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THE QUARTERLY JOURNAL

OF

INEBRIETY.

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

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

Vol. XII.

JULY, 1890.

No. 3.

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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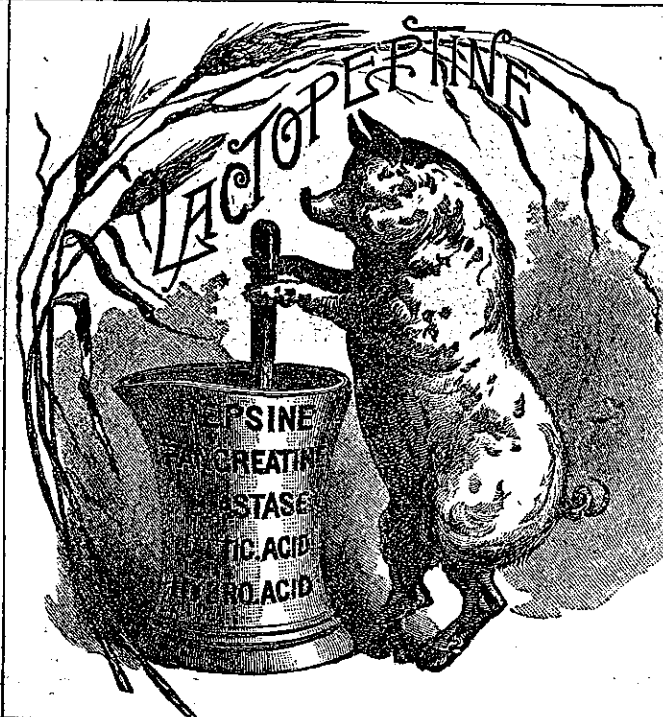
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Vol. XII. JULY, 1890. No. 3.

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

DISEASED CRAVINGS AND PARALYZED CONTROL: DIPSOMANIA; MORPHINOMANIA; CHLORALISM; COCAINISM.

By T. S. CLOUSTON, M.D., F.R.C.P.E.,

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Before we can in any true way appreciate the significance of a diseased craving or desire, we must endeavor to realize the meaning of a normal or physiological craving. What is it? How does it arise? How is it stopped? What is its physiological use? Its normal place in the bodily and mental life must be looked at before its existence as an abnormality can be understood. In the same way, before we can estimate in any way the meaning of paralyzed control, we need to study the controlling powers and agencies in the normal physiological life of the higher organisms, more especially man. What are they? How are they manifested? What are their normal limits? What are their uses? Any attempt to study, to understand, or to treat effectually the "diseases" called Dipsomania, Morphinomania, Chloralism, or Cocainism, without direct and constant reference to the

physiological and psychological aspects of desire and control as brain functions and as essential attributes of the higher organisms, would be equally unphilosophical and unpractical.

Diseased Cravings.— A desire, or in its stronger degree a craving, in a healthy organism represents a necessity or an advantage for the individual or the race. It is essentially independent of reasoning. It stands related to control, inhibition, or will as the energies of heat and motion stand to the engineer — things necessary, but needing regulation. Desire and its opposite, repulsion, which represents injury to the organism, are the foundation of all the higher feelings and emotions. There is no definable line of demarcation between chemical or magnetic attraction and repulsion and the vital selections and repulsions of the living and active cell. The choice of digestible particles and the non-selection of indigestible molecules by the amœba are examples of a process which is evolved in the higher and more integrated organisms into desire, craving, and conscious choice or repulsion. The term "desire," like "memory," may therefore be applied to an organic and unconscious process.

Why does the earthworm actively strive to get into darkness? Its organic necessities, and thence its desires, are thus exhibited. As mind and consciousness develop in the higher animals, desire and craving for what is necessary to them are evidently *felt* more and more keenly the higher in the scale we rise; but efforts to gratify their needs are just as strongly put forth in the lower as in the highest animals. The regulation of desire, stopping the efforts for its gratification altogether, allowing only temporary or partial gratification, postponing gratification to regulated times — those are only seen in any marked degree in man, or in animals that have been taught by man. But in a perfectly healthy man all his desires and cravings can be safely gratified in some way or at some time; none of them need absolute inhibition; all are good, and do good to the body and the mind through their gratification. Reason and experience, ancestral and

personal, come in at every point to *regulate* the gratification of desire, and will carries out the conclusions of reason and the lessons of experience at every turn. Good and happiness always result from such regulated and reasonable gratification. The exigences of social conditions at all points and in innumerable ways compel restraint and regulation of craving, and constitute them into a moral code. But the great fact about desire remains. It is the revelation to consciousness of the needs of the organism, individual and social, and its gratification is a direct fulfillment of organic law. If we act according to our desires, under the limitations of knowledge, experience, and law, it should give happiness and do good; otherwise there is something wrong with us or our desires. Desires and repulsions should be Nature's infallible safety and danger signals. If they lead to danger and death, there is necessarily disease and abnormality in the organism. A craving that leads to ill is a diseased craving. In fact, no better definition of a diseased craving could be constructed than that it is one which leads to harm. One of the essential laws of Nature has, through disease, become changed when the two things which Nature has conjoined, desire and necessity, are found in antagonism. Desire and hurt is a pathological combination. The conscious pleasure, that in all the higher animals results from gratified desire, represents the good done to the organism. Where we find desire, conscious pleasure in its gratification, and harm following in sequence, we, as physicians, should at once seek an explanation in disease, hereditary or personal. Such a result should be the same to us as when the politician finds that his laws are leading to theft and violence. He then knows there is something wrong in the body politic or social, and at once seeks out an explanation and a remedy.

By far the strongest and most subtle cravings of a morbid sort necessarily originate in the brain, without any necessary disturbance of function in the lower centers, such as the sympathetic or visceral ganglia, or in the organs of the body or their functions. We may go farther, and say that

such intense and subtle cravings necessarily arise, not in the brain as a whole, but in its very highest centers. They originate in the "emotional centers," being in their essence emotional in character. Take the craving of the mother for her sucking child. It is a part of the love she bears it—the strongest emotion being the maternal. Or the morbid craving for death, which I have seen so strong as to overmaster all motives, all natural repugnances, and all moral and religious feelings, the reasoning powers being almost unimpaired. The seat of such a craving must lie in disturbed dynamical action of the highest centers of the cortex, where, no doubt, the normal love of life, the strongest instinct of man and all living creatures, resides.

It is a fair and scientific inference, that complexity and delicacy of structure must bear a direct relationship to importance and delicacy of function. Structure cannot become delicate without its nerve supply also becoming sensitive. The most essential quality of the nerve cell is its instability. A stable nerve cell would neither be receptive of peripheral impressions nor able to liberate its energy rightly in mental or motor impulses. This kind of instability of a nerve cell is a source of strength, for it means that nervous and mental power is great, and readily called into intense action. But there is another kind that is a source of weakness and of death, for it is explosive and destructive. If this bad quality resides in a motor center, we are apt to have convulsions, hysterical motor acts, chorea, and exaggerated reflexes. If it exists in an emotional center in the brain, we are apt to have explosions of passion and temper and morbid cravings set up. This bad quality is commonly a hereditary transmission from an ancestry whose brains had been subjected to undue excitement and strain, to poisoning by alcohol, or opium, or syphilis, or to unphysiological conditions generally. Given a certain tendency to this bad quality of explosiveness due to heredity, we find it is easily converted into an actual disease by many cerebral causes; chief of these are the stimulation of the higher brain centers by those substances

that have a special affinity for the highest organized substance in Nature — the brain cortex of man. By virtue of this affinity they stimulate thought, and especially emotion, causing brilliancy and fanciful views of things, with a conscious feeling of intense pleasure. This stimulation being often repeated, leaves a strong organic memory in the tissue and a conscious memory in the mind. Both unite with the unstable dynamical state of the organ in causing a craving that tends to grow stronger and stronger. The pleasurable effects stimulate those resulting from the gratification of cravings for food when hungry. The repeated stimulation by alcohol of such brains seems to have the sort of effect that repeated explosions have in the motor areas. Ferrier says that a monkey's brain subjected to a very strong electrical stimulation, so that general convulsions result, is ever after more liable to convulsions, and that localized stimulation is in such a brain very apt to spread and to cause general convulsions instead of local muscular spasms.

Let the fluids of the body evaporate, and the result is a craving for water; let the *vis nervosa* become exhausted, and we have a craving for a stimulant or restorative of some sort to the nerve energy. It is a fact that some foods are more stimulating to the brain cortex than others, *e. g.*, strong beef-tea than milk, flesh than bread. Let us first take a keenly-working sensitive brain, then let us imagine that brain stimulated by life in a large city, by hourly converse with men, by anxious employments, or by intense study. If from childhood upwards the possessor of such a brain has depended on stimulating diet and drink for its restoration when exhausted, there is an intense and irresistible craving set up for such food and drink stimulants whenever there is fatigue. Such a brain has developed an affinity for them, and for such alone. Milk and farinaceous diet often become repugnant, and when taken do not satisfy the brain craving. Its owner becomes physiologically a flesh-eater and an alcohol-drinker. I am in the habit of preaching an anti-flesh crusade for the children that by heredity have such brains; not that flesh

won't give more work, but that in the long run the happiness, the health, and the longevity of such persons are increased by the non-stimulating foods, and that the risk of many nervous diseases is avoided. To stimulate strongly and constantly the receptivity and intensity of a hereditarily receptive and intense brain in most cases has the effect of making the organ too keen in working for the time at the expense of the general bodily and trophic vigor. And it is not always remembered that for every increase in the power to energize and to enjoy, the penalty is exacted by Nature of a subsequent and consequent increase in the feeling of exhaustion and of power to feel pain. This effect is still further increased, and the penalty paid is still greater, if in such a brain as I have been supposing there are hereditary potentialities toward the neuroses.

If we now look at the effects of the nerve stimulants nearest food, viz., tea and coffee and cocoa: the custom of taking these for the dissipation of the feeling of exhaustion sets up in brains of the keenly-working but unstable type a commanding craving and a dominant impulse in many cases. The chemical constitution of all such substances has an affinity for the highest centers in the brain, stimulating and soothing some of them in a very subtle way, most delightful to the consciousness of their owners. Alcohol, opium, and cocaine are still more immediate and more intense in their effects on such brains, they seem more consciously restorative, the present joy is greater, and the craving begotten of habit far more masterful. After a time every indication points to a change in the innate mode of working of the higher brain centers as the result of the repeated use of such cortical stimulants: the evolution of energy is less regular and more spasmodic, the trophic nerve energy is less, the reserve stock of power less. The brain stimulant and the resulting spasm of brain energizing become so correlated that the steady development of brain energy from food is interfered with. The want of the stimulant for any time is intensely felt as a constant and ardent craving, which can

only be resisted by the exercise of a strongly-put-forth inhibition. The cortex is, in fact, starved of what has become to it a necessity of working: the conscious feeling is that of a thirsty man for water. A substitute for necessary food has been used with more intense and more immediate effects. The natural food craving has become transformed into a much more intense stimulant craving.

It is certain that the existence of a craving indicates a *need of some sort, — but it may not be the thing craved for that is needed.* It is a very essential principle of the treatment and cure of cases of dipsomania, morphomania, and cocaineism that the cravings are sure signals of distress, that must be attended to.

To gratify unregulated desire may be a sin, but to inhibit it altogether may be still more sinful, because more dangerous, — for is not all sin disobedience of law? And if the physiological law in regard to the matter be as I have stated, it is to thwart a law of Nature not to gratify a craving in some way, and put a stop to it thereby. It will be the highest duty of the physician of the future to interpret cravings and repulsions, and to satisfy them safely by his treatment. Perhaps the same rôle will apply to the politician and priest of the future. I by no means homologate the witty reply of the Epicurean to the question, how he "got rid of temptation?" — "By yielding to it." If a consumptive craves milk and fresh air, if a gouty man loathes tobacco and flesh, if a pregnant woman craves pickles and fruit, we refuse to gratify and quench these cravings and repugnances in some way at peril of sinning physiologically, just as we should sin by refusing a thirsty man water or a starving man food.

A diseased or pathological craving is one whose *direct* gratification would injure the organism in its own life or that of its descendants. It is a separation of two things that ought to be indissoluble, viz., desire and benefit, the performance of a function and the pleasure or organic satisfaction which that performance should give. When eating causes

pain, when energizing is always distasteful, when breathing cool air is repugnant, we have no hesitation in concluding that a condition of disease exists. The organism is, peripherally in some of its organs, or centrally in its co-ordinating and regulating and feeling brain, in a pathological state. If a man desires alcohol or morphine when the system needs food, there is a condition analogous to a paræsthesia.

In the higher animals every function has become exceedingly complex, and for its proper performance a concurrence of organs is necessary, all working normally. To take normal digestion, for instance, we must have, among other conditions: (1), the gastric juice glands healthy; (2), the immediate regulating apparatus of these glands, the nervous ganglia and plexus in the coats of the stomach, and the abdominal sympathetic also sound; (3), the regulating motor centers for the gastric muscles normally excitable; (4), soundness of structure and function of the pneumogastric centers; and (5), healthiness of the highest centers in the cortex, where the stomach and the digestive function are represented, where they are connected with feelings and ideas that depend on and relate to alimentation, and through which conscious craving is established and conscious satisfaction is felt when the craving is satisfied with suitable food. Theoretically, we may assume that if the gastric glands (1) are secreting the gastric ferments in abnormal proportion of ingredients—*e. g.*, if the hydrochloric acid is deficient, there will be a feeling of discomfort after food, and a craving for something will be established in the highest regions (5), which will be stopped when acid is taken, the normal sense of organic satisfaction being then experienced. When again the digestive ferments are so changed that some of them are irritating the sensory nerves (4) of the stomach, then also a gastric pain or dissatisfaction is felt by (5) that is only converted into the normal satisfaction by the administration of an alkali or bismuth. In either of these cases the administration of whisky or morphine might stop the feeling of discomfort, and establish a false and pathological

feeling of alimentary satisfaction, which we know as physicians would not represent a cure of the disorder. The conscious memory of this transient relief, and the organic memory of it by the stomach and the brain would certainly, after many repetitions, set up a craving for whisky or morphia every time the same gastric discomfort was felt. A morbid craving would thus result from a false medical treatment.

Let us now imagine the original disorder to be in the higher brain centers. If through a pathological condition of these centers there arose to consciousness a feeling of alimentary dissatisfaction or gastric pain analogous to a neuralgia or a paræsthesia of cerebral origin, if through such a purely cerebral cause normal appetite was never felt, but instead thereof a sinking, low feeling of emptiness, exhaustion, and depression, alcohol or morphia is given to remedy this. Blood is determined to the alimentary center in the brain, the cells of which are also directly stimulated dynamically by the drugs. To consciousness a feeling of satisfaction and pleasure is substituted for one of discomfort. The normal food appetite returns in some degree. Every time the same feelings are experienced the same delusive remedy is craved. The man's brain was exhausted by mental exertion or emotional distress, or was unstimulated by sufficient oxygen in the blood freely circulated by muscular exercise. He craved for some remedy for his discomfort; he learned to have his craving satisfied by his physician, who put a false interpretation on his desire, and adopted a delusive remedy. The true restoratives of rest, fresh air, and exercise, and of tempting, easily-digested food, were not given, but, instead, he got a brain stimulant or sedative that was more suddenly productive of relief than even Nature's true remedies. This sudden relief made a more vivid impression on the memory, conscious and organic, than the slow and gradual, but physiological, cure of the disordered condition. It is therefore more keenly and directly craved for when the sinking feeling and discomfort arise, just

because the memory of the sudden pleasure it gave is more vivid.

