggerated and intensified. The nation at length is a nation of neurotics. The people are a race possessing positive but contradictory traits of character. They are called changeable, inconstant, and mercurial. Such is Ireland to-day; and her enemies charge inebriety upon her as a *crime*.

But there is a limit to human power and human endurance, mental as well as physical. It is not permitted to mortals to look upon God and live. When a certain advancement in mind is obtained, a farther step means lunacy—mental wreck. So it is that certain families, which for generations, perhaps, have led the van in particular intellectual and scientific work, are liable to reach the acme of mental possibilities. Happy the man who recognizes this, his condition. He and his kindred, if they are wise, will revert to first principles in the modes of life. He will return to his great mother, the earth; and in the seclusion of rural retirement he will cultivate the soil in peace and contentment; or else he will seek some other quiet and congenial avocation, free as possible from mental cares and asperities. Otherwise the allurements of alcohol are liable to furnish the conditions which operating in another generation, may produce epilepsy, insanity, imperfections of body and brain, with defects in the moral nature, and that deplorable outcome of cumulative neurotic inheritance—the *criminal constitution*.

In 1878, '79, and '80, the number of women committed for inebriety in London and Liverpool, has steadily increased.

In 1880, the number in both cities exceeded the men committed for the same offence.

In Liverpool, in 1880, this number was fifteen thousand three hundred and fifty-seven.

Barst's *Medical Index* is a book that should be in the hands of every physician, and is literally one of the most practical aids that could be devised, for noting facts and placing them where they can be seen at a glance. We have used it a long time and its value increases every day.

Capnicumardi is the name given to those who manifest an uncontrollable impulse to smoke a pipe, at all times and seasons. These are the men who never abandon or give it up, no matter what their experience may be, or what arguments are advanced against it.

ALCOHOL IN CASES OF GREAT HARSHNESS
AND EXPOSURE.

W. DR. ALBERT LAY, SURG. WASHINGTONIAN HOME, BOSTON,
MASS.

We have in the annals of the armies of the British empire, in their service in all parts of the globe, in every zone, and on sandy deserts, positive testimony, as convincing proof as can be, that alcohol is not necessary in those varied climates; but on the other hand, it is proved beyond a doubt that it is injurious in cases of great hardship and exposure.

In the year 1800, an English army, proceeding from India to Egypt, to join Sir Ralph Abercrombie, marched across the desert from Kossey on the Red Sea, and descended the Nile for four hundred miles. Sir James McGregor says, that the fatigue in this march has perhaps never been exceeded by any army, and goes on to remark: "We received still further confirmation of the great influence which intemperance has, as a cause of disease. We had demonstrated how very little spirits are required in a hot climate to enable a soldier to bear fatigue, and how necessary a regular diet is. At Ghenné, on the voyage down the Nile, on account of the difficulties of at first conveying it across the desert, the men had no spirits delivered out to them, and I am convinced from this, not only did they not suffer, but that it even contributed to the uncommon degree of health which they at this time enjoyed."

Dr. Mann, one of the few American surgeons in the War of 1813-'14 who has left any considerable account of that contest, thus writes:—"My opinion has long been that ardent spirits are an unnecessary part of a soldier's ration. At those periods during the Revolutionary war when the army

received no pay for their services, and possessed not the means to procure spirits, it was healthy. The 4th Massachusetts regiment, at that eventful period when I was the surgeon, lost in three years, by sickness, not more than five or six men. It was a time when the army was destitute of money. During the winter of 1779-80 there was only one occurrence of fever in the regiment; and that a pneumonia of a mild form. It was observable in the last war, from December 1814 to April 1815, the soldiers at Pultsburgh were not attacked with fevers, as they had been the preceding winters."

The troops during this period were not paid, a fortunate circumstance to the army, arising from the want of funds. This embarrassment, which was considered a national calamity, proved a blessing to the soldier. When he is found poor in money, it is always the case that he abounds in health,—a fact worth recording. No testimony can be stronger than that given by the Inspector-General, Sir John Hall KCB, in his "Medical History of the War in the Crimea." He says: "My opinion is, that neither spirits, wine, nor malt liquor is necessary for health. The healthiest army I ever served with had not a single drop of any of them; and although it was exposed to all the hardships of Kaffir warfare at the Cape of Good Hope in wet and inclement weather, without tents or shelter of any kind, the sick-list seldom exceeded one per cent, and this continued not only throughout the whole of the active operations in the field during the campaign, but after the men were collected in standing camps at its termination; and this favorable state of things continued until the termination of the war. But immediately the men were again quartered in towns and fixed posts, where they had free access to spirits,—an interior species of brandy sold there, technically called 'Cape smoke,'—numerous complaints made their appearance among them.

"In Kaffirra the troops were so placed that they had no means of obtaining liquor of any kind, and all attempts of the 'Winklers' to infringe the police regulations were so

summarily and heavily punished by fines and expulsion, that the illicit trade was effectually suppressed by Colonel Mackinnon, the Commandant of British Kaffra, and the consequence was that drunkenness, disease, crime, and insubordination were unknown; and yet that army was frequently placed in the very position that the advocates for the issue of spirits would have said required a dram. Small as the amount of sickness and mortality was in the Crimea during the winter of 1855-56, they would have been reduced one-half. I am quite sure, could the rule that was observed in Kaffra have been enforced there.

In the same Kaffra war (1855) a march was made by two hundred men from Graham's Town to Bloombfontein and back; one thousand miles were covered in seventy-one days, or at the rate of fifteen miles daily; the men were almost naked, were exposed to great variations of temperature (excessive heat during the day, while at night water froze in a bell-tent with twenty-one men sleeping in it), and got as rations only biscuit (meat one and a half pounds) and what game they could kill, for drink they had nothing but water; yet this rapid and laborious march was not only performed easily, but the men were more healthy than they had ever been before, and after a few days ceased to care about spirits. No man was sick till the end of the march, when two men got dysentery, and those were the only two who had the chance of getting any liquor.

In the expedition to the Red River, under the command of Sir Garnet Wolseley, no alcoholic liquid was issued. An account of the memorable march was published in *Blackwood's Magazine* by Captain Hayshe (and the *Journal of the United Service*, 1871). Captain Hayshe says: "Although it was an unheard-of thing to send off an expedition into the wilderness for five months without any spirits, still, as the backwoodsman was able to do hard work without spirits, it was rightly thought that the British soldier could do the same. The men were allowed a large daily ration of tea—one ounce per man, practically as much as they could drink

and as I am now on this subject of bohea versus grog, I may as well state that the experiment was most successful. The men of no previous expedition have ever been called upon to perform harder or more continuous labor for over four months. They were always cheery, and worked with a zealous will that could not be surpassed.

This expedition would have been a bright example in our military annals, had it no other result than that of proving the fallacy hitherto believed in of the necessity of providing our men, when in the field, with intoxicating liquors.

Another writer in *Blackwood's Magazine*, in speaking of this expedition says: "The men were pictures of good health and soldier-like condition, whilst stationed at Prince Arthur's Landing and the other large camps. The men had fresh meat, bread, and potatoes every day. No spirits were allowed throughout the journey to Fort Garry, but all ranks had daily a large ration of tea. This was one of the very few military expeditions undertaken by English troops where intoxicating liquors formed no part of the daily ration. It was an experiment based upon the practice common in Canada, where the lumbermen, who spend the whole winter in the backwoods employed upon the hardest labor, and exposed to freezing temperature, are allowed no spirits, but have an unlimited quantity of tea. Our old-fashioned generals accept, without any attempt to question its truth, the traditional theory of rum being essential to keep the British soldier in health and humor. Let us hope that the experience we have acquired during the Red River expedition may have buried forever this old-foggy superstition. Never have the soldiers of any nation been called upon to perform more unceasingly hard work; and it may be confidently asserted, without dread of contradiction, that no men have ever been more cheerful or better behaved in every respect. No spirit rations means no crime; and even the doctors who anticipated serious illness from the absence of liquor will allow that no troops have ever been healthier than they were from the beginning to the end of the operation; with the excep-

tion of slight cases of diarrhea, arising from change of diet, it may be said that sickness was unknown amongst us."

Sir Garnet Wolseley, who commanded this remarkable expedition, speaks very strongly against the rum ration, and says that "by substituting tea for rum, the health and efficiency of the men are increased, their discipline will improve as their moral tone is raised, engendering a manly cheerfulness that spirit-drinking armies know nothing of."