Assume now that this brain was by heredity full of the potentialities of diseased working, that it was "unstable" and "non-resistive" to internal or external causes of disease. Assume that it was easily tired and unduly sensitive to its own exhaustion. Stimulants or sedatives are taken, the present comfort and relief are even greater to such a brain than to one with no such heredity, because it is more sensitive and less resistive. Its essential constitution, too, has more affinity with brain stimulants and brain poisons than that of an ordinary brain. A craving is very soon indeed set up in such a brain, and is very intense. I knew the case of a boy who got a glass of whisky from a companion when tired, and from that moment had a masterful craving for such a stimulant whenever he was hungry. His mother had been insane, and no doubt he had derived a brain from her that was full of potentialities of such evil. It is in some such cases that there seems to be a hereditary memory of drunkenness shown by a craving for stimulants in the daughters of a drunkard, arising at puberty before alcohol is even tasted, and felt at every menstrual period during the reproductive life. It does not need even the disturbing influences of menstruation on the brain for such a craving to arise. Plenty of boys hereditarily tainted acquire a strong craving for alcohol from the beer they get at school, and from the wine they have the chance of getting at dancing parties. I knew of a boy of fifteen, the son of a neurotic but perfectly sober mother, but whose maternal uncle was a dipsomaniac, who began to take whisky on the sly, and who at once developed into a drunkard of the secret sort. From that time forth he took whisky at intervals in large quantities, always secretly. In many of these cases I think it a reasonable explanation that there is a hereditary memory of the craving for a brain stimulant. The fathers had eaten sour grapes, and the children's teeth had been set on edge.

Paralyzed Control. — Control exists and must necessarily

exist wherever there is life. Growth must cease at some point in every organism and in every organ — that is, cell growth must be controlled through some law. The shape, and the size, and the composition of every cell of every organ must be under a controlling power, and muscular motion must ever be under control from the lowest up to the highest animal. The fixity of the hereditary laws that govern all life, "like begetting like," is a form of control; the fixed limits to all vital energies and powers, evolutions and developments, are a form of control. A controlling force is as much an essential quality of all living things as weight is of inorganic substances. The idea of evolution is founded on control; for "natural selection" and the "survival of the fittest," may be regarded as other modes of expressing it. But it is when we come to special organs of the human body, and special qualities of mind through which control is exercised, that we realize its incalculable importance, physiologically and hygienically. Every system of morals has, as its practical side, not the knowledge of good and evil, not the feeling of love for the one and hatred of the other, not the "sense of right and wrong," but the power of controlling thought, feeling, imagination, and action. The former would constitute but a very incomplete system of morality without the existence of the latter. So, physiologically, all organs would fail in their organic uses to the life and to the organism were there no apparatus of control or inhibition. What use would the bladder, as a temporary receptacle of urine, be, but for the elaborate controlling apparatus to close and open its outlet, to put its muscles into action, and to stop them at the proper times? How would the heart and lungs provide for the conditions of exertion and repose, heat and cold, rarity and density of atmosphere, without an elaborate apparatus of inhibitory nervous ganglia? Life would be impossible, as we understand it, without the power of adaptation to varying conditions and environments. This is largely due to the controlling apparatus. Much of this is not "voluntary." It is automatic, like the governor of a steam-engine; but it is control, notwithstanding.

The highest regions where control is exercised are where it is consciously exercised to regulate or inhibit felt desires or craving in man. This, like all nervous and mental function, must have an encephalic basis. It is not merely a "moral quality," with no substratum of cerebral cells and cell energy. Is not its prolonged exercise always accompanied by a conscious feeling of strain, by a determination of blood to the brain, and of exceeding fatigue just like muscular exertion? Let any man control and fix his attention for some time on a subject that is not interesting, or inhibit a desire for food, or resist a craving for fresh air when in a stuffy room, and the results are physical weariness, drowsiness, or muscular fidgets. It is still doubtful whether there are localized "inhibitory centers" in the brain for all the control that is seen to be exercised, or whether control and limitation of energizing are not essential qualities of every center — whether, in fact, the power of liberating nerve energy does not imply some power of controlling its liberation. No doubt control is the highest function of nerve substance. The higher the animal the more control in various forms is seen. A high control over the expression of the emotions and over conduct is the last product of evolution. The moral qualities are thus the highest physiologically and evolutionally, as well as psychologically. In all systems and classifications of mind, volition is placed at the head of the faculties.

There is a certain power of inhibition over desire and of regulation of craving which all men and women must possess to be able to live in any community, however primitive, however barbarous. In the primitive community that power of control is limited in extent, but is often very intense in certain directions where it has been gradually strengthened by practice in many preceding generations. The Red Indian will inhibit all signs of pain when tortured and all signs of astonishment before strangers, but he has no power whatever to control his craving for firewater after his brain has once felt the effect of the fatal stimulant. I do not agree

with Maudsley when he says that the savage craves for alcohol after having once felt its effects because it opens the ideal to him. "This eager use (of alcohol) running headlong into abuse is evidence of the longing that there is in human nature for the ideal: for an elation of feeling, an expansion of sympathy. A freedom of mental power, an exaltation of the whole nature, mental and bodily, are obtained thereby which are denied to it by the real."* This, I think, rather describes the overmastering motive to excess in the use of nerve stimulants by the men who by ancestry and cultivation have acquired the faculty of being idealists in any degree. The savage and many of the congenital dipsomaniacs and the habitual drunkards among our laborers and our criminals cannot by any use or abuse of alcohol have any ideal opened out to them. We must seek a lower motive than this for the craving and for the inability to resist it. Maudsley's description exactly applies to De Quincey's motive for giving himself up to opium. It does not apply to the Red Indian or to the Whitechapel victims of "Jack the Ripper." In them the motive is more analogous to that which prompts the stallion to seek sexual congress with the mare—it is a simple organic craving of great intensity.

The study of mental inhibition as it gradually arises in children is one of the most instructive lessons in psychology, from the physiological side, that it is possible for any one to learn. At six months there is no such brain power existent as the higher inhibitions. It shows itself about the end of the first year in an average child. It gradually develops just as muscular co-ordination and equilibration, as the power of attention and reasoning gradually develop. But as between different children the difference is enormous as to when one can stop eating a sweetmeat by a mental effort as compared with another. One child will accomplish this act of mental inhibition at twelve months while another cannot do it at three years. The sense of right and wrong, and the power to follow the one and avoid the other, are earliest seen in a

* *Body and Will*, p. 247.

good stock — even precociously so sometimes where there is a nervous strain in the stock. But in many of the children of habitual criminals and of drunkards, and of the insane, it is often long in appearing, and frequently never attains much strength. I have had brought to me on several occasions the daughter of one of my asylum female patients, who in features is precisely like her mother, whose father was a drunken tramp, and who now at fourteen seems utterly devoid of any power of higher control whatever. From the time she could walk and speak she has exhibited the impulsiveness of an untrained dog of a bad breed. She has often nearly killed her brothers and sisters. She never showed any desire to share anything with them till she was done with it. She would steal and lie as if these practices came natural to her. She was sent some years ago to a sort of religious reformatory school, and was so dangerous to the other girls that she was the terror of the place — and all this without any sort of adequate cause, for she was kindly treated. It seems to take many generations to redevelop an atrophied conscience when it has by heredity nearly disappeared. There are many cases where control was normally developed in childhood and youth, but where its organic basis seemed to be weak and unresistive to outward causes of disintegration. I knew the case of a youth of normal character at 18, who when subjected to temptation during his college life gradually lost his inhibitory power, so that by 25 he was a simple automaton so far as resistance to drink and to his sensual appetites were concerned. It seemed as if in his case a neurotic heredity produced a brain that needed always to be guarded against any strain on its inhibitory qualities. This brain being poisoned by alcohol in the stage of development during adolescence, it underwent deterioration, and was never again able to exercise normal inhibitory power, just as some stomachs, after being subjected to a course of indigestible food, never again gain their normal power of digestion. Many of us have seen “stomach” drinkers, — men who have lived on sheep runs, eating for

years nothing but damper and mutton — in this condition of chronic dyspepsia, who could not live without the gastric and cerebral stimulus of whisky.

A long and continued course of poisoning the brain with alcohol will often destroy its power of inhibition in even the strongest and most normal brains and with the best heredity. We have all seen such men of splendid powers of self-control at 30, who by continuous drinking or opium-taking have first weakened and then destroyed their controlling powers, so that at 45 or 60 they not only were drunken sots, but disregarded the common decencies of life and society; their word could not be believed, and they became, as regards control, far below the level of a well-trained dog.

When we come to obvious disease of the brain in function or structure, the symptom of lack of control is one of the most common and marked features. Insanity has been well defined as in essence loss of control. In the explosive motor diseases of the epileptic type, impulsiveness and irritability are the most common mental symptoms. In brain-softenings of all sorts, more especially where they are extensive, irritability and loss of control over the expression of the emotions are two of the most marked features. Loss of control in all of these diseases is regarded as so perfectly natural a symptom that no one regards it with wonder or doubt. It is only when we have the symptom of loss of control standing alone, or nearly so, that doubts are thrown on it as being a real disease. If a man is melancholic, but yet in outward conduct so natural, and in judgment so sound that he goes into the market-place among his fellow men and transacts complicated business well, and yet he puts an end to his own life that night, we do not now look on that terrible and absolute loss of control as being other than disease, and our feeling is not one of blame; yet if that man's brother, with the same bad neurotic heredity, at the same age and under much the same circumstances, becomes run down in nervous tone, gets somewhat depressed, takes to drink or opium, cannot stop his craving for such a neurine stimulant or sedative, but

yields to it and allows it to destroy his health, injure his reputation, and finally put an end to his life, — in such a case the law does not regard it as a disease, society blames instead of pitying him, and even the medical mind has much more difficulty in realizing that the uncontrollable craving for drink in him was a disease as much as the uncontrollable act of self-destruction in his brother's case. Control, in fact, is not fully recognized as a brain function as yet; it is instinctively considered dangerous to do so by some, while most think it wrong to do so. It looks to some people like knocking away the chief pillar on which society rests, and on which law majestically reposes, if any question is raised as to a craving being diseased or as to man's control being "paralyzed." To admit that a man's conduct depends on his heredity, on the working of his brain, or on the pathological conditions to which that brain is subject, seems like robbing him of his "free will," depriving him of his conscience, and reducing him to the level of the "brutes that perish;" yet the facts of science must sooner or later be recognized, and must be acted on. About one-fourth of my insane male patients in this asylum would soon kill themselves with whisky, or any other strong brain stimulant, if they had full access to it. But no one regards this as strange in any way. When the judging and emotional power and memory are impaired by disease, it is assumed that volition and control will also be disturbed. When a woman's emotional nature is so changed that she takes dislikes to her own children, when a man's judgment is so perverted that he thinks himself the king of England, when a man's memory is so impaired that he cannot tell his own name, these cases being otherwise for the most part sound in mental working, we have no difficulty in recognizing that such persons are mentally unsound and that their brain-working is pathological. But when a man loses his power of control in regard to drink, or opium, or sexual conduct, he is not necessarily regarded as laboring under a diseased condition of brain at all. I have now a patient who is in judgment acute and in con-

duct normal in all respects but one. He exposes his person before the other sex whenever he can do so undetected. He schemes for opportunities, yet he deplors the hold this diseased craving has acquired over him. Motives of every sort have been used, and have utterly failed to control this bestial impulse. He has lost his professional position through it; the ties of family, of wife, and of children have failed to check it; he has been punished by the law and put in jail — yet it is masterful as ever. You may spend days with him, and find him agreeable, intelligent, and without a trace of delusion or other mental perversion. He has voluntarily taken refuge in an asylum for cure if possible; for control, if cure cannot be attained. Such conduct, motiveless, yet existing as a hard pathological fact, makes the case very instructive as an analogy to some cases of dipsomania, a stepping-stone of belief and realization that enables us better and more firmly to comprehend that a paralyzed control over a craving for drink, or opium, or cocaine may be a disease as much as suicidal melancholia.

Diseased Cravings and Paralyzed Control regarded together. — Diseased craving and paralyzed control, though differing essentially in physiological and pathological aspects, and capable of being looked at as I have now done, separately, yet must commonly be regarded together when we come to study and treat individual cases of brain disease. No doubt there are innumerable cases where there are diseased cravings, but with normal control through which these cravings are kept in check. Stronger motives and desires than such cravings exist, and act inhibitorily. Society rests on this fact. In many cases of insanity in their early stages this is seen, and in many other cases the disease is recovered from before it goes further than the still controllable craving. I lately saw a young man who had the most acute desire to touch filthy sores and to put his fingers into filth, yet his power of control to resist this in most cases remained, and a few months, under change of scene and circumstances, fresh air, tonics, and cheerful company, he got over it entirely

There are thousands of persons who have suicidal feelings, yet control them from being put into action. How many thousands of men and women there are who have a strong desire for drink, and yet control it! So, on the other hand, we may have paralyzed control, but with no great craving to do wrong acts. I saw a woman once whose power of control in every direction was quite gone, who could originate nothing, who was sometimes tempted to act wrongly by suggestion from without, like a person hypnotized, but not by craving from within, who, by the help of a little gentle but constant guidance from without, did nothing very much amiss, and recovered after a year or two's duration of this state of paralyzed volition.

Neither of these conditions by themselves are, however, so common as the one where we have the two morbid states combined, the morbid craving and the lessened control. It is not quite clear, on physiological grounds, why they should commonly go together, but it is certainly so in fact. It seems as if the lessened power of nervous energizing, the brain disease, or the degeneration which sets up the one weakens the other. Normal desire representing physical and organic need, normal inhibition representing the coördination, the correlation, the limitation, and the selection that are necessary to the existence of all higher animal and social life, it is realizable how, in disturbances of the higher centers in the brain cortex where all organs and functions are represented and are correlated, and where most of the strong hereditary qualities reside, craving and control should stand or fall together. Both relate in the closest way to the continuance of the individual and of the species—the two primary ends and motives of life.

The chief varieties of diseased craving with paralyzed control are the following:

I. Congenital absence of inhibitory power; the craving toward drink, lying, unnatural sexual acts, violence, and lawlessness arising from physiological causes, or by suggestion, or by the direct teaching of criminal associates. Such cases

are always of a stock hereditarily tainted with the neuroses or with social lawlessness.

II. Loss of the power of inhibition with exaggerated cravings occurring as one of the many neuroses of adolescence, standing as one of the developmental dangers in hereditarily weak subjects. It then ranks with hysteria, chorea, consumption, rickets, adolescent insanity, developmental epilepsy, Friedrich's disease, etc. It often appears as "incompatible" and "peculiar" temper, or as impulsive wandering from home, or causeless lying, drinking, uncontrolled sexuality, stealing, taking to unnatural foods, to strange ways of living, to eccentric religious impulses, to outbursts of talking when alone, to association with persons of lower social status, and to "impracticablenesses" and unconventionalities of all kinds in theory and conduct.

III. Development of craving, and at the same time loss of power of control, from over-indulgence in sexual vice, in drink or opium, or other drugs having special affinity with the brain cortex. In such cases there is often an innate tendency to inhibitory breakdown from some cause. There is often over-sensitiveness, the keen feeling tending to produce nervous exhaustion, and this suggesting a counteracting stimulant. But, as I have said, continued and excessive indulgence in the use of alcohol, opium, or cocaine will produce a craving and destroy control in any brain, however strong its original constitution may have been.

IV. Over-work, over-anxiety, distress, and affliction, life in unhygienic conditions, often produce morbid cravings for nerve stimulants or sedatives, and will diminish the inhibitory power to resist these.

V. Injuries to the head, gross brain disease, and sun-stroke, frequently diminish the controlling power and produce impulse and craving of a diseased sort.

VI. Actual insanity is accompanied by morbid craving and paralyzed inhibition to a marked extent, the "dipso-mania" symptom in many cases of ordinary insanity being very troublesome indeed. Very many cases of simple mania,

some cases of simple melancholia, many cases of delusional insanity, many cases of early general paralysis, and many of dementia, have this symptom. This has not been drawn attention to sufficiently; the more apparent symptoms of insanity have overshadowed the less obvious failures of inhibition, or, as in some cases where the disease was caused by drink, they are regarded as dipsomaniacs long after they have become ordinary maniacs.

VII. The conditions occur sometimes in relation to recognized insanity between the attacks, then taking the place of an attack of mental disease with delusions, or excitement, or depression. I have seen many cases who were always either "very mad" or "very bad," but not both together.

VIII. Certain of the physiological functions and conditions, such as menstruation, pregnancy, parturition, lactation, and the climacteric, set up morbid cravings of all sorts, and paralyze control in certain women. For a physiological function thus to be accompanied by a morbid volitional state a neurotic heredity is commonly needed.

IX. Absolute lack of education of the controlling faculties, with nothing to observe or imitate but bad example, and escape from the natural consequences of bad acts in youth, may leave the controlling power undeveloped.