I have quoted largely from the annals of the military operations of the British army, which has operated in every zone on earth, from the frigid north to the torrid Equator, and at the antipodes of its great centre of power. It is the same thing in civil life. There is no question that more disease is directly and indirectly produced by drunkenness than by any other cause, and that the moral as well as the physical evils proceeding from it are beyond all human calculation, and yet the attempts of the Legislature to set some bounds to intemperance have been and are opposed with a bitterness which could only be justified if the degradation and the improvement of mankind was desired.

Men and women become inebriates because there is an inborn element in their nature to develop inebriety. No special cause of company or surroundings have brought it on; they possessed a restless, perverted brain force which under any circumstances would develop inebriety. The seeds of this disorder would surely develop in all conditions of living.

Much of the real injury from alcohol comes before the person suffers from paroxysms of drunkenness. These attacks indicate a degree of alcoholic poisoning and degeneration which leads rapidly to other stages, to all of which the patient are more or less oblivious.

The limits of excess are passed long before drunkenness or stupor comes on.

SOME PRACTICAL POINTS RELATING TO THE TREATMENT OF INEBRIETY.

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We consider to-day that inebriety is a *disease*, and that it is curable like other diseases if subject to appropriate treatment. Such treatment to be of permanent benefit to the patient needs to be carried out in private institutions, where especial attention is paid to the treatment of this disease, and where perfect discipline, both moral and physical, can be carried out. By far the most frequent type of inebriety which we meet with among the higher classes, is dipsomania—a periodical insanity—a condition in which a patient may abstain for weeks and months from all stimulants, and may possibly during this interval positively dislike them. As the time for the paroxysm draws near, the patient suffering from dipsomania—who differs entirely from the common drunkard who merely chooses to indulge in liquor to excess—becomes uneasy, listless, and depressed; is not inclined to apply his mind, and is impelled by the irresistible impulse which is the *the great diagnostic point* attending the *disease*, to gratify his morbid propensity for drink, and continues his paroxysm of drinking for several days, and then deeply regrets that he has, against all his better impulses, gratified this irresistible desire for alcoholic stimulants, which has plunged him into the deepest degradation.

I was telegraphed for in the middle of the night to go to one of our prominent hotels, and found there, drinking until

* An address delivered before the "American Association for the Cure of Inebriates," at their semi-annual meeting held in New York City, Oct. 11, 1882.

he had nearly brought on the benumbing apoplectic sleep of the drunkard, a gentleman of high official position, who, following his insane impulse to drink, had left his official position suddenly, without notice to his superiors, and thereby rendered himself liable to severe punishment. He had been driven into the debauch in which I found him by the irresistible craving for drink. His paroxysms, he told me, were always preceded by copious perspirations, sleeplessness, a feeling of general prostration, and an irresistible desire to drink, regardless of all consequences. Between these paroxysms of drinking he is an exceedingly brilliant man, and a man of more than average mental power and a fine executive officer. He would not agree to my prescription, which was seclusion from society and the necessary restraint in some institution until his disease could be cured. In all of these cases, of which he is a typical example, the control which the intellect exercises over the moral sense is overcome by the superior force derived from disease. I have heard it said by many physicians that there was no such disease as dipsomania, that excessive drinking was merely a bad habit. When, however, such authorities as Bucknill and Tuke of England, and Prof. Krafft-Habing of Germany concur in pronouncing it a true periodical insanity, and treat of it as such in their respective handbooks on insanity, there can be no tenable argument advanced against their ably expressed views. Pathologically, we get thickening and increase of the pia mater, and arachnoid, and permanent infiltration of the pia mater, and a varicose condition of its vessels, as a result of continued abuse of alcohol. The brain, as the disease takes on a chronic form, becomes anæmic, atrophied, and indurated. When a chronic meningitis appears from the use of alcohol we get as symptoms impairment of memory, dullness of intellect bordering on dementia, trembling of the limbs, a tottering gait, hesitancy, slurring speech, and other symptoms indicative of gradually progressing paralysis.

In ordinary cases of mebrney we find the symptoms of nervous exhaustion—great debility, profuse perspirations, loss

of elasticity of the skin, inability to make much exertion, and also very often an irritable and hyperæsthetic condition of the central sensor tract of the nervous system, induced by visceral irritative disease of the stomach, kidneys, or liver. In severe cases of long standing we may have hypertrophy of the left ventricle of the heart, chronic diseases of the kidneys, and degenerated cerebral arteries, three things directly predisposing to the slight cerebral hemorrhages that inebriates induce premature mental decay, with impairment of all the mental faculties. It is a fact that we cannot too often refer to, that with our stimulating climate, and with the extreme nervous sensitiveness which has increased with the increase of civilization, by reason of the excessive use and strain upon the nervous system, *inertly*, if the practice of drinking be indulged in, what was at first a normal healthy, moderate *déjà*, becomes in a few years an increased, augmented, inordinate demand for alcoholic stimuli, entirely at variance with a sound and healthy condition of body, or with legitimate wants, and which impels the subject of it to acts of debasement and intoxication, acts which a man's intellect condemns, but which he is too weak to resist as the *déjà*, dipsomania has resulted from the habit of drinking daily. It is not safe for a brain worker of to-day to be even a moderate drinker, and they are rarely more than this, as society to-day frowns down excessive drinking, and a man would not be tolerated at his club who showed himself there intoxicated. The nature and effects of alcohol can, I think, be taught to the people in a manner to convince them that moderate drinking will lead, in all probability, to a large proportion of them becoming inebriates, by reason of the scientific law, that with our delicate nervous systems moderate drinking in this climate is next to an impossibility. The habit of drinking occasionally is not merely a moral lapsus, but rather the commencement of a malady which, if unchecked, will overwhelm those who indulge in it in ruin, and compared with which cholera and yellow fever are harmless, and we as an association should urge upon the thinking and reading public the duty of

prevention and avoidance with as much earnestness as we would carry out sanitary measures against the spread of small-pox or any infectious disease. The person affected with inebriety is at its mercy most completely. He is lost to self-control, and yields to the influence of the all-absorbing appetite without even a shadow of resistance. The desire for indulgence is the ruling passion. To gratify it every other consideration is sacrificed; the subject of it is insane for drink; he feels nothing but the insatiate desire; he thinks of nothing but the means of gratifying it; his mental powers are overwhelmed by the one all-absorbing demand; he is left no liberty to refuse, but is impelled onward to complete his self-destructive acts. What maniacal excitement takes a stronger hold upon the mental operations than does the mania for drink? What suicidal impulse is more powerful, or more to the purpose than are the self-destructive acts of the inebriate? What delusion, however strong; what insane impulse, however urgent, surpasses that which impels one to forget or rather disregard every consideration in life, and to sacrifice all for the gratification of this one all-absorbing passion?

The danger in social drinking consists in the fact that it is the peculiar property of alcohol to beget in the great majority of men who take it a desire for its repeated use. Notwithstanding the fact that the irresistible impulse to drink, which constitutes the peculiar feature of inebriety, is a disease, and proceeds from a morbid state of the nerve centres, the habit of drinking, in this early stage of which I am now speaking is *not* uncontrollable. The power of restraint is not lost, and the man is perfectly capable of understanding the debasing and destructive nature of alcohol, and the cogency of the reasons why he should abandon it. If the habit be persisted in, inebriety becomes a disease with a rapidity modified by the constitutional tendencies of the subject, causing organic and fatal disease of the brain and nervous centres. To a man ambitious of distinction in any of the liberal professions, the knowledge of the nature and effects of alcohol, and the cer-

tainty that its continued use will inevitably result in loss of tone in character, blunting of moral perceptions, and the certain impairment of intellectual discrimination and of all the mental faculties, is, I think, the strongest possible argument in favor of abstinence. When the public are educated up to the universal acceptance of and belief in the fact that alcohol, instead of being a tonic and restorative to the system is a narcotico-irritant poison; that it has no analogue in the human system, and that its continued use will *inevitably* result not only in the impairment of the mental and physical health of the individual himself, but also that of his offspring, who will inherit a morbid condition of nerve element which will predispose that child to the acquisition of epilepsy, insanity, or dipsomania, and at all events an ill-balanced and defective state of the nervous system, disposed to take in diseased action, *then* public sentiment will be adequate to the prevention of intemperance without legislative enactments, and only then. The true action of alcohol in a physiological point of view is to create paralysis of nervous power and its influence—except when administered as a medicine—is not exercised for the elevation, but for the reduction of all the functions of life. It deranges the constitution of the blood; unduly excites the heart and respiration; paralyzes the minute blood-vessels; increases and decreases, according to the degree of its application, the functions of the digestive organs, of the liver and of the kidneys; disturbs the regularity of nervous action; lowers animal temperature, and lessens muscular power. These are the innumerable teachings of scientific men both in Europe and in this country; some of them eminent gentlemen; members of this association. At no time have the general public been so well educated as at the present time, and they are capable of analyzing facts and drawing deductions from them, and can readily see for themselves, if such facts are laid before them, that alcohol diminishes the temperature, the strength, and the power of endurance of the individual who takes it habitually, and increases his predisposition to disease; that