X. The absence of normal mental stimuli, social intercourse, amusements, family life, in some cases tend to set up cravings for brain stimulants of the alcoholic sort.

XI. Senile degenerative changes in the brain will sometimes set up morbid cravings never before experienced, or weaken control over ordinary cravings. Senility often shows its commencement by immorality, by over-drinking, by gross sexuality, and by a loss of self-respect.

XII. Diseased craving and lessened control alone or combined in lesser forms and degrees are often associated with ordinary nervous diseases, and even with diseases of the bodily organs other than the brain. They are seen in some cases of epilepsy, diabetes, locomotor ataxia, anæmia, chlorosis, cardiac disease, myxœdema, phthisis pulmonalis, pernicious anæmia, and many other complaints.

Dipsomania.—Dipsomania has never been satisfactorily defined, any more than insanity has been defined. But if we cannot define insanity in the abstract, we agree in the main as to what it is in the concrete. That is certainly not the case with dipsomania at present. The word is used in the loosest way both in the profession and out of it. It has come to be a synonym for drunkenness in popular estimation. It is exceedingly common for our profession to describe any kind of alcoholic insanity as "dipsomania." Still more common is it for patients unquestionably insane, who have delusions, or who have maniacal excitement, or who have suicidal tendencies, or who are subject to epilepsy, but have in addition strong cravings for alcohol, to be called dipsomaniacs. Before we can understand or treat of the disease in any sort of scientific or clinical way we must come to some more definite use of the term. We must, in the first place, confine the term to that form of disease where the lack of inhibition or the morbid intensity of impulses are the real departures from normal mentalization. If we have a patient with simple coherent mania,—that is, with distinct mental exaltation, sleeplessness, restlessness, talkativeness, changed habits, loss of common sense, unsettledness, loss of control over temper, morbid brilliancy of imagination, and hyperæsthetic memory, we must not call such a man a dipsomaniac, though he drinks excessively, and has all his symptoms aggravated by it, and has an intense craving to get it, over which he has no control, lying to get it, cheating to get it, and stealing it. This particular lack of self-control or craving is then only one of the symptoms of an ordinary form of mania. It may be a very outstanding and troublesome symptom, and the most hurtful one to the patient, but it is unscientific to take any one symptom of a general brain disease and ticket it as the disease itself. We might as well call a pneumonia a dyspnoea or a cough. I have had cases of simple mania by the dozen where excessive drinking was one of the earliest and most pressing symptoms. I had one case of irregular *folie circulaire*, amongst many such, whose excited period always began by

excessive brandy drinking in company, and whose melancholic period was always liable to heavy solitary drinking to relieve his mental pain; who actually brought on short attacks of delirium tremens when suffering from simple mania on two occasions by such morbid drinking; who certainly could not control his craving; in whom the keeping drink from him was the most troublesome and difficult, but yet a perfectly essential part of his treatment, and in whom this restraint from drink, I had reason to believe, shortened the attack of maniacal elevation. His reasoning was very acute, he had almost no delusions, and he was perfectly coherent. Why was he not then a dipsomaniac? Simply because I had clear evidence that a morbid brain elevation preceded the tendency to drink; that he had lost control in many directions besides drinking; that he was changed intellectually, affectively, and morally; and, in brief, looking at his case clinically as a whole, that it was one of *folie circulaire*. Cases of this kind, or those subject to periodic or occasional recurrences of simple brain exaltation, are very common, and only some of them have drinking as a symptom. They should all be excluded from the category of dipsomaniacs.

Then we have many cases of simple melancholia in which drinking is a symptom. The patients find that its effect on their brain is to deaden their mental pain, and to substitute for it a kind of transitory happiness, or confusion, or a partial lethargy. As a part of their melancholia, their inhibition is lessened, and so the desire for drink for this purpose cannot be resisted. The longer it is taken, the less becomes the power of control. But the direct effects of alcohol and all such substances that act specially on the functions of the higher brain centers being to lessen inhibition by constant use, a positive craving is soon set up. I had one such patient, who, on each of the many attacks of simple melancholia she had, became to her husband and to her doctor "a dipsomaniac" in this way. But, in my judgment, she suffered from melancholia, and her taking to drink at first was a deliberate attempt at self-therapeutics. There was not to begin with a

craving for drink at all. My reasons for this conclusion were that the symptom began by mental pain, a suicidal feeling, morbid suspicions, loss of power to do or think of work, lack of interest in everything, a conscious loss of affection for her husband and children, sleeplessness, loss of appetite, and falling off in flesh,—all these preceding the drinking. Then the symptoms, under proper treatment, ran the course of an ordinary case of melancholia. Clinically it was melancholia, not dipsomania. I have another case of melancholia in my mind that has become chronic, where all alone a craving for drink is a symptom, and her friends thought her case one of dipsomania. But she was sent to the asylum after an attempt at suicide, and I had no doubt, during her residence there, that she suffered from melancholia. She had many of the ordinary concomitants of dipsomania, viz., untruthfulness, laziness, want of proper interest in husband and children, and lack of self-respect in regard to the conventionalities of life. It is most important to ascertain if there is a melancholic element preceding the excessive drinking.

Then I have known many epileptics with intense and quite uncontrollable cravings for drink, but the greater certainly includes the less here, and it would be improper to call such cases dipsomaniacs. I have many epileptics in the asylum that I cannot let into town on pass simply because they cannot resist the craving for drink, and will beg, borrow, or steal anything to get it. I don't know any class of human beings more likely to acquire a dominant craving for drink than some adolescent epileptics. It aggravates all the symptoms of the peculiar psychoses of epilepsy—the impulsiveness, the irritability, the homicidal and suicidal tendencies. An epileptic maniac is often bad enough, but a drunken epileptic is likely to be a demon incarnate.

There are many cases of mild mental enfeeblement (dementia) resulting from acute primary attacks of mania, who take to drink as a symptom of such mental enfeeblement, and have no power to restrain themselves. Such patients are often so apparently well in asylums that they get discharged

as "recovered." It is only the rough but real tests of life in the outer world that bring out their weak points. I was once sent for to see an old patient who had had originally an attack of acute mania and apparently recovered, and had gone to live alone. I found him dirty and drunk, and his room simply filled with bottles that had once contained whisky. I put him under care, but found that after stopping the drink, bringing up his general health, and making him conform to the ways of ordinary life, his mind was permanently weakened. He had no active craving for drink. He rather liked it, and his power of control was diminished. He never asked for drink in the asylum, and never tried in any way to get it. Yet when he left, he went back to his old drinking ways. I do not call such a man a dipsomaniac, but a mild dement.

There are cases of delusional insanity and paranoia who have the drink craving strongly as one symptom. I have now a gentleman patient who is very irritable, has delusions of persecution, and has periods of slight excitement as well, who has an extraordinary craving for liquor at all times. He is so easily affected that one glass of beer will make him quite hilarious and agreeable. He will do anything for drink; yet he is not a dipsomaniac in any true sense.

I have now a case of general paralysis, who, during the time before he showed any real sign of insanity or any special paralysis, took to drinking excessively, that being entirely contrary to the practice of his former life. Had general paralysis not come on, he would have been a true dipsomaniac, for the chief symptoms of his disease then present was a loss of control over a lower appetite and a craving for alcoholic stimulants. A very careful analysis of his intellectual and affective condition for that year no doubt showed slight changes, but not more than the effects of the drink he took might have accounted for. In that case every one would agree that it would be incorrect to ticket the temporary mental change by the name dipsomania, for it was clearly a part of the general mental disruption marking the beginning of a grave organic cortical disease.

I can recall many other cases where, as an early mental symptom of brain softening, of tumors, of brain syphilis, and other organic diseases, patients took to excessive drinking, and evidently could not control those morbid cravings. One such case particularly impressed me. It was that of a professional man who had lived a studious, laborious, self-denying life up to fifty-six. He then took to unrestrained and shameless drinking, losing his position and destroying his reputation. No other signs of "insanity" were seen in him then. Those who knew him most intimately saw that a subtle change otherwise had come over him intellectually and morally. I saw that his pupils had become unequal and not regularly contractile to light, that there was a faint asymmetry of his face when his muscles were in action, and that his walking and equilibration generally were very slightly defective. But he was subtle in argument, especially in excuse for his over-drinking. In about two years from the time of the sudden development of the drink craving he took an attack of hemiplegia on the same side as I had noticed the slight flattening of the face. I had no doubt whatever that the drinking was simply an early sign of the brain starvation and softening of arteritis, which afterwards caused the paralysis and death. I found, on careful inquiry, that even before he began to drink he was not doing such original work, and that his force of mind, which had been very great, had abated. It may be said that in such a case it was the excessive drinking that caused the first brain damage. In the light of my own examination of his symptoms, I am certain that the brain disease had begun before the drinking, and had caused it. I am sure that many cases of brain softening are attributed to drink that were really of other origin. No doubt the drink will hasten on any change that has already begun in the brain.

Brain syphilis is especially apt to cause lack of control over conduct and immoralities, amongst which excessive drinking stands prominent as one early symptom. Probably this is because brain syphilis is so apt to affect the mental area of the brain cortex by gummatous deposit or arteritis.

Perhaps one of the most sad forms of drink craving with lack of control is where it develops as one of the early signs of the breakdown of senility. I have seen many such cases where lessened inhibition was the first sign of senile brain degeneration. I have seen many men of unblemished, self-controlled lives up to sixty or seventy who then took to drinking, and were senile dotards within a few years thereafter. Taken together, most of the cases where men at that age, of good character, take to sexual immoralities, to low company, to acts of dishonesty, and who change in their tempers, becoming irritable and violent, and where drinking is a prominent symptom, should be more correctly put down as due to senile brain decay, than called dipsomania.

In considering all such cases where uncontrollable craving for drink is seen as an early symptom of marked forms of insanity, of incipient organic brain disease, or of commencing senile degeneration, we must take the heredity of the patients into account, and the education to which the brain had been subjected in youth, as well as the motives that had operated with force during the controlled part of the life. The heredity towards weakened mental control in regard to drink and otherwise may be put down as very general,—indeed, in most Teutonic countries, as DeQuincey says, “our northern climates have universally the taste latent, if not developed, for powerful liquors.” During the last century few persons who were not under strong moral or religious motives seemed to exercise very much control over any tendency they had to drink excessively. We, their descendants, as a matter of fact, don't drink as hard. Why? There must be motives operating strong enough to counteract our evil heredity, and to enable us to exercise inhibition over our latent cravings. Our education is all in the direction of inhibition now; public opinion, too, tells as strongly against as it did formerly for excessive drinking.

What happens in the cases I have been adducing seems to be this: The patients probably knew quite well intellectually that the excessive indulgence in drink meant social dis-

grace, and that such excess was morally wrong. But whereas in sound brain health the effects of education and the higher instincts of morality and public opinion, with a normal power of brain inhibition, kept them straight against a liking for drink; whereas, after disease of the brain had broken down the power of inhibition, the lower animal liking for drink overcame the higher motives; it is now pretty generally recognized that as the "moral faculties" were the last to be evolved, they are commonly the first in brain disease to disappear. It is quite possible, too, that a certain diminution in the power of keen intellectual perception accompanies the loss of inhibition; the imagination does not so vividly "realize" the consequences of habitual drunkenness as before. Our means of testing minute degrees of psychological change are as yet far too imperfect to enable us to dogmatize on such points. If any man will take the trouble to analyze the exact intensity of his "moral sense" in different circumstances and at different times, and its inhibitory and propulsive power over conduct, he will soon see, if he is honest, how it fluctuates. If he then tries to gauge its intensity in different people, especially in the persons where it is hyperæsthetic, he will realize that the scale of moral sensitiveness is a very graduated one, even keeping within sane limits.

Having excluded those mental diseases and brain lesions and degenerations from true dipsomania, the next thing is to separate it from simple drunkenness. We cannot say that all men who have a strong leaning for drink are dipsomaniacs; nor can we say that all men who habitually or periodically drink to excess, and so mar their prospects, destroy their health, and hasten their deaths, are dipsomaniacs. It is not the craving nor the unreasoning disregard of every motive alone that should enable us to form our conclusions. It is the non-existence of the power of control that is the test of whether the drinking is a disease. Very many persons have a craving for drink; in not a few of those this craving is of morbid strength, and is in some of them even connected with

weakened or disordered brain action. Such persons frequently do indulge to excess, but they do so deliberately, and could control their actions if they would, and do control them when there is sufficient motive for it. They drink as a part of their social life, and an aid to it, or to experience the pleasure that drink gives them. Some of them cannot stop at the point they lay out for themselves, after they have begun to drink. To treat of drinking from a medico-psychological point of view, and to ignore the great part wine has played in aiding social joy from the earliest human records till now, is to set aside one of the great facts of sociology. The study of medico-psychology without reference to the habits and social history of mankind would be like the study of politics without reference to human passions. Deep-rooted, ingrained, apparently innate in the social instincts of mankind, is the practice of feasting, as distinguished from mere eating and drinking to sustain life. It has been followed equally by the Hottentot and the Greek. The universal desire for it, and the pleasure it gives, must certainly be regarded as proving its necessity to mankind. Feasting always implies taking more than is absolutely necessary for life, and also that the food and drink are more tempting or more highly seasoned or stimulating than those in daily use by the partakers of them. It also implies that if food or drink, or both, of the same quality or in the same quantity, were taken daily, it would be injurious. As an essential part of their feasts, nearly all people—except the followers of Mahomet—have used drinks or drugs that intoxicate more or less. Once invented or discovered—and their discoverers have always been placed among the gods—these drinks seem to have always become an essential part of feasts. No great harm is proved to have been done by feasting with the use of drinks if it was only indulged in at rare intervals, and if the feasters led physiological lives in between. Nature provides that excesses do not do much harm if not often repeated. Nature also gives clear indications that the pleasures of feasting are greatly lessened if they come too often.

The glutton and the dipsomaniac are landmarks to show that Nature's laws have been broken. Broken law by man in time creates conditions of brain that become hereditary. Long before actual demonstrative tissue changes occur, we have diminished resistiveness to hurtful influences, lessened staying power, and not so great an organic pleasure in living for its own sake. The fathers ate sour grapes and the children's teeth are set on edge. Man cannot both live and break the laws of his life. But few thoughtful persons can imagine that feasting and its risks can be mended by being ended. Mankind has too keen a consciousness of the balance of advantages for this ever to happen. And intoxicating drinks being historically an essential part of feasting, how can we expect them now to be eliminated from it? If we would use intoxicants as a part of feasts only, mankind would be safe enough from their abuse, and in a few generations dipsomania would be unknown.

But what about the Red Indian, and the effect fire-water has on him? A whole tribe, a whole race, of primitive healthy barbarian men and women, with no heredity whatever towards a morbid craving for drink, become in one or two generations all dipsomaniacs together. They conform to any scientific definition of dipsomania that can be given. Their cravings are diseased, and their control is paralyzed; they drink till they become extinct, individually and as a race. No motive will control them from not drinking to excess if they have the chance. The use of drink in them is never connected with the gratification of social instincts at all. It is a simple craving for experiencing the intoxicating effect of it on their brain. No doubt this is a difficult problem to explain. Its explanation seems to be best found in this social aspect of drinking among savages. They had not grown up by the experience of countless generations to the social uses of drink, and their higher power of control over strong cravings, or over conduct, has not been evolved. Inhibition over things relating to their wars and hunting matters they have in abundance. But the finer ethical inhi-

bition has not been evolved in them. So that when strong alcohol, a substance which civilization alone could have discovered, and the subtle bad effects of which it required the inhibitory power of a fully evolved brain to withstand, was presented to them, it is no wonder that their limited control failed in such a case. It should never be forgotten that alcohol poisons as well as exhilarates. It affects more strongly the highest brain functions of emotion and control. The unevolved savage was suddenly brought into contact with a poison and intoxicant combined that only civilized brains could resist, and his brain at once fell a victim to it. I often think the instructive analogy between the dipsomania of the unevolved Indian and the dipsomania of "reversion" in the civilized man has not been sufficiently dwelt on.

The distinction between dipsomania and the various forms of true alcoholic insanity and alcoholic nerve degeneration is clear enough if we accept the term in the sense I have endeavored to make out. Yet they may have a close relationship. A dipsomaniac may develop alcoholic insanity. A case of acute alcoholic insanity may get cured, and become one of dipsomania. A dipsomaniac, while he remains a pure case of that disease, has no systematized delusions, no hallucinations, no amnesia, and no motor symptoms; has seldom strong impulsive, suicidal, or homicidal impulses. In fact, most dipsomanics are harmless enough except to themselves and others through their conduct. We need not point out that every case of true alcoholic insanity has always one or more of these symptoms. This distinction is most necessary to be kept in mind. We can get no scientific idea of dipsomania so long as we do not distinguish it from true alcoholic insanity and alcoholism generally. Popularly it is almost impossible to get them distinguished from each other, and we are too apt to assume their identity through that intellectual laziness that makes us so often accept the term "softening of the brain" as a sufficient description of general paralysis, apoplectic seizures, bulbar degeneration, cerebral atrophic conditions, or even extreme secondary dementia.

This tendency is wrong, and we should resolutely resist it. Our medical nomenclature is getting complicated enough, but this is inevitable, and we should use different names to distinguish things that really differ.

The greatest difficulty in the diagnosis of dipsomania is, questionably, to distinguish it from drunkenness, where the control is not paralyzed, but simply not exercised. Especially is it difficult to tell where the stage of sane, responsible, punishable drunkenness ends and that of dipsomania begins, in those cases where the latter arises out of the former. In marked cases the disease makes itself manifest to a careful clinical study of the symptoms present. Those symptoms are psychical and nervous and are often subtle in quality. Such a case is like many difficult mental cases,—it needs the faculty of psychological diagnosis to be put into exercise. There may be no coarse and evident elements of differential diagnosis present at all. To diagnose a case often requires that fine points of character, of conduct, of the influences of motives, of the affective nature, of business capacity, of the power to sleep and to concentrate the attention, have to be put into the balance and weighed. The whole moral history and capacity of the patient has to be laid open and inquired into. The general health, and markedly the brain health, in its sensory and motor, but especially its trophic functions, needs examination. This question always arises, too, "Is there such a difference between the man now and at some previous time when admittedly well that a condition of disease only will explain it?" The chief clinical facts that prove such disease, or tend to prove it, are the following:

Marked remission and periodicity.

The diseased craving and paralyzed control having followed, as effect follows cause, brain injury, loss of blood, mental strains, bodily disease, conditions of anæmia or exhaustion, critical periods of life, or an attack of mental disease.

A change in the whole mental, moral, and emotional

character, coincident with or closely related to the drink craving.

A mental or neurotic heredity.

A marked neurotic diathesis.

A congenital weakness in the inhibitory qualities of the brain, brought out by emerging into life or having new opportunities for indulgence.

That the patient had normal control at one time, and exercised it under temptation to yield when he chose, but that the excessive use of alcohol has destroyed the brain's power of control, and has set up a morbid craving, this being usually evidenced in other ways than mere drinking.

It being accepted that dipsomania is a form of diseased craving or impulse, with paralyzed—wholly or partially— inhibition, the next question is to examine its varieties and its proper treatment. I have never seen any classification of dipsomaniacs that satisfied me either as to its scientific basis or its practical value, and I am unable to devise such a classification. It is easy to schedule them into intermittent and constant, into social and solitary, into diseased and vicious. I hazard the following as being founded on more clinical, etiological, or physiological principles than those commonly in use:—

1. Developmental and retrogressive dipsomania.
2. The dipsomania of a neurotic diathesis.
3. Somatic dipsomania.
4. The dipsomania of excess.

I am very well aware that this is chiefly an etiological scheme, and has many weak points. The varieties run into each other and overlap, and we come on some cases that will not fit into any of the four pigeon-holes.

1. Under the developmental and retrogressive form I would include the congenital cases whose higher inhibition has never been developed as a brain faculty; the cases arising at puberty and during adolescence, a numerous and an unfavorable class; those occurring at the climacteric, a not uncommon kind in both sexes, but especially in women; and the senile class, also not rare.

The general features of the congenital class of dipsomaniacs are a slight weakness of mind, inhibitorily in all directions, impulsiveness, lack of moral sense, want of balance, keen unreasoning likes and dislikes, want of power of application, want of common sense, and distorted and often remarkable social instincts. With all these lacks there may be a certain intellectual acuteness and precocity, and much cunning. I assume that the intellectual and other weaknesses do not go down to the standard of technical insanity. There may be educability if the proper methods are adopted. From early childhood an impartial study of such children will detect these deficiencies. They are usually of neurotic parentage or of a drunken family, and are in fact one variety of the class of "moral idiots" or imbeciles. The drink craving arises at any time, and usually suddenly after the first taste of alcohol, the effects of which on such brains is intensely pleasurable. Alcohol has a special affinity for all nervous tissue, but it seems to have a very special affinity for such brains, while out of it comes excitement, drunkenness, outrage, and crime. The craving I have seen developed at ten years of age, and even earlier. There are, of course, great varieties in different cases, but the following presented the main features of the disease with sufficient distinctiveness:—

A. B., aged 12, was seen by me on account of the following symptoms. His mother was a very unstable woman, and the father drank hard and came of a drunken family. The boy had been slightly peculiar, impulsive, and difficult to manage from a baby. He had been taught the ordinary branches at school, and could read and write, but was backward somewhat. Especially he had no depth of moral nature or of resistive volition. The body was large enough, but the movements were not so quick and fully co-ordinated as to be graceful. The head was badly shaped, the palate arch very high, and the eyes restless. It was difficult to fix his attention for any time on anything, and he was a good deal of an automaton mentally, but anything like idiocy or con-

genital imbecility had never been thought of. About a year before I saw him some whisky had been given him, it was not known exactly how, but ever since that first taste the craving for it had been present. He stuck at nothing to gratify it. Lying and stealing he would practice at any time to get a little of the coveted stimulant. He invented wonderful stories of illnesses at home, for which whisky was needed at once, messages from his mother to the family tradesmen, etc. He was plausible in excuses and prevarications when charged with the offences of which he had been guilty. The first taste of whisky he had got seemed to have found a brain most sensitive to its evil influence, and from that time dominated it as if a glamour had been cast over the child — for child he was in reality. He was, in fact, a very mild imbecile with the special quality of whisky craving. What could I do in such a case? Nothing that I know of but send him, as I did, to a far-off manse in a solitary country place, to be under the care of a sensible, firm couple, who for the sake of an addition to their income took this precocious congenital dipsomaniac into their home, and did their best to look after him, and get him interested in the work on the glebe. Fortunately such children are uncommon.

The next is the adolescent form of dipsomania, which is common enough. I should say that more true dipsomaniacs develop the habit of excessive drinking and acquire a keen craving for it, between the ages of 18 and 25, than at any other age. It seems to be one of the developmental neuroses, standing in the same class as the cases of adolescent chorea, hysteria, insanity, epilepsy, and Friedrich's disease. Like those diseases, it seems to indicate a failure in the perfecting process of the organism. There is always a neurotic heredity in such cases; but there is not, in my experience, any psychological or physical type that would lead one to predict this likelihood of dipsomania in any young person, except I should expect him to have the characters of the neurotic diathesis; but he would have this in common with a great many who would not become dipsomaniacs at all, nor

develop other neuroses. In this typical case the craving usually arises within a certain short definite time. A certain year can be looked back upon when the craving was roused beyond the power of control. The subject of it may not have become a "drunkard" that year, or for some years afterwards. At first he only gets intoxicated when the chances offer conveniently, when, in fact, he is in circumstances of more or less strong temptation. Commonly for a year or two he drinks in convivial company. Then the craving becomes more intense and more morbid, and he drinks alone, secretly and for drinking sake. Then duty is neglected, and morals deteriorate all along the line. Truth, honor, duty, honesty, self-respect, natural affection, all disappear; and the man, before he is 25, becomes the well-known wreck and wastrel that is the curse and skeleton in the closet of so many families. To give a clinical example is almost a work of supererogation. No medical man but knows many examples. Few large family groups but can furnish at least one young man who has in this way made shipwreck of life at the outset. The following case presents the main features of this form of the disease:—

B. C., the son of sensible, educated parents, but in whose mother's family there was both insanity and epilepsy. He was carefully brought up in the country, away from temptations. To those who knew him intimately he had certain mental peculiarities. He was untruthful if telling the truth meant risk; he was vain, and had no power of self-denial, wanting in a high sense of duty, and mean. But he was educated for a profession, and developed no drinking tendencies till he went to a university town to live in lodgings during his education. Within two years, and before he was 19, he was found to be a confirmed and uncontrolled drunkard, utterly lost to affection and honor, indescribably untruthful, vicious with women, and a useless burden on society, which he remained till his death, ten years afterwards. From the time he got to like drink he showed no redeeming point, no let-up at any time, no trace of control over his

craving, and no single point in his mental or moral nature that could be got hold of to apply any kind of motive to. I was satisfied, from a careful study of the case, that he was quite irresponsible and hopeless in the conditions of our modern society, and in the present state of the law. It was not a long course of nerve degeneration, caused by years of drink soaking, but a sudden destruction of inhibition by a few months of drinking in the case of a brain that was innately weak in inhibitory qualities, and so unstable that it was very soon entirely overset. But supposing he had never begun drinking, or after a few months had been placed where no drink could have been obtained, and a healthy, industrious life led for a couple of years? In that case I think he might have developed into full manhood, when the risk would have been much less, able to do some suitable work under good example, and not a curse to all who had to do with him. It was during the development of adolescence that the great danger lay. There was no doubt a short time during which this control was not lost and the craving not diseased; but this initial period of drinking was so short, and the amount of drinking was then so entirely inadequate to cause real brain damage, that we must look to the innate quality of the brain for the explanation of the facts. In normal brains with reasonably good health, we do not find a short period of dissipation followed by complete breakdown in the whole controlling power and moral sense, in the total destruction of what, from an evolutionary point of view, it has taken hundreds of generations to create and upbuild. Therefore such cases should be looked on from the pathological rather than from the ethical point of view. I have seen several examples of young men becoming dipsomaniacs during adolescence whose mothers had been neurotic periodic dipsomaniacs.

The dipsomania of the retrogressive periods of life, which are usually accentuated at the climacteric and senility, is not so common as at adolescence, but is far from being rare. Few practitioners but have met with cases of women who had led sober, self-controlled lives up to the menopause, and

then took to alcohol to counteract the feeling of weakness and lack of energy and of enjoyment that they experienced. The commencing failures, mental and bodily, of senility, too, are sometimes attempted to be fought off by liquor, with the result that the liquor becomes master of the situation, and useful and respected lives are terminated in disgrace and dishonor.

D. E. was a lady of good position, married, and happily circumstanced in all respects. She had led a correct life up to 46. She had always had a glass of sherry at lunch and dinner, but never had any craving for liquor till after she began to have the usual signs of the climacteric. Then she "felt low" at times, and began to take a glass of sherry before lunch, then another when out shopping in the afternoons, and at dinner would take two instead of one. At bedtime she would take some whisky and water to make her sleep, and the water grew less, till the whisky was taken neat. In a year she herself awoke to the fact that a craving for alcohol had seized her, and that her control against it was all but gone. She decided on teetotalism, but the effort was too great for her. She broke down over and over again. She gave out to her family and friends that she was "ill," and kept her room, when in reality she was drinking. She never so lost self-respect or caution that she got drunk on the streets; but she was drinking herself to death, and had no control whatever over the craving, when a relative took her a long voyage in a teetotal ship, and watched over her for a year or two longer, with the result that she lost the craving and acquired sufficient self-control never again to touch drink. She got stout, shapeless, and sober; she had passed the climacteric, and was safe. I could not discover any heredity, but she had been a "nervous," sensitive, and brilliantly intellectual woman.

As an example of senile dipsomania, take the following case: F. G., a gentleman who had built up and conducted extensive business till he was 70. His habits had not been in any way abnormal. He indulged freely enough in

convivial drinking at times, but never had drinking bouts or solitary sprees. At 70 he got to drink more and more at dinner and at night; then he began at lunch-time, and then became a perfect sot, with no self-control or self-respect whatever, unable to do business, or to mix in society. This was coincident with atheromatous arteries, a senile heart, and a failing memory. At 73 he had alcoholic amnesia, and at 76 senile dotage, when he lost the craving for drink, and lived five years longer a sort of vegetable life.

2. The next kind of dipsomania is that of the neurotic diathesis. There are unquestionably some persons of high brain qualities, especially of keen sensibilities and poetic minds, of practical force and of conscientiousness in a high and even hyperæsthetic degree, but yet who have small staying power, are soon tired, are apt to be carried away by the very force and intensity of their emotions, and who are very sensitive to their own sensations of weariness from any cause, some of whom are very subject to such a loss of control over their craving for stimulants that it can only be called diseased, if they have once taken to their use as "restoratives." Few of us but have known some examples of such persons. They need not have any insane heredity, or any connection with technical insanity in any degree, or they may be of the insane diathesis. Suppose we take the poet Edgar Allan Poe as an example of the latter class. To some such persons the effect of alcoholic stimulants or opium is so intensely pleasant, and so reinvigorating at the time, that it is no wonder they are craved. They are lifted from a common state of mind into an ideal one. Their social instincts are greatly intensified by drink. To them it is a mental stimulant in a true sense. In some of them there is a periodic depression nearly allied to simple melancholia that is accompanied by a special craving for some external agent that will give enjoyment. In women of this type, the nervous accompaniments of menstruation, pregnancy, and nursing are especially apt to lead to a craving for stimulants. But it must be kept in mind, and it has certainly often been

forgotten by writers on inebriety, that there are two varieties of periodicity in the drink craving quite distinct from each other: the one is when it comes on *per se*, and is a true recurrence of a subjective nervous phenomenon, a true cyclical neurosis. The other is when there are "bouts" of drinking that upset the stomach and liver, and produce a thorough satiation of the tissues with alcohol, which can no longer be taken, therefore, without producing a revulsion. When the organs and tissues become freed of those poisonous effects, and can with impunity receive more alcohol, then the man begins another "bout." This, which is more common than the periodicity, I do not call a periodicity at all. There would always be a mental desire for drink in such cases, but the body will not tolerate it for a time after a drenching. Whenever toleration is established excess begins. The following was an example of a neurotic dipsomaniac: H. I., a lady of good education with a distinctly nervous heredity, but with no insanity in her ancestry. Was a brilliant, social, rather jealous, and very attractive girl. She was tall, thin, mobile, and highly neurotic in temperament. She married soon, and the change of habits, the responsibilities, the child-bearing, and the desire to appear lively and entertaining to her husband, made her use wine at first and then spirits. When she was tired the effect of alcohol was always delicious to her. It dissipated any feeling of fatigue, raised her spirits, enabled her to appear well in company, and to do her work, as she thought. In two years after marriage she had begun to take it secretly, and she found she "needed" it, and she accordingly took more and more strong spirits until it mastered her, and she became its utter slave. She lost all power of controlling her craving, and constantly lost her truthfulness, but she was not entirely demoralized. She was always worse when menstruating or pregnant. She made many resolves to abstain, but seldom could do so for more than three months at a time. When she once tasted spirits she could not stop. Everything was tried — voyages in teetotal ships and the world, voluntary residence in asylums, but nothing

availed, and she died of some intercurrent disease after having ruined her constitution by drinking. A careful study of her brain state convinced me that she had a very neurotic constitution, that she had never been able to control herself from indulging in what she liked well, and that the effects of alcohol on her brain were intensely pleasurable, and that within two years after having begun the habit she was utterly helpless to restrain her craving for brandy, and was therefore in a condition of disease and not of vice.

I have known several cases of neurasthenia take to stimulants as an antidote to their bad feelings, and very soon lose control over the cravings thus set up.

In the neurotic dipsomaniacs it is the morbid intensity of the pleasure felt from drink that cannot be resisted. Their very strong point of keen sensibility is the rock that shipwrecks them. With their brain protoplasm alcohol has an especial affinity. They take to opium, to cocaine, to gambling, and to exciting employment to excess, all for the same reason, their over-sensitiveness. They are mostly thin and have not too good digestion. When they become teetotalers they are rabid anti-drinkers, with no charity at all to those who can drink in moderation. One does not despair of the cure of a neurotic drunkard if abstinence can be enforced in time. Many such people have very strong volitional and inhibitory powers. They are not the facile fools not worth trying to save.