it impresses a peculiar morbid influence upon the brain and nervous system, which, if the habit be indulged in, becomes a permanent pathological impression, and results in the formation of an irresistible impulse or craving for alcoholic stimulants, this permanently diseased state being known as *dipsomania*. I think that when the people *really believe* that our climate and our national nervous temperament renders the effect of indulgence in alcoholic stimulants especially hurtful to the brain and nervous system, and that our peculiar nervous sensibility makes it an impossibility for many to partake, even in moderation, of alcohol without grave diseases of the nervous system being the result, they will accept the disease theory of inebriety, and unite in applying the proper sanitary, hygienic, and medicinal remedies to this disease.

The therapeutics of inebriety I shall divide into two parts, 1st, The therapeutics of ordinary inebriety, or dipsomania and 2d, The therapeutics of delirium tremens.

I. *Treatment of Inebriety.* Primarily in the treatment we have shattered constitutions, and broken-down nervous systems to deal with. We have a disease eminently marked by weakening of the will-power, and seclusion from society, rest, judicious restraint, and enforced abstinence from all alcohol stimuli are cardinal points of treatment. I always let patients, applying to me for treatment, distinctly understand that a permanent recovery depends largely on allowing sufficient time for restoration of nerve-power, mental tone, and physical vigor, and I think, in most cases, six months is the least time necessary for a complete recuperation of the will-power. Dipsomania is a disease that requires the most perfect discipline, both moral and physical, if we expect a cure. Periodical insanities are notably difficult to cure so that there is no chance of a relapse, but we may reasonably expect an ultimate cure if there is no structural change in the brain which has resulted from the course of inebriety. The heart's action in dipsomaniacs is weak, often irregular, accompanied by palpitation. There is a loss of tone in character, blunting of moral perceptions, impairment of intellectual dis-

crimination, and generally impairment of all the mental faculties. There is very often an utter inability to fix the mind on any one subject, or to follow up a train of thought consecutively. We see periods of abnormal cerebration; an instantaneous abeyance of reason and judgment; a condition resembling an epileptic state, during which period the inebriate may be actuated by mad, ungovernable, or eccentric impulses; a condition in which disease has deprived him of the power of choice, and during which states, in my opinion, the inebriate is as little responsible for his actions as is a person suffering from any other phase of mental disease. I knew a gentleman of high social standing in this city who has these mental blinks during which time he rides up and down New York in a horse-car, aimlessly, and has no recollection afterward of having done this at all. These are very interesting cases from a medico-legal point of view. In these cases the healthy coordination of ideas is destroyed for the time, and the patient need not be alcoholized to have such states occur. In cases of inebriety or dipsomania we have to deal with the results of a toxic poison, and we may have various complications proceeding from the abuse of alcohol, such as cirrhosis of the liver, gastritis, epilepsy, various forms of dyspepsia, and in some cases with Bright's disease. We may also find a simple hypertrophy of the left ventricle of the heart, and degenerated arteries. Our patient must have cheerful, tranquil, and pleasant surroundings; all cerebral excitement must be repressed; sleep must be procured; plenty of nourishing, easily digested food administered at short intervals, and an abundance of fresh air and exercise. I am not in favor of much meat in the diet list. Certainly none at all except at dinner, and I think a strict diet list, so that the work of the liver and kidneys is diminished by lessening the amount of highly nitrogenized food and of the hydro-carbons, gives decidedly the best result. Fish, oysters, fruits that contain but sugar, the green vegetables, bread, wheaten meal, and oatmeal are all permissible. Potatoes should be eaten somewhat sparingly, and eggs also. Poultry and the white meats

are well borne. Heat and motion are not so well borne, and are contra-indicated, except at dinner. Exercise in the open air is indispensable. The action of the skin must be stimulated, and systematic skin friction with cold sponge or shower baths do much good. Also an occasional Turkish bath is useful. The natural saline mineral waters are the best to stimulate excretory action by the abdominal organs. The Hungary-Janos, Friedrichshall water, and Saratoga Congress water are the best, while for diuretic waters the Capon Spring water, the Poland water, and Saratoga Vichy are the best. Apollonius water is also good. We have a worn irritable condition of the nervous system in inebriates, an unstable condition as regards its nutrition, its solidity, and its perfection of structure. We must supply the greatest amount of nutritive material to the brain and nervous system to repair the existing nutritive lesion. We must supply the phosphates in some way, the many eligible preparations containing them being familiar to you all. All abnormal nervous excitability must be quieted, and our patient kept calm and tranquil. A prolonged warm bath at night, followed by the administration of one teaspoonful of the ammoniated tincture of lupuline, which Dr. Neergaard of this city makes for me, or of a pill of camphor, ext. hyoscyamus, and putr. digitalis will often quiet the nervous excitability. And when it will not, a teaspoonful of the following prescription, accompanied by ʒi gr. pli. of gelisium will generally procure sleep.

R. Chloral Hydrate, ʒiij, ʒi	R. Tr. Opii deod.,
Sodi. Bromidi, ʒi	Ext. Hyoscyam., ʒi/ʒiij ʒi
Morph. sulph., ʒi	Chloral Hydrate,
Syr. Zingib.,	Sodi. Bromidi, ʒi ʒi
Aquas,	Tr. Capsici,
M. Dose, one tablespoonful	Tr. Acet. rad.,
	Ag. Ment. ʒij,
	M. Two teaspoonfuls for dose.

A pill of Zinet Valerianæ and Belladonna every two hours is also very useful if there is much excitement, as follows:

R. Zinet Valerianæ, ʒi
Ext. Belladonnæ, ʒi ʒss,
et Tr. pill no. xxx,
Sig. Pill every 2 hours

Care must be given to the excretory functions of the skin, kidneys, and bowels. If there is headache and drowsiness, such diuretics as the big ammoniac acid, with spir. nitric ether are indicated. Indian hemp has proved itself in my hands a valuable adjunct, in doses of ʒ gr. of the extract, as required. A very valuable sedative mixture is one composed of ʒo grains of bromide of sodium and ʒo minims of tinct. of cannabis indica prepared with water, at the time required. It induces calmness and tranquility, and can be repeated three times if required without the loss either of flesh or appetite. One of our most valuable remedial agents in inebriety is phosphorus, which I always give in ʒiʒ to ʒi gr. doses in cod liver oil after meals. Cod liver oil is one of the best nutritive remedies, as fat must be applied to the nutrition of the nervous system if this is to be maintained in its organic integrity. The general effects of phosphorus are those of a stimulant, but it possesses a special power over the exhausted nervous system. It is perhaps evanescent in its effects, but is never followed by a stage of depression which is noticeable. It should never be ordered upon an empty stomach. A pill of iron, phosphorus, zinc, and strychnia is also very useful, and combinations are often more beneficial than the medicines when taken singly. A large percentage of all cases of inebriety, before admission into our institutions for the cure of inebriety, have passed through the primary and acute stages, and have probably been subjected to medical treatment. This fact must never be lost sight of in forming our opinion, not only of the nature of the disease itself, but of the medical treatment necessary for its cure. We often discover that the dipsomania has been allowed to exist and slowly progress for a considerable period, no treatment either medical or moral, having been adopted for its removal. The most simple classification of inebriety, the one best adapted for useful and practical purposes, is its division into the *acute*, *periodic*, and *chronic* forms. The *acute* form is the rarest, and is ushered in by exhausting diseases, or excessive sexual excess. The *periodic* form is much more frequent,

and it is to this form of inebriety that I would recommend the term *chronic* to be restricted. It is frequently the result of hereditary and strictly periodic in its periods. These patients—dipsomaniacs—may abstain for weeks or months and may during this interval positively display sound minds. The history of a form of inebriety is very variable as the patients are necessarily under the desire for alcoholic stimulants and will get them if any opportunity occurs where the *chronic* have only the irresistible craving for constantly *chronic*. It is in these cases of *chronic* that we find hallucinations of sight and hearing, very painful mood, impressions, confusion of thought, spasmodic tenderness, tremors of the facial muscles and tongue, and very often paralytic symptoms, ending in general paralysis. It is here, in chronic inebriety, that disease of the brain may destroy all apparent consciousness of pain and keep to themselves the outward and appreciable manifestations of the important indications of organic mischief. Extensive disease of the stomach, lungs, kidneys, bowels, uterus and heart have been known to have progressed to a fatal extent without any obvious recognizable indication of the existence of such affections. The most essential preliminary matters for inquiry relating to the treatment of inebriety have relation to the age, temperament, previous occupation, and condition in life of the patient. It will be necessary to ascertain the character and duration of the attack; to ascertain whether it has resulted from moral or physical causes; if of sudden, insidious, or slow growth; whether it has a hereditary action, or is the effect of a mental shock or of mechanical injury; whether it is the first attack, and if not, in what features it differs from previous paroxysms. It will also be our duty to inquire whether it is complicated with epilepsy, insanity, suicidal or homicidal impulses. If any prior treatment has been adopted we must learn its nature, whether the patient has suffered from gout, heart disease, rheumatism, skin disease, or syphilis. It is important in cases of females to obtain accurate information

in relation to the condition of the uterine functions. We should also inquire whether the patient has been suspected of habits of self-abuse. Having obtained the above information upon these essential points, our own personal observation will aid us in ascertaining the character of the inebriety. The configuration of the head, chest, and abdomen; the gait of the patient; the degree of sensibility and volitional power manifest; the state of the retina, the pulse, the temperature of the head and body; the condition of the skin and hydroptic viscera; the action of the heart, lungs, and nature of any existing disease of the uterus should be noticed. Our prognosis in cases of inebriety will mainly depend upon the duration of the attack, its character and origin, and the diagnosis of the patient. The prognosis is unfavorable if the disease is hereditary. Age materially guides us in forming a correct prognosis. The greater proportion recover between the ages of twenty and thirty-five. When a patient has youth and a good constitution and remedial measures are promptly applied to the patient while he is secluded from all occasion of temptation, the prognosis is favorable. I have seen patients after forty and fifty recover.

The prognosis is unfavorable when inebriety is associated with organic disease of the heart or lungs, or when great impairment of mind associated with paralysis is present. Prolonged hot baths are of the utmost service in the treatment of inebriety. Among the therapeutic effects of these baths I would mention a diminution of the circulation and respiration, relaxation of the skin, alleviation of thirst, the introduction of a good deal of water into the system, an abundant discharge of limpid urine, a tendency to sleep, and a state of repose. It is most useful in acute and chronic inebriety. The preparations of hyosevamus, conium, stramonium, camphor, hops, aconite, ether, chloroform, and Indian hemp are all of great service if given with judgment. The best plan in practice would seem to be to judiciously combine various kinds of sedatives. Milk heated almost to boiling is very valuable. It allays irritability of the stomach and craving for

stimuli, and two glasses at night have a very sedative effect. If there are decided signs of cerebral congestion the occasionally application of a leech behind the ear is good practice. If symptoms of softening of the brain appear they will often yield to the persevering use of the preparations of iron, phosphorus, zinc, and strychnia, with generous living Strychnia antidotes, it appears to me, slight impairment of the mind, loss of memory, defective power of attention in inebriety very perfectly, and may be combated with two or three doses of quinia three daily. If inebriety is associated with suicidal tendencies it will be important to ascertain whether any cerebral congestion exist, and if so, a few leeches applied to the head, followed by an active cathartic will relieve the local irritation. In the absence of any positive active cerebral symptoms, the prolonged warm bath and the continued exhibition of morphia will be the best treatment until the suicidal idea disappears. We need both State and national hospitals for the care of inebriety, not places of detention or asylums, under the care of medical officers well trained by preliminary education for their vocation and acquainted thoroughly with inebriety.

One of the best remedial agents which can be employed in inebriety is electricity. Both the constant and induced currents, or galvanic and Faradic electricity may be used. Electricity is a true nerve tonic, and it is an agent which furnishes us with the means of modifying the nutritive condition of parts deeply situated, and of modifying the circulation to a greater extent, I think, than by any known agent. By the judicious employment of the constant and induced currents we have it in our power to hasten the processes of nerve growth and nerve repair, and thereby hasten the acquisition of nerve power. The use of electricity does not, I think, act by contributing anything directly to the growth or repair of nerve tissue. Its action is to stimulate and quicken those processes on which the material and functional integrity of the nervous system depends. The use of electricity in inebriates is always followed in my institution by an increase of

strength and nerve force, and the results gained are gradual and permanent. Dipomania or periodical inebriety is characterized by abnormal nervous excitability, conjoined with cerebral exhaustion, and the two indications which are urgent are, primarily, for increased rapidity and effectiveness, as regards the process of nerve nutrition, and secondarily, to secure freedom from excitement, and diminution of nerve activity, and thereby to check the waste of nerve structure and of power. These indications are best fulfilled by the judicious use of electricity and nerve tonics more certainly than by any other means, there being no other such combined sedative, restorative, and refreshant to the central nervous system. To give the brain the direct nutriment it needs in inebriety I have before stated can be accomplished by rest, cod liver oil, phosphorus, the phosphates, etc.

"The problem of cure in *inebriety* consists for the most part, not in the administration of antidotes, or the discovery of specifics, but in the careful study of all the details and modes of functional activity in the patient, with a view of removing obstacles, strengthening weak points, and in general assisting normal function to overcome abnormal as far as may be. We have come to aim at treating not so much the disease, as the man affected with the disease, administering our remedies not upon the principle of warring with an occult foe in some obscure corner of the organism, but on a far higher principle of dealing with the whole man, and assisting, sustaining, supporting all that is sound in him to overcome what is unsound."—BAKER

A man who becomes an inebriate after forty years of age is always the victim of some profound disturbance of the nerve centers. Some condition of disease or exhaustion is present, that has broken up the normal integrity of the brain centers and demands alcohol, simply because it brings relief to this state of irritation

SEMI-ANNUAL MEETING OF THE ASSOCIATION FOR THE CURB OF INEBRIATES.

The meeting convened in the parlors of Dr. Beard's residence, in New York, Wednesday afternoon Oct. 11, 1882. The attendance was large, and the interest unabated. The president, Dr. Parrish, in the opening remarks, referred to the great temperance movement which had appeared in the field of politics lately, promising to become the great question of the hour. It was clear to him that the practical workings of prohibition would not be found a remedy for this evil. But he would not in any way discourage the efforts in this direction, for from the agitation and discussion the truth would come out more clearly, no matter what the errors may be at present.

The report of the secretary was read and adopted. He read a letter from Dr. Piper, of Germany, one of the honorary members of the association, and corresponding secretary. In it Dr. Piper stated that in Germany they are helping on the same movement that the American association inaugurated here, and which received the hearty cooperation and valuable help of Dr. Joseph Parrish and the late Dr. Mason, of Brooklyn, both of whom had been presidents of the association in past years. The writer laid stress on the necessity of adopting in Germany the disease theory of inebriety. A meeting to be held in Dresden, on October 30th, organized to do practical work on a medical basis.

The secretary's report was largely devoted to the inebriety of to-day. He said that no disease of mind or body was so important to the general public as the disease of inebriety. There was a great increase in insanity and neurasthenia from alcohol. The association was organized twelve years ago on the principle that inebriety is a physical disease, and its influence has

been widely exerted and has been productive of much good in this country. In France two inebriate asylums have been founded this year. The measures of legal and moral prohibition will fail because they do not reach down deep enough. The still, small voice of science will make clear to all in time the disease theory of inebriety and the fact that the remedy is medical rather than moral in all cases. The *Quarterly Journal of Inebriety*, edited by the secretary of the association, has met with the warm recognition of American and foreign medical journals.