3. By "Somatic dipsomania" I would distinguish those cases where traumatism, sunstroke, paralysis, brain erysipelas, brain lesions of all sorts, so weaken the self-control, that men who had previously led sober lives then acquire marked cravings for liquors and cannot control those cravings. I have seen examples of every one of these lesions inducing dipsomania as one of their symptoms; indeed, I have known several cases where falls and blows on the head and sunstroke induced it as the only mental symptom.

Under this category, also, come these cases where the craving appears after losses of blood, after severe illnesses,

during conditions of anæmia and chlorosis in women after childbirth, during lactation, and during pregnancy. Usually there is not only a craving for drink, but not much tolerance of it. A small quantity excites and intoxicates or stupefies in such cases. A small amount will sometimes cause violent delirium, and the traumatic and sunstroke cases show homicidal and suicidal impulses soon passing into actual delusional or impulsive insanity. All those are very hopeless varieties except the anæmic, chlorotic, and nerve exhausted varieties. Nourish and fatten such cases, and they will often get well.

4. The "dipsomania of excess" is the most difficult form any to deal with theoretically or practically. By it I mean that form where there is no special heredity, no neurotic diathesis, no disease, and no critical period of life, and where there has previously been a prolonged excessive use of stimulants. A bad habit has been voluntarily cultivated, and has grown in strength until it has become master. There was no natural lack of self-control, but most probably a natural love of liquor and its effects. It is only after many years that the habit has grown into a disease, and there is no special time at which the one ended and the other could be said to have begun, nor any perceptible line of demarcation between normal liking and diseased craving, nor between possible control and paralyzed inhibition. The alcohol it is which in such cases itself destroys certain higher brain qualities by its excessive use. It is voluntarily and of set purpose taken, with the full knowledge of its evil consequences, or, at all events, that knowledge could be acquired by the least thought. The loss of control, and the morbid craving which result, are brought on by the deliberate act and deed of the drunkard. The craving was for many years so excessive that it could not have been controlled. Constant soaking alters the texture of the brain cortex; the nervous elements, the connective tissues, the blood vessels, and the lymphatics all suffering in time, and we are thus often able to demonstrate a physical basis for the disease. But this is only after many years, and after the cases have become incurable.

This is the class to which some punitive treatment could in the first stages be properly applied. If one of them has a sufficient motive, he can in the early stages control his evil habit.

As to the treatment of dipsomania, the following are its principles :

1. We need a legal control for many cases, without which nothing can be done. But it is an utter mistake to imagine that if we had the most stringent law of legislation that the strongest advocate for it could devise, that we should be able to cure all dipsomaniacs, for the reason that by the time a case is a dipsomaniac he is often *ipso facto* incurable. You cannot apply the remedy in time. How can any period of enforced abstinence cure the atrophied brain-cells, and the hypertrophied membranes and neuroglia, and the degenerated vessels and lymphatics of the dipsomaniac of excess? It would, no doubt, be a great blessing to his relatives and society to separate him from his fellows, but the process would have more the idea of an incurable asylum for a chronic lunatic than of a hospital for the treatment of dipsomania.

2. Special asylums are needed, but I have not yet seen any institution that comes up to my idea of a true curative hospital for dipsomania.

3. Every means that strengthens the bodily health, that restores all the functions of the brain and body to normal "tone" and working, is good. Especially work and walking and life generally in the fresh air, under supervision, tend toward restoration. Dr. Playfair of London reports several "cures" by massage in cases of neurotic dipsomania.

4. "The special expedients," the "cures," and the panaceas generally are only temporary measures for special symptoms or crises. How can it be reasonably imagined that the highest brain quality, that of control, can be set up permanently by a few bottles of bromide of potassium or bark? No doubt such things are useful to allay temporary intolerable cravings, and to give the stomach and brain temporary substitutes for its accustomed stimulus.

5. One of the best things we can do is to study the brain qualities, and especially the weak points of our children and our patients' children, so that by the prophylaxis of right conditions of life, by the formation of right opinion as to drink and its dangers, and by right "upbringing" generally in body and mind, the power of control may be strengthened, and cravings may be controlled before they become morbid. The most important thing by far, on the whole, in regard to dipsomania, in my judgment, is to prevent all such persons from acquiring a liking for drink, who, from their age, heredity, or neurotic diathesis, would be liable to have set up a morbid craving for it. It will be one of the problems of preventive mental medicine for the physician first to read the signs of the nervous and mental constitution along with the heredity, and then to say, "You shall not touch the dangerous thing. To you it is poison. There is something in you that will take fire if you do, just as surely as gunpowder will explode if you throw a match into it." Everything that can strengthen the sense of duty and the moral faculties generally, that can rouse interests in life and excite emotional enthusiasms, may save such persons if applied in time. Religion, love, business, family responsibilities, and fear, may one and all cure a man on the verge of dipsomania.

(To be continued.)

Practically, all inebriates can be divided into those who are such by reason of defective and perverted nerve and brain organization and hereditary predisposition to exhaustion, also those who are neurotics, descendants of persons who have had profound organic disease affecting the brain and nervous system. The second class are those who are inebriates from some direct injury to the brain or some profound exhausting disease which develops the craze for drink, also those who have suffered from bad surroundings, bad nutrition, perverted culture of both mind and body—persons who by nature of their abnormality are unable to live a regular, natural life, and who take spirits for rest and relief.

A STUDY OF THE SOCIAL STATISTICS OF 4,663
CASES OF ALCOHOLIC INEBRIETY,*

TREATED AT THE INEBRIATES' HOME, FORT HAMILTON, L. I.,
FROM JANUARY 1, 1880, TO DECEMBER 31, 1888.
INCLUDING STATEMENT SHOWING RESULT
OF TREATMENT, ETC.

By L. D. MASON, M. D.,

Consulting Physician Inebriates' Home, Fort Hamilton, L. I.

Nativity, sex, age, temperament, climate, occupation, custom, and social conditions, are important factors in the etiology of alcoholic inebriety, outside of the well-known causes of preceding or accompanying disease or injury and heredity, and also, to a certain extent, are to be taken into consideration in the treatment of all cases of inebriety.

Nativity of the 4,663 cases was as follows: United States, 3,186; Ireland, 826; England, 203; Scotland, 77; British Possessions, 73; Germany, 109; other nationalities, 44; not recorded, 145. The United States naturally compose a large majority, as we find in asylums of other countries inhabitants of those countries as inmates will be in excess of all others; but we must acknowledge that the nervo-sanguine temperament of the American is peculiarly susceptible to the evil effects of alcohol, and that, other things being equal, the average American would sooner succumb to inebriety than his transatlantic brother. Ireland takes the lead among foreign nationalities. Next in order we have England, Germany, and Scotland; the lesser nationalities occur in insignificant proportions, and do not call for special comment.

* Read in the Section of Medical Jurisprudence, at the Forty-first Annual Meeting of the American Medical Association, May, 1890.

As a matter of *racial importance* I cannot recall a single instance of acute or chronic alcoholic mania in the negro, among the several thousand inebriates who have passed under my notice during a period of nearly twenty-four years.

In reply to a series of questions, Dr. Landon B. Edwards, of Richmond, Va., informs me "that the negro is rarely the subject of chronic mental or nervous disease arising from alcohol, although it is rare to find a negro, male or female, who does not drink. Alcoholic liquors are preferred, and the laboring negro, as a rule, is not a drunkard." He attributes this to the out-door life, simple habits, and low grade of nervous organization of the negro.

Climate.—As to the influence of climate on inebriety, we have not any special statistics to show, but it is a popular impression that the inhabitants of low levels, especially near the sea-coast, are more apt to be intemperate than the dwellers on the higher plateaus, table lands, and mountainous districts. The influence of certain barometric conditions, dependent upon atmospheric changes, in influencing and producing certain conditions of the nervous system, is familiar to all who have made this subject a special study. It is also a well-known fact that in malarious districts the depressing effects of the malarial cachexia are counteracted by the free, habitual use of quinine, strychnine, coffee, and other nerve stimulants, among which alcohol predominates. No one will dispute the fact that an unhealthy, enervating climate is more apt to produce intemperance and consequent inebriety, than a climate having just the opposite characteristics. Climate, undoubtedly, is one of the factors in the production of inebriety, as it is of other diseases.

Sex.—There were 4084 males and 579 females. The Fort Hamilton Asylum is intended more especially for males, hence the small proportion of females. It has no provision for females of the better class; the female inmates were from the middle and lower classes of society, but the inference must not be drawn that inebriety does not prevail

among females of all classes, or that the above is a fair relative proportion of the inebriates of both sexes. In this country, undoubtedly, the male inebriate far exceeds in numbers female inebriates. But this is not universally the case. In England† and Wales the habitual inebriate females already convicted to the habitual inebriate males already convicted are as three to one. In England, especially among the higher classes of society, inebriety prevails to a greater extent among females than in the same class and sex in the United States.

Social Conditions. — The married male inebriate exceeds in numbers the unmarried male inebriate. There were 2,098 married, 1,744 single, male inebriates; and especially does the married female inebriate in far greater proportion exceed the unmarried female inebriate. There were 401 married female inebriates and only 48 single female inebriates. Must we conclude that, other things being equal, the married life predisposes to inebriety? It would seem so, in the case of females at least. The married female has a much greater strain upon both her mental and physical constitution than the unmarried. A fact substantiated in the reports of our Asylum further shows, that unmarried males are more frequently subjects for readmission than the married; that is, that they are more apt to relapse. The reverse is true in regard to females. Married females are more apt to relapse than unmarried females. The latter are not apt to relapse; if they do, it is the exception to the rule. The spinster, then, is the most temperate member of society. There were 242 widowers and 130 widows also recorded.

Approximation of Ages. — The ages of the majority of the cases treated were from 20 to 60, the greater proportion from 30 to 50, and of these considerably over one-half were between 30 and 40 years of age. Below the age of 20 and above the age of 60, comparatively few. The oldest patient was 73 years of age, and the youngest 18 years. We must conclude that the great majority are of that period of life

† Inebriety, by Dr. Norman Kerr, London, England.

which is the most effective for usefulness and attainment under normal conditions. In other words, alcohol cripples and handicaps the majority of inebriates at the most useful period of life. Another fact is, that inebriates may exceptionally, but do *not* as a rule, attain to a *long life*. About one in 385 of inebriates, whom we treated, reached the age of 70 years.

Occupation.— Let us now consider the relation of inebriety to occupation. Imagine a community of 4,663 adult inebriates, embracing every trade, employment, or profession. Excluding 234 males who had no occupation, and 562 females, 275 of whom were unemployed, and the balance either domestics or housekeepers, we have about 3,867 males who were variously occupied, representing two hundred trades, professions, commercial, mercantile, or agricultural occupations.

We find directly engaged in the *liquor business* 71 bartenders and 51 liquor dealers. The in-door trades exceeded the out-door trades. Among those engaged in the out-door occupations, inebriety seemed to affect most those whose business especially exposed them to irregular hours and inclement weather;—teamsters, cartmen, coachmen, carmen, conductors, drivers. One hundred such are recorded. The next in frequency were butchers (45); next stone-cutters (28); next plasterers (26); next coopers (19). The other occupations being at or below the latter figure, and running at or about the same average or percentage. Among in-door occupations we find painters (121) in the majority. The painter handles alcohol, turpentine, etc.; his occupation is not a healthful one; he is apt to contract diseases incident to it, as turpentine poisoning, lead colic, and nervous diseases arising from lead poisoning, as wrist drop, or paralysis of the extensor muscles, etc.

Next in order come printers (58) and pressmen (58). Long hours, extra work, night work, and an employment that demands great rapidity, and probably more mental and physical strain than the average occupation, may account for

the fact that the printer and the pressman take the second place.

The other trades are in the following order: Shoemakers (45), plumbers (39), tailors (38), hatters (34), tinsmiths (31), waiters (28), photographers (27), carpet-weavers (22), glass-blowers (21) — the remainder of the in-door trades were at or below 20.

The greater part of the various occupations were from mercantile or commercial life. At least 1,200 or 1,300, or about one-third of the entire number belonging to one or the other of the above classes in the following order: Clerks (565), merchants (283), bookkeepers (100), salesmen (152), agents (78), brokers (44), the balance being made up of canvassers, contractors, railroad officials, bankers, publishers, and superintendents, etc.

In agricultural occupations we note, farmers (34) and gardeners (15).

Professions. — Four hundred and seventy-seven, or about one-eighth of the whole number, belonged to the professions, as follows: Physicians (115), lawyers (111), engineers (58), druggists (43), journalists (39), artists (32), students (21), reporters (19), clergymen (10), actors (9), the balance being in small proportion, architects, accountants, actuaries, notaries public, chemists, assayers, army officers, dentists, editors, etc.

Why physicians are in excess of other professions is due to the fact that they lead very arduous lives, both physically and mentally, with irregularity as to sleep and diet, rest and recreation; but there is another fact also, the physician would be more likely to appreciate and avail himself of asylum privileges for the treatment of his inebriety than any of the professions.

In considering the various avocations the usual average relation of the occupation or profession to a normal condition of society must be considered. In this way only can we get at the fact as to whether any one calling exceeds the other in a tendency to lead to inebriety.

Results of Treatment, etc. — Total cases, 4,663; still

under treatment, 1,283; total cases discharged and to be accounted for, 3,380; doing well, 1,465, 43 per cent.; lost sight of, 662, 19½ per cent.; unimproved, 555, 16½ per cent.; readmitted, 556, 16½ per cent.; died, 81, 2½ per cent.; transferred to other institutions, 61, 2 per cent.

Doing well. — By this we mean the patient is restored to society, to his business and social relations. Exclusive of *death* and *transfer*, the percentage will be nearer 45 per cent. It must also be considered that the inebriate on an average is not brought to us for treatment until after *his inebriety has lasted ten years*, his system broken down, and oftentime the object of incurable disease, the result of his inebriety or some disease or injury with which his inebriety is complicated, and which may have preceded and been the cause of it. Again, not only do inebriates apply at a late period for treatment, but only about one-quarter of those who do apply remain over six months, while three-fourths remain at periods varying from one to four months, and the large majority less than the legal limit of three months, so that if we were to apply the same rule that is applied to other diseases which are submitted to us to be cured, that is, having the patient brought to us at a *reasonable period* after the disease tendency has manifested itself, and having also the patient *remain under our care a reasonable length* of time for treatment as each case may demand, it would be easy to see that our ratio of cures would be 75 or 80 per cent., instead of 43 per cent. as they now are, which is nevertheless a good showing considering the disadvantages we have had to contend with. We are confident that in the future, under proper conditions, at least three-fourths of the inebriates treated in our asylums will be cured.

Thirty six per cent. were *lost sight of*, or *unimproved*, but this does not mean they will not be heard of again; a certain proportion will return to our institution, and of these a number will be cured. Some of our most successful cases are those which have been in the asylum at different periods under treatment. Of the balance, some will die, others will

move away, others go to similar institutions elsewhere located. We shall not make any comments as to *deaths* except to call attention to the *remarkably* small percentage, which is about equally divided between those who died outside of the asylum and those who died in the asylum. Some 61 were transferred to other institutions—30 to the *lunatic asylum*. We observe the tendency of inebriety toward insanity. The great majority of inebriates carry unevenly-balanced minds; they are on the verge of insanity all the time, and not unfrequently pass over the line. In any inebriate asylum it would be safe to assert the large majority of inebriates, at least for the first few weeks after their entrance into the asylum, are in a mental condition that, to say the least, is not normal. The above 30 transfers were marked cases of lunacy, acute or chronic mania, which were not suitable for an asylum of our character. The moral effect and the law of association forbid that the inebriate of weakened mind and body should be associated with insane persons. The tendency of every inebriate is that way, and such association would only precipitate the event. This is the principal argument against the incarceration of insane persons and inebriates in the same institution, although there are other arguments equally effective. A certain proportion of persons were brought to the asylum suffering from various diseases or infirmities that rendered them unfit subjects for our asylum. Of these, some 31 were transferred to hospitals or other institutions.

We have thus given a few general observations, resulting from a study of these special statistics. We have not by any means exhausted the subject, but we trust we have added some points of interest and importance, not only to the etiology of inebriety, but also some indications for its more successful treatment.