The conclusion of this report Dr. Parrish read his semi-annual address, which is published in this number. The discussions on this and other papers are omitted for want of room. The next paper was by Dr. Crofts, entitled "Neurotrophin in the Etiology of Inebriety." The general idea of the paper was that nervous exhaustion generally precedes inebriety. It might be either nerve exhaustion from brain or muscle work; but brain workers were most liable to inebriety. Several interesting cases were related illustrating this point. Insanity or inebriety were generally to be found in the ancestry of inebriates. Among the causes of inebriety, rather than nerve exhaustion, might be mentioned sudden cessation of work in advanced life, or a radical change in life which left a previously busy man with nothing to do but to enjoy himself. Nervous shock was also a cause of severe attacks of periodical inebriety. While nervous exhaustion plays an important part in the production of inebriety, we should remember that alcohol is a seductive and dangerous remedy for the neurasthenia.

Dr. Lewis D. Mason of Fort Hamilton, N. Y., read a very interesting paper on "Restraint in the early stages of Inebriety," which appears on another page.

Dr. E. C. Mann of New York read the next paper, entitled "Some Practical Points in the Treatment of Inebriety." The next paper was by Dr. Day of Boston, on "Alcohol in cases of Hardship and Exposure." Dr. Blanchard of Fort Hamilton remarked on the intimate relation between opium

and alcoholic inebriety, which brought out a very general discussion on this point.

Dr. Day referred to the efforts in some directions to revive the vice theory of disease, which elicited a general expression of opinion that any system of treatment for inebriates which depends entirely upon the religious principle or element will always fail.

It was also the unanimous feeling of the members of the association that discussion of the element of vice in inebriety was unprofitable, and without the province of scientific work.

The secretary announced that the committee had fully agreed in the conduct of the *Journal of Inebriety*, to pay no attention to criticisms and attacks on the principles of our association. The *Journal* was conducted purely in the interests of science, and the positions it had reached and the facts upon which they were established needed no argument to prove them for they were self-evident, and could be seen by every observer in this field. Also, that both the *Journal* and Association could not give space and attention to articles or pamphlets calling in question our position and work, emanating from persons who had no practical acquaintance with this special field of inquiry. Resolutions of thanks to Dr. Beard for his courtesy were passed, and the meeting adjourned to the last Wednesday of April, 1883.

Many of the tribes of Eastern and Northern Siberia, chief of which are the Samoids, the Ostiaks, and the Kamtschadales, use the puff-ball fungi to produce a state of inebriety. The effects are a pleasurable state of delirium, and unconsciousness of all trouble and sorrow, rarely developing the lower animal passions.

Abstracts and Reviews

DISCUSSIONS ON THE TREATMENT OF DIPSO- MANIA.

The British Medical Temperance Association, presided over by Dr. Richardson, has from time to time discussed many of the questions of inebriety with much intelligence and liberality.

Some time ago the late Dr. S. S. Alford read a paper on the practical treatment of dipsomania. As the paper was printed and distributed among the members its discussion was postponed to a late meeting. Dr. Alford's paper was based on his American observation and experience and discussed the disease of inebriety, its causes, and the need of legislative control in asylums, also the value of this means of treatment. The ground covered by this essay was familiar to all our readers, hence it was not noticed at the time.

A review of the discussion which followed will be of interest, as showing not only the diversity of opinion but the prevailing sentiment of this association. Dr. Edmunds, surgeon of the London Temperance Hospital, cited a number of cases of inebriety which came under his care, which he pronounced to be cases of vice, the only chief remedy of which was total abstinence. The doctor's remarks, while throwing doubt on the disease theory and the value of asylum treatment, contained unwittingly a clear argument in favor of it. The cases cited were marked instances of disease, and the failure of the means showed the necessity of restraint in an asylum. Dr. Rudge was not satisfied that there was any distinct line of demarcation between dipsomania and moderate drinkers of alcohol. It was a question of quantity of al-

cohol, and susceptibility to it. The treatment was to restore the tone and power of the nerve centres which were enfeebled by alcohol; time and good food would effect this to a large extent. In his opinion these or other agents could scarcely ever bring a man up to the same standard of mental power that he was in before. Dr Stewart was very doubtful if they should place dipsomania under the category of disease; he hoped this word would seldom be used by physicians; that it did not involve loss of mental power, as insanity did, hence should not be classed as that disease or like it. Dr Dowse agreed fully with Dr Alford that dipsomania was a disease, and that the victims were all more or less irresponsible; that from the three sides, moral, physical, and psychical, the evidence of disease was clear and unmistakable. Dr Clark doubted the doctrine of the disease of dipsomania, and questioned, if a disease, what organ it affected, and because it could not be traced to any single organ was sure it did not exist. He never saw a case of hereditary disease in the cases he treated, and of course it was not there, but unfortunately for his opinions he related some cases, which (as in Dr Edmunds' case), thoroughly disproved his own theory. He had great faith in religion and the pledge.

This closed the first day's discussion. The second, or what was literally the third meeting in which this paper was the subject, and was opened by remarks on the death of Dr. Alford, after which Surgeon-General Francis said that he could conceive of no reasonable objection to the term dipsomania, any more than to any other form of mania. From his large experience in many countries, covering a life-time, he was sure that there were two kinds of drink craving: 1. Those who develop it by circumstances, and 2, those in which it was hereditary. He would eliminate cases of ephemeral drinking, where there was no distinct tendency to drink for the love of the thing, but where from a variety of causes the individual drinks more than is usual, and is very sorry for it next day. Such are not cases of drink craving; though if the alcoholic ally be too frequently appealed to, it may become

developed. The drink craving having been in one way or another established, we ask ourselves what is the pathology of it? In many instances we should find congestion of the cerebral vessels, with disintegration of nerve tissues; but this would be the effect, not the cause. As in a vast number of cases of neuralgia where the symptoms are sometimes so severe as to lead the uninitiated to expect some decided post-mortem revelation, we shall find nothing abnormal like some functional disorders especially of the nervous system. I believe dipsomania has no morbid anatomy. Nevertheless it is, I think, as much a disease as neuralgia or ague. We admit, say objectors, that drink craving is a habit, but nothing more. But so frequently is neuralgia. Generally, though not necessarily, of malarious origin, the recurrences of pain are apt to become habitual, and the time of their advent may often be foretold with tolerable accuracy. So the crave for drink in the dipsomaniac is more pronounced at one time than another; just as accidental circumstances will bring on a neuralgic attack, so will they; not the same circumstances, perhaps, but others, induce one to drink. Although this crave may be developed in any one, those possessing the nervous constitution are especially liable to it. In cases of hereditary dipsomania the crave would become developed sooner and more readily than in cases where it had been created. Dr Alfred Carpenter said the cure of dipsomania was a work of great magnitude, but it could be done. It might require years and long persistent hygienic influences, and teachings of self-control, but to doubt it was to doubt the power of the whole profession in its first lines of work. Dr Hall thought the effort to establish hospitals for inebriates was a move in the right direction, where dipsomania could be treated as a disease, and where great good would follow. Dr Gray was in full accord with Dr Alford's views, and fully satisfied that private asylums were the only places where dipsomaniacs could be treated successfully. Surgeon-General Peal was satisfied that dipsomania was a disease, and that in a hospital could be brought all benefits of medical

and other appliances which are found useful in the treatment. Dr. Paramore was certain that dipsomania was a disease, but he felt that the religious element was very important in the treatment. The president, Dr. B. W. Richardson, summed up the discussion, after stating the views of the different speakers, and expressing his opinion that a closer comparison of views would show that they all were more or less in accord on the main facts; he said that the question whether dipsomania was attended with any particular pathological indications, and he thought if they brought the matter to this point they would be forced on physical grounds to admit that dipsomania was as marked a disease as any other malady with which they came in contact. The medical man summed up all the symptoms of dipsomania in the same way as he would sum up the symptoms of pneumonia, bronchitis, typhoid or typhus. These were considered diseases because of the recurrence of their symptoms in the same form; and with regard to dipsomania the recurrence was so striking that there would not be a difference of opinion between any two of them, what the nature of the case was; he saw therefore no means of getting out of admitting that it was a disease. When they came to the pathology as indicated in the changes which took place in the body, they found certain marks which were perfectly indicative of disease. Dipsomaniacs had changes going on in various organs of the body, which were essentially typical of the condition in which they were. For example, there would be in all of them, at one time a very equal, and at another time a very slow and feeble, action of the heart. They would listen to the heart one moment and the impulse would be great upon the thoracic wall, and they would get an almost continuous sound, so that they could not clearly distinguish the true sounds, one from the other; and they would find in another case the heart so feeble that they could scarcely distinguish the sounds at all. So regarding the change in the mechanical working of the heart, it was almost distinct in its character, and in every sense pathognomonic. If they came to a more minute examination of the pheno-

mena, changes in the nervous system will be found, which, though they might be temporary in character, were at least as distinct as the changes which marked hysteria or tetanus. If, then, they defined dipsomania as a disease, then they had to consider its relation to treatment, and here was one of the most remarkable phenomena in relation to dipsomania, that it occurred under slight promptings. Not the effect of ice-cream upon persons who were easily subject to asthma from the mere breathing of it were more striking than the action of alcohol on certain singularly constituted individuals. He agreed with Mr. Alford that anything which produced a physical or mental depression would turn the scale, would give rise to a desire on the part of a reclaimed drunkard to go back to his former habit of drinking; that desire would lead him back to the acute stage, while finally the acute stage would lead him to determine relapse. The effect of the east wind which had been mentioned by Dr. Alford was a very interesting observation; he was quite sure, having looked over his books, for a lengthened period, that cases of dipsomania were much more frequent in the spring months than they were in the summer. In the treatment, he was sure deficiency of sleep tended to bring about relapse, necessitating plenty of good sleep and warmth, and of relieving them of all the causes that had a tendency to produce an exhaustion, and thereby a tendency to the taking of stimulants. Coming to pure medical details, what were the best means of making dipsomaniacs sleep under treatment? He had never seen any good from substitutes used in the place of alcohol. Yet sometimes they got conditions of stomach which seemed to require something to stimulate its action. In cases of great acidity, as often happened, nothing answered so well as a mixture of bicarbonate of ammonia, five grains; tincture of capsicum, ten minims, with a bitter infusion of hops to make up the draught. If there was not acidity, and if the alkalies produced irritation and heartburn, he generally resorted to a draught composed of five to ten minims of tincture of nuxvomica with an infusion of hops and ten minims of nitro-

mutiatic acid. Very frequently when there was extreme insomnia, as there often was in these cases, he found an infusion of herbane with half an ounce of liquor, ammoniacacetatis, and from three to four grains of bicarbonate of ammonia, in half a pint of water, to be taken at bedtime very valuable. If there is a great deal of nerve-lessness, from twenty to thirty grains of bromide of potassium are found useful. He was convinced that *chloral* was not nearly so useful and safe a remedy. Turkish baths were exceeding valuable, and he heartily wished he could believe in the panacea of religious influence, but all experience was against it; not that it was not valuable, and should be applied and made a part of all treatment, but its real value was in the quieting and kind of religion dispensed. He had noticed, as a psychological fact, that the *atheistic* religion, which was most imperative in all its teachings, and where the decision of its ministers was absolute, exercised a most powerful aid toward reform. In his experience there was no safety in dipsomaniacs who indulged in tobacco; on this point all experience and observation would abundantly confirm it. For the future, he felt sure that first-class homes, at the houses of accomplished medical men, and government homes for the poor in agricultural districts, far removed from all temptation, were the basis on which they must ultimately rest for the successful treatment of dipsomania.

CRANIOLOGY OF INEBRIATES.

Dr. J. S. Wright, professor of surgery in the Long Island College Hospital, Brooklyn, New York, has lately made some very original studies of the deviations of the heads of inebriates compared with epileptics and others. Want of space prevents us from giving the tables of measurement with figures, hence we confine ourselves to the conclusions which they indicate.

The doctor begins with the assumption that any organ which has notably deviated in conformation and volume, has

also deviated in function. That the brain may deviate from the standard of conformation and volume. That any organ of the body has in health a fixed amount of variable conformation and volume; and a constant, though variable function. The first question to be solved was this: Does the confirmed inebriate have an abnormal conformation of the brain? In answer the heads of thirty-five confirmed inebriates, inmates of the inebriate's home at Fort Hamilton, N. Y., were measured and compared with similar measurements of thirty-five uneducated men. The average weight of the inebriates was found to be less, owing to the derangement of nutrition and general health, but the average height was greater. The head of the confirmed inebriate had a greater circumference than the head of the uneducated man, but this measurement can not be depended upon as an index of the volume of the contained brain. The conclusions were, namely:

1. The uneducated man has a greater volume of brain in the anterior part of the cranial cavity than the confirmed inebriate; also a greater volume in the posterior part of the cranial cavity.

2. The confirmed inebriate has a greater volume of brain in the middle part of the cranial cavity than the educated man; also in the middle region of the head the vertical diameter of the inebriate is greater.

Hence it appears that the brain of the inebriate is a deviation of both organism and function. In the main the conformation and the volume of the brain are attained and established by the time the individual is twenty-five years of age; hence the inebriety could not be the cause of the deviation in conformation and volume of the brain of the confirmed inebriate. The causes must operate previous to this date. They must occur during the early life of the individual, or they must be hereditary. In many cases these causes are inadequate to produce the deviations in volume and conformation found in the brain of a confirmed inebriate, hence we conclude they are mainly hereditary. We also conclude that the brain of the confirmed inebriate is a poorer order of de-

development than the normal brain. This condition involves lower quality of brain structure.

It follows then that these deviation of the brains of confirmed inebriates are properly to be treated as diseased conditions, and that a confirmed inebriate must be treated as a sick man. The hereditary conditions seen in confirmed inebriety clearly show why many cases are practically incurable.

In the study of the question, do epileptics have an abnormal conformation and volume of brain, a large number of cases were examined. The result reached was that the brain in inebriable epileptics is a deviation both in structure and function. The onset of the disease is generally hereditary. Given this onset manifested in the conformation of the brain, we have a basis for the development of epilepsy, or inebriety. Looking upon certain individuals as having heads deviating from the standard of volume and conformation, and finding that they are not adjusted to the conditions in which they live, and that they exhibit abnormal functional manifestations, and seeing that the influences of disease and injury may have the deviation of the volume and conformation of the brain an important indication as to what the clinical history may be not only immediately but during the rest of the life of the individual. Dr. Clark concluded, from a study in this field, that crime and epilepsy originated in inebriety in the parents. Dr. Wedd noted that the average criminal also exhibited a deviation from the normal brain. He concludes that the brains of inebriates and epileptics vary but little and with slight changes would readily run into each other. The altered brain found in the epileptic often has descended from the deviated brain of an inebriate. This field of study is one of great practical interest, and we trust the doctor will follow up the lines of research, he has so clearly pointed out.

SOME NEW BOOKS.

D. Appleton & Company of New York have lately published two books of unusual value and interest to all who make inebriety and the allied subjects a study. The first one, entitled *The Brain and its Functions*, by J. Luys, Physician to the Hospice de la Salpêtrière, Paris, France, is a very fine, interesting effort to make clear the anatomy and physiology of all brain action. The first part of the book is a clear sketch of the general structure of the brain and its ganglions; of the different nerve cells and their connection; and the general and special anatomical arrangements. The second part is a physiological explanation of all cerebral action, with analysis of the properties of nervous elements, showing that intellectual operations are nothing but cerebral reflexes.

The chapters on the perturbations of automatic activity in insanity; the notion of personality; the explanation of somnambulism; and the genesis of pathological states, are specially attractive for the light they throw on the mental phenomena of alcoholic and opium inebriety. As a whole the book carries us further into the unexplored regions of the nervous centers, affording clearer and more satisfactory views than has been obtained before.

The second book is by the eminent French physician *Kibel*, so well known as the author of *Heredity* (a book often quoted in our pages), entitled, *Diseases of Memory; an Essay on the Positive Psychology*.

This is a very successful effort to group the diseases of memory and present them from a pathological and psychological standpoint. It is treated under the following heads: memory a biological fact; general amnesia; partial amnesia; excitations of memory; the influence of food, and quality of blood on memory; the laws of regression, and the relation of perception and nutrition, with examples and explanations of the many phenomena that are often so confusing.

The conclusion is very satisfactory, that the disorders and maladies of this faculty, when classified and properly inter-

period will be found regulated by compensations which have been described and understood.

The very general symptoms of defective nutrition among those engaged in our industries is made plain from this study.

Like the former work it is a new study along lines of thought which all our confusion-faded, Western minds can understand. Books so far our readers not to be found elsewhere are as the last as works that must be studied by everyone. It may well furnish to all our students of medicine. They are words of great value in our special Landmark fields of investigation.

Each of these books are parts of the *Industrial and Social Hygiene Series* and can be had of the publishers for one dollar and a half each.