THE RESPONSIBILITY OF DIPSOMANIACS.*

By THOMAS B. EVANS, M.D., OF BALTIMORE, MD.,
CHAIRMAN OF SECTION ON MEDICAL JURISPRUDENCE.

In the present period, when the attention of the whole civilized world is being directed to a consideration of the ravages that follow the improper use of alcoholic beverages; when legislators, National, State, and municipal, in our own country, are deliberating upon the enactment of laws for curtailing their use; when judges of law are departing from old and well-recognized decisions as to the responsibility of the victims of its abuse, it is right and proper that from this medical center there should go forth some expression of our conclusions, based upon the facts that support and sustain the faith that within us rests.

It is hardly necessary to attempt a portrayal of the consequences that follow the inordinate use of alcohol; it is written in letters of living light all over the history of the world. The almshouse, the penitentiary, the jail, the insane asylum, the desolate fireside—all, in solemn acclaim, and with one accord, attest that of all evils it is the most potent, far-reaching in its influence, debasing in its effects, withering in its blight. Beneath its subtle spell truth lies prostrate, honor dethroned, love extinguished, joy dispelled, and crime exalted. It is somewhat singular that long ago the question "of how to chain this great evil," has not been definitely determined. Great evils of far less importance have had around them thrown the restraining influence of the law, and the effect has been a great advance, in lifting up the lowly and bettering the condition of the human race. But King Alcohol has reigned supreme, his realm has not been invaded,

* President's address, read in the Section on Medical Jurisprudence, at the forty-first Annual Meeting of the American Medical Association, Nashville, Tenn., May, 1890.

his subjects are loyal and true, and so mighty in power, that no opposing force has been able to hold the field against them. In this day of free thought, with brain and mind unfettered, surely there will come some means to stay the progress of this great and burning shame that is now threatening our national life, undermining the foundations of law and order, and stamping upon mankind the curse of its impress. It is a question that appeals to every lover of his race, to every lover of home and fireside; its bloated front may enter your family circle; its bleared eye, distorted and wild, may be seen in the person of a loved son or a doted daughter, and it may be that they are not responsible beings, that heredity placed upon them a seal whose lines were engraved by their progenitors. Although legislation is necessary to restrain men from its abuse, and should be consummated, yet such action is environed with difficulties. As a rule men do not like prohibitory laws, and oppose them often upon principle alone, without regard to the good that may be accomplished. Therefore, the people must be educated up to the standard of a higher law, that will teach them the dangers that beset and are sure to follow the use of alcohol in any form. There is no class of men that can do this with as much force and emphasis, and command the respect and attention of the community, as the physician. It is our duty as physicians to teach the public how to subdue an epidemic, but better far, to teach them how to prevent it. Preventive medicine is the brightest gem in the diadem of science, for there is more glory in arresting disease of the fountain-head, than to endeavor to dam the current, swollen by a thousand tributaries. It is our duty as physicians, by concerted action, to hold aloft the banner of science, and with fervent zeal impress upon the mind of the world the fact that alcohol is a poison, a drug, that stamps upon the nerve centers impressions that appear in the brain of the offspring; a pestilential spirit whose bated breath is laden with germs of weird and mystic power, that make their nidus within the brain grow, expand, and multiply, filling its tortuous and winding halls with their progeny,

subduing its energies, paralyzing its functions, dethroning reason, and transforming God's best and noblest work into a foaming, raging demon.

It has been demonstrated satisfactorily to every unbiased mind that alcohol has an elective affinity for water, greater than for any of the tissues of the body.* Upon the dead tissue it causes contraction and shrinking of its substance by the absorption of water contained therein. That this same process takes place upon the living tissue is shown by dropping alcohol upon the web of the frog's foot, or upon the wing of

t. The movement of the blood in the vessels soon stops, corpuscles congregate and contract, the caliber of the vessels diminishes, till at last all movement and vitality ceases in the part and it remains a shrunken, leathery, insensible structure, very liable to slough and disappear. This effect is more or less marked as the fluid is more or less purely alcoholic. That a similar result may take place when more or less concentrated alcohol is introduced into the cavities of the living body, may be reasonably inferred from the well-known fact that thirst follows the use of alcoholic drinks, at the same time that increased urinary discharge occurs, the alcohol displacing a more or less considerable amount of water from the tissues of the body, throwing it into the circulating blood, whence it passes off by the kidneys. It therefore appears that both in the living and dead tissues of the animal body the affinity between water and alcohol is actively manifest. An obvious corollary would be, then, that the greater amount of water any animal tissue may contain, the more marked will be the action of alcohol upon it. Now, of all the structures of the human body the brain is that which contains the largest per cent. of water, and, therefore, under similar circumstances it will be the organ most markedly affected by alcohol. Dr. Carpenter, upon this point, says: that this affinity of alcohol and water is such as will occasion the continual presence of alcohol in the blood, even in very minute proportion, to modify the nutrition of the nervous sub-

*Dr. T. Rogers, New York Medico-Legal Society.

stance more than that of any other tissue; for the alcohol will seek out, as it were, the nervous matter and fasten itself upon it. In a fit of intoxication the commotion set up between the alcohol, circulating in the blood through the vessels of the brain, and the watery portion of the brain substance surrounding these vessels, which water portion constitutes about eighty per cent. of the mass of the brain, it is not difficult to comprehend how a permanent alteration of nerve structure may result from repeated attacks of that character.

Dr. Maudsley, in his learned work upon "*The Physiology and Pathology of the Mind*," says the influence of alcohol upon the mental functions furnishes the simplest instance in illustration of the action of a foreign matter introduced into the blood from without. Here, where each phase of an artificially produced insanity is passed through successively in a brief space of time, we have the abstract and brief chronicle of the history of insanity, because the action of the poison upon the nutrition of the nervous centers is quick and transitory; but we have only to spread the poisonous action over years, as the drunkard does, and we get a chronic and enduring insanity.

Nasse says the physical disturbances which result from the abuse of alcohol are numerous. Besides the digestive apparatus and the blood and brain, the blood vessels gradually degenerate, and there is hardly an organ of the body which does not undergo pathological changes in consequence of the impaired general nutrition, and every habitual drinker arrives finally at a state of mental disease founded on tangible changes in the functions of the brain, and characterized by dullness of the senses, the judgment, and memory, by weakness of the will and loss of the faculty of self-control. Whether he has arrived at this point by way of a vicious habit or under injurious influences in consequence of an abnormal organization, the result of continued drinking is the same. We have a morally depraved, mentally and physically sick individual on our hands.

Prof. Griesmeyer says that every degree of drunkenness

represents a grade of real insanity, being a dreamy condition, with many illusions and hallucinations. The habitual drinker exhibits, even when not drunk, many signs of chronic brain trouble, and his condition may gradually merge into insanity. In the brain of the habitual drinker, as in that of many insane, may be found the results of passive stasis, of chronically formed opacities and thickening of the membranes. The habit of drinking is so strong, and the representatives against it in the drinker so feeble, and his will to abstain so weakened, that though fully conscious of becoming dishonored and despicable, though his health is failing and his domestic happiness going to ruin, yet every day anew he will break his good resolutions.

Dr. Taylor says that pathological investigation shows the brain is changed from a healthy to a diseased state by the action of alcohol. Healthy thoughts and healthy moral sentiments are not evolved by a diseased brain. To its possessor we attach no moral responsibility. An inebriate has a diseased brain; no will or agency of his own can bring forth therefrom other than diseased mental and moral products. A person who is governed by an uncontrollable appetite, or by an uncontrollable influence, is not a responsible being.

Dr. Hutchinson states that a confirmed inebriate is an insane man, dangerous to himself and others, and however responsible he may have been for bringing the disease on himself, his responsibility ceases as soon as he comes under its influence.

Numerous authorities might be quoted other than those mentioned, all showing the drift of medical conclusions as to the effect of alcohol upon the brain and the responsibility of dipsomaniacs. I do not know that there is any fact in medicine so clearly shown by reason, observation, and experience: that the dipsomaniac is an irresponsible being, a diseased, stricken individual with a crooked brain, in which reason and self-control have no abiding-place. For him there is no sunshine; the silver sea of dawn and evening's cloud of molten

gold, the solemn splendors of the night, and all the voices of the sea, wake not his soul to gladness. There is but one thought, one desire, that wanders through his brain, born of an insatiable, uncontrollable thirst for alcohol, and for it he sacrifices all that is dear to the human heart, the ties of love, the prattle of children, the sacredness of home, priceless honor. To say that one is insane is enough to command the sympathy and commiseration of every true man, and when insanity has been diagnosed beyond a doubt the law does not hold the individual responsible for any of his acts. Therefore, if it is fairly proven that dipsomania is a disease of the brain, that it is a form of insanity, and that the dipsomaniac is an insane person, why should he be held responsible for his acts and deeds, while the insane from other causes are held to be irresponsible? The effect is the same, although the causation may be different, and there is no justice in differentiating their relationship to responsibility and irresponsibility. Insanity is insanity, no matter what the cause.

As early as the time of Chief Justice Coke, it was formulated that for criminal acts done in the condition of drunkenness, the person was doubly guilty, for inebriety always aggravated the offense, and that the penalty should be increased rather than diminished. This view has been accepted by legal minds as being just, and eminently conservative of social and proprietary rights. A recent judicial charge might be quoted to show that there has been very little improvement upon the legal dictum of Chief Justice Coke, in regard to the plea of irresponsibility. Our efficient and well qualified secretary, Dr. Crothers, testified in the case with his usual clearness and perspicuity, that the prisoner was insane, and not responsible. The judge said: "No insanity or irresponsibility can be predicated in any given case, unless the mind showed a continuance of delirium or delusion. And that in no case should this be taken into account or in mitigation of guilt, if it resulted from alcoholic intoxication." This decision is based on the old English law, that intoxication is never an excuse for crime, and that no man can plead that

he should be exempt from the law by reason of not knowing or not being able to control the extent and force of his acts, by reason of being drunk, and that drunkenness is a voluntary insanity, and those who use alcohol to that degree know full well the consequences of that act. A decision of that character is unjust. It belongs to the dark ages. It is born of ignorance, and is opposed to the principles of pathology and common sense. The fact is patent, that judges are generally ignorant of the physical laws that govern and control insanity; seeing that by long experience and devoted study only, is a profound knowledge to be acquired, it is not to be wondered that they so often fail to administer the law justly. But not only are judges incompetent in many instances, the average juror is still more. How is it possible for twelve men, drawn from the masses, to be equipped and qualified to decide the delicate and complicated question of a prisoner's mental condition. Again, the medical profession, unless they have had special training, are likewise incompetent. There may be some cases of insanity so well marked that it would be comparatively an easy matter to decide the question. But the majority of cases require the specialist, who has made a study of insanity in all its varied forms. He must be a physician and something more.

A great deal of the confusion that prevails in the profession is owing to the fact that every man thinks he knows as much about insanity as he knows about common continued fever. The grave and complicated questions that enter into the consideration of each and every case, the predisposing and exciting causes, its occasional sudden accession, its intermissions and remissions, its varied phases of depression, excitement, or violence, its premonitory symptoms, its different symptoms and probable termination, can only be determined by the trained medical mind. It is not a question for judge or juror to decide, without the aid of competent, scientific, unbiased evidence. There is a radical reform necessary in the law, in regard to medical jurisprudence. It is high time that some advance should be made in that direction,

and that we had closed the musty tomes of the past filled with judicial errors, acts of grievous injustice, and opened a better volume; a warmer, brighter record of law, wherein humanity can find a plea, science a place of honor, and dipsomania justice. Already some judicial minds are moving in that direction, the dawn of a new era is beginning to rise; and all the horizon around is invested with bright rays. In England and elsewhere some eminent jurists have decided "that a man may be convicted of an offence committed in drink, and yet be absolved from responsibility." For example, as reported in *The Lancet*, Baron Pollock has held that a plea of irresponsibility was tenable in a case where a homicide was committed by a person after taking a small quantity of alcoholic liquor, a quantity not sufficient ordinarily to disturb the reasoning faculties, but which, in the case in question, was sufficient to set in motion an insane predisposition that became the prime agent in the manslaughter. Another eminent judge in England has recently ruled, in regard to the case of a drunken mother, who, through the neglect of her babe, occasioned its death by starvation, the withholding of nourishment by the mother was not a crime, for the reason that it was undesigned, and that it is not a declared crime to imbibe too much liquor.

Chief Baron Pallos has recently ruled, that neither law nor common sense can hold a man responsible for the acts done under the influence of an intoxicant, if by reason of long vigil, deprivation of sleep or impoverishment of the blood, he shall have become so reduced as to be made drunken with a smaller quantity of liquor than would have produced that effect upon him in good health. Justice Day has gone still further, and has declared "that a person who does not know the nature and quality of the acts he commits, is not responsible for them whatever may be the cause of his unconsciousness. These decisions have about them the true ring, and are complete reversals of the decisions that have ruled the courts of the world for three centuries. They are in harmony with the teachings of science, in accordance with all authori-

ties upon insanity, and apace with the advance and general improvement made in all branches of medical knowledge since the day of Lord Coke.

It becomes the duty of every physician to promulgate the facts as laid down by these eminent jurists, and to support and sustain the principles involved therein upon all occasions. There must be no conflict in the future, as there has been in the past, between law and medicine. We must always insist that dipsomania is a physical corporeal disease in common with all forms of insanity, and must be diagnosed by competent medical authority. The right interpretation of its symptoms belong alone to the realm of medicine. Then alone will justice beam with all the brightness and purity of unsullied truth; humanity glow with the splendor of righted wrongs, and the genius of medicine, unshackled and free, side by side will stand with the genius of law, clothed with all the majesty of might and power, to elicit truth, to administer justice, to those bereft of reason by that demon alcohol.

It might be taken as a rule that, with very few exceptions, any agent that produced an immediate sense of vigor was not food, but on the other hand, was simply an excitant or stimulant. Food required to be digested, digestion was a process that took time, so that if they put into the body an agent which in a few seconds produced an immediate sense of vigor, it was not a food but an excitant or stimulant. Alcohol produced an immediate and transient sense of vigor, and a man, a few minutes after he had taken a dose, would declare that he felt stronger, and therefore was stronger.

—*Dr. Rawlings.*

MR. CAINE treated thirty-six inebriate women from four to twelve months, and three had permanently recovered many years after. He ascribes the failure of most of these cases to the fact that they went back into homes where spirits were taken in moderation.

A STUDY OF ALCOHOLISM AS IT OCCURS IN
THE BELLEVUE HOSPITAL "CELLS".

BY CHARLES L. DANA, M. D.,
Visiting Physician to Bellevue Hospital.

In the basement of Bellevue Hospital are two suites of rooms familiarly known as "the cells," and devoted to the care of cases of delirium tremens and the other forms of acute alcoholism. Each suite consists of a poorly lighted corridor, into which open six rooms. These rooms are about ten by twelve feet in measurement, with low ceiling and one strongly barred window, through which filters a melancholy light. The furniture is severely simple, and consists only of two or three low and narrow iron cots, with the occasional addition of a robust and ascetic stool. The number of persons arrested for intoxication in New York city every year is about 30,000. Most of these are fined or sent to the island, or both. But, when a poor person is found suffering from the effects of alcohol to such an extent that he evidently needs medical care, he is sent to these Bellevue cells. The number of persons annually making this enforced visitation is over 3,000 (in 1889, 3,428), of whom nearly one-third are women (959). Such cases are spoken of as cases of "alcoholism," but this term covers several different forms of alcoholic intoxication, as will be seen hereafter. A certain number are simply cases of very bad drunkenness; a larger number consists of persons who have been drinking continuously until they are complete physical wrecks, nauseated, sleepless, and exhausted. The remainder — and they make up over one-half — come in with or soon develop the symptoms of delirium tremens or alcoholic mania in some form.

The *social history* of these poor creatures is, I think, not

without interest. It is the history of the vast majority of pauper and indigent victims of alcohol in New York city, for no other hospital accommodates such cases except for a short time, so that the "Bellevue cells" are the eventual resting-place of these, the rashest worshipers at the shrine of Bacchus.

Sex. — Three-fourths of the persons who go through these experiences are men.