Water is the grand liquid of nature, and is undoubtedly as well known to be the best food to follow the system of that state of which there is the regular system. In other words, it is necessary for the health of man. In proportion as we combine the use of this advantage with of nutrition, and tend to combine compounds, do we depart from the obvious character of nature and increase the probability of various consequences. It is dangerous to admit articles into our diet which are not distinctly beneficial in restoring the natural waste of the system, and therefore cannot be denominated otherwise than articles of luxury. Alcohol and substances of a stimulant nature in common use, do not come under the denomination of nutritive substances—they provide more or less physical excitement, but do not add to the bulk or strength of the system or bestow permanent vigor and refreshment.—Dr. DAY.

BEER AND STRONGER ALCOHOLS

BEER AND STRONGER ALCOHOLS

The theory of the slowly accumulated alcoholic beverage, the free use of beer and light wines, which are followed by a great diminution of stronger drinks is a fallacy. Prominent features and societies have argued that, and it is thereby it has no support from medical observation or statistics. Like many other false notions, it has grown out of vague theorizing by persons who have not the facts, and unacquainted with the facts.

On these theorists point to Germany for cases in support of their views, when really it is in England, where beer is brewed and light wines are most commonly used, the worst symptoms of brandy and whisky are abundantly to be seen. This has been noted ever since 1857, and in 1881 the total amount actually doubled in amount per capita to what it was in other England of the United States. This was very clearly brought out at the late meeting of the German brewers and distillers, and an attempt was made to show that this increase of strong drinks followed the increased demand for beer and wine.

Other evidence is found in the fact that the excessive use of alcohol is fully recognized as a disease, and a large medical work has been written devoted to its nature and treatment. If the increased consumption of beer and wine encouraged moderation and temperance, this would not follow.

In France, where wine and beer are very common, and to the ordinary traveler, but little public intoxication is seen, the statistics show that the demand for strong drinks, including absinthe, has steadily grown to great proportions, and not only the manufacture but the importation of strong

of coins has been the "proof test." The reports of hospitals and asylums have additional evidence, and from a table compiled by M. Lassar it has been estimated that fully seven per cent of epileptics can be traced directly or indirectly to the excessive use of alcohol.

In this country the use of beer has increased far greater than of whiskey or stronger alcohols. This is taken as proof of the diminution of inebriety, but a realer and more direct test is the demand for beer and strong drinks, which not only based only show the amount upon which revenue is paid, and in no way represents the actual consumption. It is a well-known fact that all forms of strong drink are expended indefinitely, after the revenues paid by both the wholesaler and retailer. Hence it is impossible to estimate the amount of strong drinks consumed. This does not take place with beer and of course the figures of the demand for this form of drink are not nearly accurate. The increase of inebriety in this country is evident from the increased manufacture and importation of strong liquors, an increase beyond the proportional gain of population. Other evidence is found in the records of courts and asylums, and the history of lagged progress of the times. From this and other evidence there can be no doubt that the increased use of beer and wine in this country is followed and always accompanied by a greater demand for the stronger alcohols.

From a purely statistical standpoint this result is inevitable, and follows as sure as day is succeeded by night. The fact may be stated as beyond all possible question or doubt, that the use of wine and beer in any way will always be followed by the demand for more strong drinks, and that instead of promoting moderation and temperance, it actually produces more inebriety and disease.

ETIOLOGY OF INEBRIETY

In the study of inebriety there are certain general facts which all observation and experience teaches, and which cannot at present be proven from statistics, to the satisfaction of those unacquainted with the subject. Take the fact that inebriety is a disease as positively curable as that it always can be traced to a physical origin; that it follows a progressive line of march; that it is greatly influenced by bromometrical changes; by storms, and electrical states of the atmosphere; that it moves in waves and currents, in obedience to laws unknown to and many others the proof of which to be above all doubts, must rest on the statistical studies and observations of many persons extending over years.

An explorer in a new province cannot bring positive evidence of the facts which his observation and experience points out, but as a scientific man his duty is to place on record such facts, to be tested by other men with wider observation. Nothing can be more unscientific than to deny such statements coming from those who have had unusual opportunities to know, simply because they are not supported by an array of facts and figures.

The charge that our literature is made up of assertions and bare statements regarding the disease of inebriety is true. When these assertions come from those who have through experience earned the right to a hearing, they are entitled to much consideration. The future will test the truth of such statements, and the facts now put forth concerning inebriety. The aim of all present studies is to record the most probable facts and truths, based on the best knowledge and experience of to-day. Beyond the few general outline truths which center about the disease of inebriety, the subject is practically unknown.

Like all other new advances in science, the study of this subject from the standpoint of disease is opposed by intense skepticism and prejudice. A fear of lessening the responsi-

bury of the mediocrity assuming that he discussed raises matters of difficulty.

Illustrative facts are deceptive in both appearance and statement of their nature. The examiner a specious mask which the careful reader or careful student constantly deceives themselves and others. In the examination of each case after some general history has been noted the locality is most important. Here in a careful examination and sifting of the facts, one often be found the key which shall unlock all the mystery. Next the early history and training of the patient with all the conditions of childhood, environment and development should be known. The study should separate naturally into two channels, physical and mental. In the former, the evolution of the sexual function and the growth of all the organs, and their activity precisely examined. In the latter, the mental conditions and their functional state, the natural force and habit of the mind and the influence of environment upon it.

Then comes the full history of the first use of spirits and the circumstances which gathered about that event. Further on the alcoholic phases which follow the drink craving or inebriety. Whatever may be the natural state of the man, alcohol in excess will always unmask him to the expert. He may be an emargin to others, and all the phases of the disorder become more obscure, but under the eye of the trained student the progress of the disease will be clear. The plan of treatment will be suggested from these facts and the prognosis is unmistakable. When inebriety shall be studied from this point, by competent men, the true methods of treatment and prevention will be clear.

PATHOLOGY OF INEBRIETY

It is said that the man who never makes a post mortem must of necessity have crude notions of the nature and treatment of disease. Those who have vague superficial views are often dogmatic and positive in their statements. A

wider knowledge brings more care and patience in explaining the facts and where they are complex the conclusions are reached very slowly.

The pathology of inebriety is unknown. Past worked examinations reveal nothing definite and this is taken as proof that no disease exists. It is urged that no theory of disease can be established unless it can be shown in the pathology of the post-mortem. Such advocates overlook a large class of nervous disorders designated by the term neuroses, whose nature and etiology as diseases are established, the pathology of which awaiting is known. Yet in face of these facts the clinical proof of disease is overwhelming. In every case there is evidence of alteration of the reflex activity of the nutrition and of the structure of the organism. A state of degeneration has been seen that is not an accident, but is the result of causes and conditions that may date back in some cases to a past generation. This degeneration which is manifested in inebriety begins in many cases in abnormal nutrition and circulation, starvation or deficient nutrition, strain, overwork, want of rest, these break up the efficiency of the nervous activity and are the primary factors in the disease which follows.

In some cases the nerve tissue is unstable or hypersensitive and explosive, liberating its energy in a succession of discharges as seen in the paroxysms of inebriety, followed by long, distinct free intervals of sobriety. A distinct pathological condition is present, of which there can be no doubt, and yet it can not be ascertained from any post mortem investigation.

The pathology of inebriety is a study of the dissolution of the body of the breaking down of the complex processes of life. Inebriety is a form of degeneration following a certain uniform line, with characteristic symptoms and indications of its march. Heredity, surroundings, nutrition, and alcohol are the active factors in the causation. Alcohol, always in excess and develops states of disorder that exist as before, like the movements of an army, which can be traced only

the appearance of the fangs above them, inebriety can be best seen in its clinical causation and symptomatology.

The story of the breaking down of the cell processes and changes which go on in organic centres in inebriety cannot be read in the dead body to-day, because we are not familiar with its clinical history and physiology.

A full knowledge of the pathology of inebriety will furnish basis for exact rational treatment. Precision and exactness here means success in the means and methods of cure. As in every advance of science, exact, accurate knowledge comes only from the accumulated observations of years, so the pathology of inebriety is in its infancy, and will be many years outgrowing the superstitions of to-day. The meta-physical pathology which would trace inebriety as a moral lapse or vice up through all the shades of spiritual states to disease, is unfortunately prominent, particularly where the disorder is least known. The scientific pathology of inebriety is the work of the future, which all exact observations of to-day will aid in securing. Every contribution to the aetiology, diagnosis, and treatment are indications of the approach of the period when the nature and treatment of inebriety will be placed on a rational basis above all empiricism.