Age. — They are of all ages from twelve years to seventy, but the decade thirty-one to forty includes the most, and the number rapidly diminishes after the age of fifty. The women a little the younger.

Occupation. — It is not the day-laborers, but the mechanics, artisans, and small tradesmen that furnish the greatest proportion of cases, while the women are for the most part either married or widows so-called. Drivers, waiters, painters, and liquor-dealers supply a very considerable quota. It is the in-door workman, however, who is oftenest the victim.

Season. — The number of cases is least in the winter and greatest in the summer. This may be, however, only because more of the subjects are out on the streets and liable to observation and arrest during the warm weather. Autumn is least favorable to alcoholism, yet the number is, on the whole, a very constant one month in and month out.

Race. — Fully one-half the persons are of Irish birth, while a little over a third are native-born. The preponderance of Irish parentage, even in the native-born, however, is very great. In my own studies of nervous and mental diseases in connection with immigration I found an excessive number of Irish-born among the insane and neurotic. Mr. Rounds, in his recent article in the *Forum*, December, 1889, finds a like racial predominance among our criminals, as does Dr. H. I. Bowditch.

In the year 1888 there were 85,049 persons arrested for violation of the law, of whom 52 per cent. were of foreign birth and 44 + per cent. of Irish birth. Such statistics seem

to deserve serious attention from friends of this virile race. The Hebrew is rarely seen in the "cells".

Symptoms. — The history of a case of acute alcoholism in detail I have often obtained from the patient, and it usually runs somewhat as follows: He began to drink two or three weeks before reaching the "cells". Having got the taste for the liquor, his work has been abandoned and he has done nothing but drink, day and night, ever since. He has taken whisky, gin, beer, ale — everything that he could get hold of, bad whisky predominating. At last he can no longer eat, and even the liquor is not well retained, yet he is consumed with a burning thirst. His tongue is dry and foul, the bowels are constipated, his hands tremble, his knees knock together, and as he sits, his heels beat a tattoo on the floor. He can get no sleep, yet he is exhausted for want of it, and prays for something to produce it. His mind is oppressed with dread, he fears the slightest noises, frightful hallucinations begin to appear. Still, the real delirium has not usually developed when the patient first comes into the hospital, but it begins about twenty-four hours after abstinence from liquor. Technically, the attendants personally experienced in caring for these cases speak of this as the time when the rum has "soaked in". In fact, the delirium is due partly to the withdrawal of the stimulant and partly to the starved condition of the nervous tissues. The patient then presents the ordinary symptoms of acute mania. The popular idea that visions of snakes and other monsters predominate is not correct. The hallucinations and delusions are mainly those of being pursued or attacked by some one or some thing; very often the fear of fire or of being burned is dominant. The ideas change rapidly and are always depressive and painful. In the majority of cases the delirium lasts only twenty-four or forty-eight hours. The patient gradually quiets down, and when he has got a good sleep convalescence begins.

Termination and Complications. — Nearly five per cent. of the patients die, however, of sheer exhaustion, after a con-

tinuous delirium of two or three days, during which little or no food is retained. The fatality is much greater among the men than the women (5 per cent. to 1.7 per cent.). Besides the five per cent. that die in the cells, a larger number (142 males, 43 females, among 3,000) are transferred to the hospital wards or to the insane pavilion. Here many suffer from alcoholic pneumonia, a type almost uniformly fatal, or pass into a condition of low muttering delirium, develop a slight fever, gradually become comatose, and finally die of exhaustion. Post mortem, these patients are found to have pale, watery brains, with no distinct inflammation; occasionally there are capillary hemorrhages in the pia, or there is a hemorrhagic pachymeningitis. In every three or four hundred cases of alcoholism one finds a case of alcoholic paralysis (multiple neuritis), generally in women, and often in fat women. These patients often suffer from low, restless delirium; they also often have phthisis, and die with it or pneumonia.

Alcoholic paralysis (neuritis), however, more often occurs in those who have not become distinctly alcoholic; and most cases of this trouble come directly into the wards as cases of subacute paralysis. Then we get a history of alcoholic excess, combined with perhaps phthisis or the puerperium or some other depressing cause.

Out of 3,000 patients, over 40 became insane or were so when they entered. Acute alcoholism, therefore, is not a very frequent exciting cause of insanity, but it is an important one. Alcohol is, however, thought to be the cause of twenty or thirty per cent. of insanity (Magnan and others).

Forms of Acute Alcoholism.— It is unfortunate that a closer study and differentiation of the cases which enter Bellevue are not made. This is partly due to the inadequate accommodation and nursing provided them; but this is not altogether the reason, for something is due to the indifference of the house staff and attending physicians. The routine practice is to put down all the cases as acute alcoholism or

delirium tremens, or perhaps just plain "drunk". As a matter of fact, there are brought to the cells the following forms of acute alcoholism :

1. Simple drunkenness, or acute alcoholic intoxication, with occasional lethal alcoholic poisoning.
2. Delirium tremens of the ordinary type.
3. Febrile delirium tremens, a type distinguished by the presence of a decided temperature (102° to 105°), excessive and general tremors of the whole body, very rapid loss to muscular strength, and profuse sweats.
4. Cases of true *mania à potu*, or delirium inebriosum.

In addition to this, distinctions are to be made as to whether the patient is a dipsomaniac (in hospital parlance, a "rounder"), or whether the patient is simply one who has been on a gigantic spree, his condition being the resultant of an accidental concatenation of hilarious social conditions, and not, as in dipsomania, the result of inherited psychopathic tendencies.

A considerable minority of the cases are of this latter class (five to ten per cent.).

A careful distinction between these conditions might lead to more brilliant therapeutic results than are now obtained.

Thus simple drunkenness requires little medication.

Febrile delirium tremens is excessively fatal, and it needs careful watching, and the patients cannot stand powerful hypnotics like morphine and hyoscyamia.

Mania à potu is the result of a very little alcohol acting upon a hyperæsthetic and highly predisposed organism. Drugs to produce elimination of alcohol and relieve gastric symptoms are not so much needed as sedatives and nourishing food.

Treatment. — The mortality of the cases of acute alcoholism is very considerable. If we include the cases of those that die from pneumonia and other complications it must reach nearly ten per cent. The treatment, therefore, is a matter of some moment. As at present carried out in my term of service, it is about as follows :

The patients when they first come in are given a cathartic and ordered a diet of milk and beef tea. If they reject food, they are given powders of bismuth and capsicum, or rhubarb and soda.

Alcohol is at once stopped unless there are complications such as pneumonia. In the milder cases they are put upon a mixture of bromide and chloral, with sometimes paraldehyde, taken every two hours till sleep results. If this is inefficacious, a hypodermic injection of morphine and amorphous hyoscyamine is given, and this is usually sufficient. Hyoscyamine alone is not a good drug, but with the morphine seems to act well. If it were practicable, the patient would be placed on a large mattress in a padded room and left unrestrained, or else put in such an apparatus as Magnan's jacket, which allows of some movement and does not impede respiration.

As it is, we have to tie most patients down, as otherwise they tear their clothes off and destroy the bedding. The women are usually more easily controlled than the men, for they have not been able to get so much liquor into them. Despite all that can be done, the patient will sometimes not sleep, or, if he does, the sleep is only a narcotism, from which he awakes without being refreshed; the delirium continues and death ensues from exhaustion.

It is to be noticed that the cases of alcoholism are more numerous than formerly and are yearly increasing. This I know personally from my experience twelve years ago. I cannot get actual statistics, however, going back for a longer time than 1886:

	Male.	Female.	Total.	DEATHS.		
				Male.	Female.	Total.
1886,.....			3,079			115
1887,.....	2,631	863	3,494	118	14	132
1888,.....	2,135	875	3,010	127	14	141
1889,.....	2,682	1,015	3,697	155	19	174

Such statistics as I can get show, as may be seen, a great increase in mortality.

Prophylaxis. — One may wonder how these unfortunates get the liquor that enables them to keep up the long "soaking" necessary to produce delirium tremens, for this condition is one not very easily produced. The system must be prepared for it by a good many years of hard drinking. There are practically no cases of acute alcoholism, and absolutely no deaths from it, before the age of twenty. Even after the system is deteriorated by excesses it takes at least a week to get up the "horrors," and usually a longer time. The secret of the continuous drinking lies in the cheap liquor and the treating and credit system. There are licensed saloons in the city where for five cents a man can get a tumblerful of whisky, and where the stuff is sold in bottles at the rate of twenty cents a pint. Two drinks of this fiery fluid will, I am told, completely stupefy or craze a man or woman. From a slight personal investigation of samples, I quite believe this to be true. I am told that the prostitutes from well-kept houses who get delirium tremens upon champagnes and good liquors are much more easily managed and more successfully treated than the poor men who have for weeks guzzled five cent whisky, stale ale, and unripe beer.

It seems as though something ought to be done to lessen this fearful tribute to alcohol. One thing might at least be attempted — viz., the prevention of the sale of cheap and poisonous liquors. These rapidly produce the worst and most intractable forms of alcoholism. There is a law restricting the sale of poisons, and no worse poisons are dealt out than the raw spirits sold as whisky at five cents a tumbler. Our health and police boards would find a legitimate field of work in this direction. The closure or supervision of the raw-whisky and stale-beer saloons would lessen the cases of alcoholism at once. If public opinion is not ripe for doing more, let it at least enforce the ordinary provisions against the sale of the poison drunk by the majority of pauper inebriates. If the cry is raised that the poor man should be allowed to drink, at least insist that his liquor be pure, and cheapened by water and not by fusel oil.

I do not mean to imply that cheapness and badness of whisky are the main factors in causing severe alcoholism. As a matter of fact, the whiskies in question are diluted with water and owe their cheapness to this fact and to their being new, containing, no doubt, other alcohols than the ethylated. Nor is there any salvation in malt liquors and light wines, as has often been supposed. These drinks, though relatively harmless in Europe, are not well borne by Americans. They produce disorders of digestion and of the excretory glands. Americans cannot drink, as a rule, without finally injuring themselves; those who can be moderate get along best probably on pure whiskies and light wines free from sugar or acids. But new whisky is full of poison, and the State might at least forbid its use, as well as that of cheap, stale, and unripe malt liquors. Meanwhile the moralist and sanitarian can try and inoculate the masses with the principles of total abstinence or moderation, according to his point of view.

MAX BUCH gives an account of the successful experiences of himself and others in the cure of inebriety by the use of strychnine salts. He follows Popaff Tolwinsky Parzewsky-Sawatyky in undertaking this method—either the sulphate or nitrate of strychnia are used in solution or pills—or by hypodermic injection. The doses used are .001—.003, once or thrice daily.—*Journal Nervous and Mental Diseases.*

TO DETECT A MORPHINE-EATER.—The morphine habit may be detected by adding to the urine of the suspect a few drops of the perchloride of iron. This produces a characteristic blue tinge if he is a morphine habitué.

SOME THOUGHTS ON INEBRIETY.*

By J. F. AXTELLE, M. D., HARTFORD, CONN.

Fred C., age thirty-seven, came to this city from Nova Scotia twelve years ago, a bright, manly young fellow, and secured a situation as salesman in one of our leading dry-goods houses. He was liked by all who had dealings with him, and was advanced from time to time by his employers. Soon he got to going out evenings, would drink with a friend when asked, but did not care for it otherwise. This went on for about two years; then he found that when he drank once he wanted more, and would keep it up for two or three days, be sick for a week, and would drink no more for six months. When on some special occasion he would again take a drink, he would then keep it up as before.

About this time he became engaged to be married, but the parents of the young lady objected, having heard of his habits, but finally consented if he would not drink for a year; he accepted the situation and won his bride, but on the night of his wedding got drunk, and kept so for two weeks. From this on for two or three years he would average four sprees a year. About this time he lost his situation; he went to Boston, but became so bad that his wife had to leave him, and came home. He was again thrown out of employment, came back to Hartford, went to work for his old employer, but could not keep sober a month. He soon went through quite a little property which was left him by his father, could not support his family, and his wife's parents had to take her and her child to their home.

About a year ago the wife obtained a divorce for non-support and intemperance, and he then made an unsuccessful attempt to commit suicide by taking laudanum.

* Read before the Section on Neurology and Medical Jurisprudence, at Nashville, Tenn., May 20, 1890.

Last week I signed papers to have him sent to an insane asylum, and while signing the paper, the thought came to me, why could it not have been signed ten years ago? Has a man the right to be a drunkard? If we admit that he has not, we are ready to proceed with the remedy; but all will not admit this position. They cry out liberty, individual liberty, and the right of the individual to do as he pleases will be forever their watchword. Has the individual such a right? Has he the right to disgrace his family, and to impoverish his wife and children? Has he the right to have children to inherit his weakness?

Instances might be selected of men without family or ties of any kind, and the position taken, that no one is hurt but themselves, but how is there to be any security that they will not ultimately commit some crime, or at least become cares to the public as lunatics or paupers? It seems to me that the unincumbered individual has no right so to live as to damage society and become a burden to the public. It is sheer madness to claim the right of the individual who has a family to drink to excess.

Drunkenness, inebriety, dipsomania, or whatever scientific term we may be pleased to give to the habit of excessive drinking of alcoholics, will be considered and regarded as a disease, as we regard insanity, and the individual so afflicted will be treated and cared for as though he were actually insane.

In many, if not all, public and private asylums, there can be found men and women who are insane in no sense except one habit, and who are treated as insane, yet no one seems to object to it, and the law winks at it. This fact alone shows the drift of unconscious public sentiment, and shows that society does regard such persons as practically insane.

It would perhaps astonish the criminal lawyers to know that a large part, perhaps a third, of the inmates of our asylums for insane, know right from wrong as clearly on most

objects as the best of us; but the trouble is to keep from doing the wrong.

Why should not the man with an ungovernable habit, which will lead him and all that are dear to him to sure destruction, be regarded as powerless to act for himself, just as the suicidal maniacs? Have his children or his friends no rights? Has his wife no legal or moral status? Shall he go on procreating unfortunates like himself, to in time, perhaps, fill poor-houses, jails, and asylums?

The strong arm of a benign and merciful law should stop him, should declare him unsound, and place him in confinement, before he has destroyed his property and himself.

THE secretary of the Christian's Home for Intemperate Men, of New York, complains "that there is an unwillingness, a prejudice based on misconception or on erroneous teachings, which inclines many to try any and every thing except moral forces to correct an immoral thing." He says that although this Home has been in active work for twelve years, and nearly three thousand men have been treated, one-half of which are "standing witnesses to the power of grace," or cured, in their meaning, the fact remains that we have never been able to fill the Home to its full working capacity. The Christian Home and the principles on which it is based belong to an earlier age of the world, the age of credulity. All scientific advance is fatal to its prosperity. Nothing but change and adapting itself to the clearer light of the age will prevent a certain death.

IN most cases inebriety means bankruptcy of physical and mental strength, and an effort to conceal it by the narcotic action of alcohol. The natural and acquired limitations of health have been exceeded, and weakness and pain follow. Alcohol covers this up by numbing and paralyzing the protests of the exhausted nerves. A new disease comes on of inebriety, and a profound paralysis of the entire nervous system follows.

Abstracts and Reviews.

SOME POINTS IN THE STUDY OF INEBRIETY.*

BY MATTHEW D. FIELD, M.D.

I desire to present for your consideration some points in the study of inebriety. While I recognize the impossibility of calling your attention to more than a few points in the time allowed, yet the great importance of the subject has induced me to bring it before you this evening. The jurist, the legislator, the clergyman, the philanthropist, sociologist, fanatic, and layman have all taken their part in the discussion of this subject. It is no wonder, for the subject is of most vital importance to all members of the community. These people have all become discouraged, and are now more inclined to relegate the case to the medical profession, where it certainly belongs. We must meet the subject and master it.

How far inebriety is disease we must determine. Such laws as are necessary for its control and suppression we must frame for the legislator. What are the civil rights and responsibilities of the inebriate we must define. Those physicians who have given the largest amount of consideration and study to this subject all recognize the element of disease. Every writer on inebriety speaks of the close resemblance with its ally, insanity, and the treatment of the two has passed through almost the same stages.