FOOD IN THE TREATMENT OF INEBRIETY.

The old adage, that the beer and spirit drinker thinks and acts like the spirit he uses, is not all a figure of speech. In other words it would be, that the mental operations of the person partake of the nature and acts of the fluid which he uses. Such influences are obvious from consideration of the fact that about three-fourths of the weight of the body is fluid; and the character of the supply from day to day must of necessity affect the functional activities of the organs. Careful study of a large number of inebriates indicate the probable fact that different alcoholic drinks cause varied and specific forms of degeneration. For instance, the mental operations of a beer drinker will differ from one who uses stronger spirits.

The capacity to rally from the anæsthetic effects of alcohol varies, and the nerve defects which mark this state differ. All shades of difference and degree of mental debility follow from the specific action of particular forms of alcoholic drinks. Each case, while following a general progressive march of degeneration, is influenced by many complex factors of which food may be mentioned as prominent. Every inebriate is practically starved, ill nourished, and suffers from defective nerve force and vigor. In the treatment this is the great essential to build up and restore the weakened organism.

The effects of food on the physical and mental state of the body are being recognized. It is a fact beyond all doubt that both food and fluids are influential in supplying the vigor and strength of the organism. The familiar experiment of feeding a dog on meat, and keeping him confined for a long time, during which he develops a savage, furious temper, while the same dog fed on bread and milk will be as mild and gentle as a lamb, illustrates vividly the influence of food. How far this fact can be utilized in the treatment of inebriety or other disease cannot at present be determined. Recently this subject has attracted much attention, and while no exact conclusions have been reached, there is great encouragement in the thought that the march of exact science is in that direction. The ideals of vegetarians are not yet sustained by physiological and clinical research. Utopians far away in the future, but there is an evident advance towards it.

Many facts are noted in the study of foods and treatment of inebriety, whose meaning and significance are unknown. For instance, in one case a liquid diet of milk and beef tea seems to act as a sedative; in another case it is an evident irritant, increasing the digestive disorders and the nervous disturbance which follows. In some cases a meat diet, or one purely vegetable, or one of grains alone will be found to build up the system most rapidly, as seen in the regular progress towards restoration. A mixed diet in other instances seems to be far better than any other. No success

can be expected from routine practice and theory. Every case must be studied and treated in the matter of diet, from an independent point of view. Some very curious instances have been noted of the effects of food in preventing or lessening the attacks of periodical drinkings, where the paroxysm can be anticipated through a knowledge of its periodicity. In some cases a grain diet and saline purgatives will effectively break up the drink paroxysm. In other cases beer tea and milk will have the same effect. In some cases ripe fruit with a grain diet, such as oranges, grapes, and oatmeal, fully meet this want.

In a case under treatment copious draughts of acid vesper diminished the nerve irritation, and brought on a sedative action as effectively as opium. In some cases under treatment the return of a restless paroxysm and state of general discontent is quickly remedied by a change of diet, which must be a matter of observation and experiment. In extreme cases food is often more effective than medicines, and is equally as dangerous. In one instance a food enthusiast gave large quantities of beef tea and eggs to a chronic case suffering from digestive complications, gastritis, and other troubles. A long convalescence, attended with delirium and much mental disturbance followed. The same case, after a relapse of a year, came under treatment in a worse state than before, making a rapid recovery on a diet of oatmeal and barley. Other instances are noted in which the effects of food are unmistakable in lessening or increasing the disorders present.

No positive conclusions can be drawn from these and other facts, which appear from every day's observation. But it is clearly obvious that diet is a very important factor in the treatment of this disorder. The same dietetic and nutrient differences seen in health exist in disease, only intensified and made more complex. Alcohol, more than any other known drug, perverts and breaks up the equilibrium of nutrition. Restoration must depend largely on exact knowledge of the nutrient state of the body, and the kind of food which

will be most valuable in building up. Long series of exact studies and observations must be made before anything like certainty can be attained. This is a field of great promise that is practically unknown.

SOME NEW REMEDIES AVAILABLE IN NEBRASKA.

In this note we wish to indicate some new remedies that have been found valuable in our experience and that of others who are engaged in the practical treatment of insanity.

Hosford's Acid Phosphate is now being generally used in all cases of extreme debility and digestive disturbances so common in insanity. The experience of others, confirmed by our own, show that it is a remedy of rare power and usefulness, both as a tonic and sedative.

Vitalized Phosphates, of F. Crosby, New York, is another form of phosphates that has proved to be of great value in many of the low forms of degeneration in chronic cases of insanity. Several cases have been noted of periodical inebriety, in which it lessened the paroxysm, and was otherwise very efficient as a tonic.

Coca, prepared by Park, Davis & Co., Detroit, has been found to be of special efficacy in the nervous irritation following the withdrawal of opium.

Zinnaria Digraea, prepared by the same firm, has in many cases a decided narcotic influence, and is an excellent substitute for chloral, bromides, and belladonna. These two drugs should be used by every one treating inebriates, simply because they give promise of proving to be of unusual value in these cases.

Avena Sativa, or common oats, is a remedy prepared by B. Keith & Co., of New York, which deserves careful study. It has proved in some cases to be of great value in the peculiar exhaustion following opium and alcoholic inebriety. It is undoubtedly a remedy which should be tested more

thoroughly in the future. We shall refer to these drugs again and would be pleased to publish the experiences of our friends who use them.

Aspirin, by Parke & Co., of St. Louis, is a very excellent formula of bromide of potassa, chloral, camphis-indol, and bromovanils, whose value is well known to all who are called on to treat ineffectively. We have used it with the most pleasing results, and recommend it above all other similar combinations.

These remedies deserve special notice and study, and we must cordially commend them from personal experience and observation.

Lactopiptin, prepared by the New York Pharmaceutical Association, should always be included among the remedies essential in the treatment of ineffectivity. Its peculiar value in some cases is not exceeded by any other remedy known.

Clinical Notes and Comments.

ACTION OF ALCOHOL ON THE BRAIN AND NERVE SYSTEM.

It is well known that a very common effect of the constant use of alcohol, even if not carried to intoxication, is to invite a proliferation or increase of the connective tissue within the proper brain area. This hypertrophy encroaches upon the rightful domain of the fibres and cells of the proper brain structure. Such encroachment is, of course, a cause of trouble in the nerve cells and in the functions of the nerve fibres, both interfering with the receiving of perceptions, and the projecting of motor and functional impulses—a trouble depending simply upon intrusion and pressure.

But the difficulties are only beginning at this stage of change. The increased tissue subsequently undergoes *con-tracture*, just as the apparently redundant tissue of a scar after a burn undergoes contraction. This carries with it the

phenomena of strangulated capillary vessels and displaced nerve cells; besides, several forms and modes of stretching and strangling, and even disruption of nerve fibres, follow in regular course. Add to this general wreck and misery the various forms of cell degeneration; as of the fatty, with subsequent absorption, and the substitution of mere cellular tissue, also the pigmentary degeneration of nerve cells in the gray matter, not omitting the calcareous or bone-like degeneration of the same class of cells—and we have some idea of the physical wreckage possible in the brain from the toxic power of alcohol.

But in chronic ineffectivity the interchange and equilibrium of nerve association is overcome by the intrusion of hypertrophied interstitial tissue upon the nerves of Meynert, and particularly are these nerves injured in structure and function by the final contraction of this connective substance, which, by process of strangulation, annihilates their function. If it is true that the fibres of association contribute so greatly to the establishment of the feeling denominated the *ego*, it follows that the destruction of those fibres must be attended by a distraction of the sense of the *ego* together with its inseparable concomitants—the senses of responsibility, rights, and duties. An early mark of the mental derangement connected with the toxic impression of alcohol on the human structure is a *change in the disposition*; that is, a change in the moral nature; and this is what we might expect from the facts already stated.

Anaesthesia is always more or less present following excess in the use of alcohol.

There is no principle more thoroughly established and recognized than that *sensation is the basis of the perceptions*. When sensation is abolished, there is no true perception. At most, there are only dreams, and the unsubstantial and inconsequent mental wanderings, flowing out of organic associations, and it might be memory—and in every instance without relation to passing facts and present surroundings. And when sensation is impaired or perverted, the perceptive faculty is likewise impaired or perverted. Conceptions are