The theory and belief in demonology and "possession," and its remedy of exorcism, availed nothing in the treatment of the insane. Punishment with the lash and execution cured not the lunatic; the terrors of hell did not calm the maniac; the beauties of heaven did not brighten the melan-

* Read before the Society of the Alumni of Bellevue Hospital, March 5, 1890.

cholic ; nor did discourses on the wisdom of Solomon awaken the dull cerebration of the dement. The same remedies have been tried in vain upon the true inebriate.

Norman Kerr defines inebriety to be "an overpowering impulse to indulge in intoxication at all risks." About one hundred years ago the great Dr. Rush attributed drunkenness to a "morbid state of the will." In December, 1817, Salvatori, in a paper before the Physico-Medical Society of Moscow, first gave the condition its true standing, for he took it from among the moral diseases and placed it among the physical, at the same time maintaining that, like other diseases, it could be cured with material remedies. He says concerning "ebriositas," "it can scarcely be doubted, therefore, that some fundamental infirmity lurks not in the mind, but in the body, affecting the mind secondarily and inducing a true insanity. It is not easy to fix on the true seat and nature of this infirmity, but the symptoms and its causes point to a disordered state of the abdominal ganglionic system of nerves allied to that which causes in children the ravenous appetite, constituting the disease bulimia, and in adults the wide-spread disorders we are in the custom of calling hypochondriacal and hysterical." Tapeworm, he affirms, brought on the craving in nine of the fifty cases treated by him.

Dr. David Skas, physician to the Royal Edinburgh Asylum, says : "Dipsomaniacs lose all control over themselves, and drink to any extent possible. In fact, they will drink anything they can get hold of, and if they cannot get spirits, they will drink hair-wash, or anything of the kind. I have known a lady to drink shoe-blackening and turpentine. These cases are mostly hereditary. They are very often caused by disease, by blows on the head, sometimes by hemorrhage, sometimes by disease of the brain. All these cases I mention to show that this is really a disease and not mere cases of drunkenness."

Esquirol said : "There are cases in which drunkenness is the effect of accidental disturbance of the physical and

moral sensibility, which no longer leaves to man liberty of action."

Dr. James Crichton Brown, recently of the West Riding Asylum, England, says: "Dipsomania consists of an irresistible craving for alcoholic stimulants. . . . Sometimes the craving becomes altogether uncontrollable."

Dr. Alexander Peddie, of Scotland, says: "Intemperance, as the result of a disease, is attributable to an impulse which the patient cannot control."

Macnish, *Anatomy of Drunkenness*, says: "There are some persons who will never be drunkards, and others who will be so in spite of all that can be done for them. Some are drunkards by choice, and some by necessity."

The American Association for the Cure of Inebriates was founded in 1870 and proclaimed as its creed, "Inebriety, a disease that is curable in the same sense that other diseases are, its primary cause being a constitutional susceptibility to the alcoholic impression, which may be inherited or acquired." This society exists to-day in a flourishing condition. In 1876 it began publishing the *Quarterly Journal of Inebriety*. A similar society exists in England.

In 1844 Dr. J. Edward Turner declared inebriety to be a disease, and thereafter devoted his life to the establishment of inebriate asylums. His ventures met with many reverses, yet they lived long enough to demonstrate the correctness of his views, and to-day sixteen inebriate asylums in successful operation are monuments to the principle for which he fought to the last.

The works of Dr. Norman Kerr, of England, and of Dr. Joseph Parrish, Dr. T. D. Crothers, Dr. L. D. Mason, Dr. T. L. Wright, Dr. Albert Day, Dr. Robert Bird, and many others in this country, have contributed facts tending to show inebriety to be a disease and the only true basis for treatment.

Many of the writers on this subject are looked upon as extremists and fanatics, and this may be so to some extent. Yet I am fully convinced from my own experience that they

are working in the right direction, and in this direction only will be found the true solution of the problem. And I believe the present modes of dealing with inebriates to be very wrong from every point of view. . . . Frequently we meet with inebriety that has the characteristics of a disease in itself. Yet it seems to me to be usually only the symptom of some diseased condition, and that successful treatment can only be adopted as we correctly understand this condition. . . .

An individual who has been temperate up to the age of twenty-five or thirty will rarely, if ever, suddenly give way to drunkenness without the operation of some physical cause. Predisposing, as well as exciting, causes must be sought for. The congenitally defective classes furnish large numbers of inebriates. Heredity exercises a strong influence. . . . The children of the insane and the epileptic are predisposed to inebriety, as the children of the inebriate are predisposed to insanity.

The sex of your patient must be considered — the nervous disturbances that frequently occur during the approach of puberty, the physical commotion and mental excitement of the climacteric period. Sexual excess, pregnancy, prolonged lactation, and frequent child-bearing, are all causes of inebriety in the female. The employment is to be inquired into. Enforced idleness, overwork, overstrain, irregularity in work, especially that which enforces irregularity in sleep and in the hours; amount and quality of food; in fact, all forms of employment that tend to reduce and destroy nerve force cause a craving for stimulants, or, what is more dangerous, the use of intoxicants to deaden or paralyze acute sensibility. Work-rooms and dwellings must be examined. Dr. Robert Bird states that "among operatives who pursue their work in badly-ventilated rooms drunkenness is always prevalent. Indeed, it is so among all classes who spend much of their time in places where the atmosphere has a superabundance of carbonic acid and an insufficiency of oxygen. So circumstanced, men instinctively crave for alcohol. It is so be-

cause alcohol lessens the out-turn of carbonic acid within the body. The journeymen tailors of London, and other London tradesmen also, continued to be immoderately drunken till the poor-law commissioners had their work-rooms enlarged and ventilated, as also the general condition of the inmates improved. Subsequent to this they grew to be comparatively sober. . . .

"All under-fed people, almost without exception, delight in alcohol. This fact is attributed to the action of alcohol in retarding and diminishing the waste of organized tissue.

"All savages drink greedily when they have a chance ; t then all savages are under-fed and badly nourished."

Any habit, disease, or condition that exhausts the nervous power of an individual may cause inebriety. Excessive hemorrhage, diarrhoea, exhaustion of fever, malaria, tape-worms, shock, both physical and moral, and many other like conditions, may lead to inebriety.

Dr. Robert Bird, formerly a brigade surgeon, East Indian army, relates the following cases :

CASE I. — I. H., an infant, while suffering from malarious diarrhoea, showed an abiding desire for gin and brandy too. When she could get it, she would drink as much as ten or even twelve ounces a day. This amount made her happy, but never very drunk. It was her chief sustenance for some months, and under its influence the diarrhoea got well. The craving for drink disappeared with the disease. When I last heard of her she was the sober mother of a family, living with her husband in a village near Newcastle, England.

CASE II. — H. R., a scrofulous boy of two years, while suffering from chronic dysentery, developed an insane appetite for brandy. When this was first offered to him he drank it greedily and screamed for more, and for weeks brandy was his cry, his joy, and his support. Ultimately he got rid of his dysentery and drink-craving together.

CASE III. — E. B. was the wife of a river steamboat captain. Her husband told me "she drank like a fish," and had been drinking so for years. She drank anything she could

get, and when ordinary drink was not forthcoming, she would drink eau de Cologne, surreptitiously purchased from Hindoo peddlers. As she also suffered from rheumatism of the womb and copious leucorrhœa. I had her removed to hospital for treatment. Cure of the womb affection in a great degree cured the drink craving also, but not quite. Oxide of zinc, as recommended by Marcel, of London, and wild thyme, as recommended by Salvatori, combined with seclusion in an institution, where she acted as sewing-mistress, were required to complete the cure of this. She ultimately returned to her husband, reformed and thoroughly restored, nor did she in the subsequent years relapse, so far as I know.

CASE IV. — M. W., when I first came to know her, was the mother of eight children. In her last confinement she lost a great deal of blood, and subsequently developed a mad wish for liquor, to the great grief of her husband, a steady mechanic. It turned out on inquiry that she had for years previously been in the habit of starving both herself and her children for purposes of economy. Iron, good food, and change to a more temperate climate in this case cured the anæmia and the drink-craving too.

Dr. L. D. Mason, a man of large experience, places traumatism as the most frequent exciting cause of inebriety, especially injuries to the head. He says: "At least one in seven of the two hundred and fifty-two cases [thirty-six] became inebriates from blows on the head."

The inebriety of insanity must always be thought of. That inebriety is a very frequent symptom of insanity I have had ample opportunity to verify. I must admit that I have more than once sent insane men to the alcoholic ward, the real condition being for the time masked by the alcoholic condition. Inebriety may be a symptom of any form of insanity. It is very frequently an early symptom of general paresis of the insane, of senile dementia. It occurs also in the exaltation of mania and the depression of melancholia. I might say right here that we must not forget that the insanity of inebriety is more frequent than the inebriety of

insanity, and that the two conditions must not be confounded.

I might illustrate what I have said by giving any number of cases from my own experience and the writings of others, but space will not permit, and I must content myself with this brief and general statement of the subject. If these views of inebriety be correct, or even in the right direction, then our treatment of the inebriate should be changed. Our remedies as medical men must be adapted to the diseased condition.

The safety of the community demands quarantine against intemperance and contagious diseases, and calls upon the medical profession to instruct the legislator in drafting proper laws, and for aid in the intelligent execution of such laws, as well as intelligent treatment of the individual afflicted with such disease. In spite of protests from fanatics and the ignorant, the intelligence of the people has asked the physicians for proper suggestions regulating the care, as well as the treatment, of the insane. The welfare of individuals and society demands that the inebriate be governed and treated according to his condition—if it is vice, then as vice; if disease, then as disease.

At the present time, in this State, a person may indulge his impulse to drink without interference unless he commits a breach of the peace. Fortunes may be squandered, intellects may be irrevocably destroyed, human bodies may be wrecked, homes desolated, and future generations cursed with a heredity forboding nothing but misery. How often are we consulted about some brilliant inebriate who is destroying home, health, fortune, and intellect, and the question comes, "Doctor, what can be done?" We ask, "Is he crazy?" Oh, no. Well, wait until he is, and then the law will permit us to act. The inebriate, as a rule, will not submit to treatment. He has not the force to follow directions, for, in fact, he has lost the power to act. He must continue until he is actually insane or gets into the clutches of the law by some criminal act, when he is not by nature a criminal,

only hurled onward by a disease that has to terminate in death, insanity, or the prison. In the sight of the law, inebriety is an aggravation of the offense, and punishment proportionately greater, except where the crime in itself calls for the full penalty of the law, when the judge can only lash the victim with words when he pronounces the sentence of death, which he invariably does.

In the petty cases that occupy our police courts it is "drunk and disorderly" — ten days or ten dollars. If the inebriate has the money he cares not; more likely the wretched wife pays the fine out of her earnings, and thereby robs herself and her children of the little food they otherwise would have had. Just think — these poor children handicapped by a terrible inheritance, deprived of that little nourishment that might give them some power to resist the physical curse that already lies upon them. If the fine is not paid, of what avail are ten or thirty days in the work-house? The records of the work-house show that it has no effect to deter men from drinking. I have seen the record of one woman who was sentenced to the work-house in this city twenty-eight times in twenty-five months. They are out long enough to get drunk again and have the process started that will bring another degenerate being into the world.

I ask you to carefully study your cases of inebriety — and you will all meet with plenty of them — bearing these points in mind. I also hope that at some future meeting we may have a general discussion of this subject and learn the results of each other's cases. A great field is open before us, the boundaries of which I have scarcely skirted. Let us enter in, make new discoveries, and help a despaired and suffering class of human beings, often more sinned against than sinning. — *New York Medical Journal.*

Dr. KERR, of London, calls the present excitement over hypnotism as a neurotic epidemic, or a non-alcoholic form of inebriety, with irregular periodic paroxysms.

ALCOHOLIC HEREDITY IN DISEASES OF CHILDREN.*

BY T. D. CROTHERS, M.D.

A. B. came under my care for home treatment for periodic inebriety. He has used wine on the table at meals for twenty years; for ten years past he had drunk in paroxysms. His wife used wine on the table also, and during pregnancy and lactation had used both beer and wine freely. He had two children, one a girl of eight years, the other a boy years old, both invalids, and had been under constant medical care from infancy, the general diagnosis being scrofula and general anæmia; and both were of pale and delicate appearance, extremely excitable and nervous.

They had continuous irritation of the stomach, from an unrestricted diet of all kinds of foods and drinks, except wine and beer; were very passionate at the slightest opposition to their wishes, and after a period of rage would be greatly exhausted and have a distinct fever for a day or more. The girl had attacks of emotional religiosity, in which she manifested great sorrow and melancholy at her sins, and asked the prayers of all persons she came in contact with; at other times she was precociously bright, and irritable at any opposition to her wishes.

The family physician had no faith in heredity, and treated these various conditions as so many symptoms of threatened organic disorders which his skill and remedies prevented from gaining farther. Both had suffered from rubeola and scarlatina, and were supposed to have never fully recovered. Bronchitis, enteritis, gastritis, neuritis, and various heart diseases, were constantly threatening, and as constantly averted. Finally, death of the physician brought a new man who recognized the alcoholic heredity of these cases, and ordered them to the country where the diet was restricted, and enforced

Read before the Section of Diseases of Children of the American Medical Association at Nashville meeting

exercise outdoors, and frequent bathing when it could be carried out.

These children had marked nerve and brain instability, with low vitality, and were neurotics, which would of necessity develop insanity, inebriety, or any other form of nerve and brain degeneration; and the rational treatment should have recognized this condition, and given special attention to the diet and surroundings, and the avoidance of all existing causes that would stimulate the brain and nervous system.

A physician wrote me that he had given tincture cinchona to a neurotic child of one year of age, for slight fever which resembled malaria. In a short time the child would cry for the medicine, and only would be satisfied for a little time after it was given; on one occasion it took at once a two-ounce mixture of this drug. He changed to other tonics, but found that nothing would satisfy the child but tinctures. The child was found to have an alcoholic mother, who died soon after its birth, and the alcohol in the tinctures aroused an organic memory which had been inherited.

In private practice, some years ago, I treated a little boy for over five years, for the most confusing and varied disorders and diseases that it was possible to have; he recovered from one disorder only to be prostrated with another. None of them were well defined or clear, and much difference of opinion prevailed among the numerous medical men who were called in consultation. At puberty this boy became a pronounced dipsomaniac, suddenly, and without any special temptation. Years after he came under my care, and was a chronic case. From a study of his history it was ascertained that his father was an inebriate, and died before he was born. Here was an alcoholic heredity, which had escaped notice, and where the alcoholic neurotic symptoms were not understood.

I think we may confidently expect of the practice of medicine, that in the near future such cases will be treated so successfully that the alcoholic or insane predisposition will be warded off. I have heard of numerous instances of child-

ren from infancy upward to puberty, upon which alcohol in any form and in small quantities acted as a hypnotic; in some cases no other medicine could be tolerated, and in some alcoholic heredity was present, in others it was not clear.

In the study of the early history of inebriates, a great variety of diseases common to childhood appear, and seem to have been more intense than in other children. Such cases seem to have suffered more severely than others from nutrient disorders, shocks, and traumatism; they are freighted with some heredity or predisposition to particular forms of degeneration; the organism has received a certain bias, from which cannot escape. Alcohol, of all other drugs, seems most potent to impress cell growth and function.

No fact is more firmly established than that alcoholic ancestors will transmit to their children a defective brain and nerve power. The form and shape of this defect and its manifestations will vary widely.

In many cases it may not be prominent until after the higher peripheral brain has reached a certain development, especially in the growth of the emotional and inhibitory centers. In others this defect is seen in infancy, in an abnormal hyperæsthesia of the senses, and nutrient disturbances. Some children manifest irritation at all sounds, and all changes of light and surroundings, by continuous crying; the skin or alimentary canal is also very sensitive, and various skin disorders and nutrient troubles follow. Low powers of vitality and slow, irregular growth are common. This condition may continue for years, then gradually disappear, and only reappear at puberty, or later, in some distinct form of degeneration. Sometimes a marked neurasthenia and anæmia appear in early life and continue up to puberty, then break out into some disease, or develop some hereditary malady.

Another class of children are noted, who come from alcoholic ancestors, by their precocious development of brain and nerve force. They exhibit powers of brain receptivity and ability that is called genius, which give way early to some

disease or form of nerve degeneration from various causes. Inebriety, insanity, or both, are very common sequels. Alcohol or opium in any form is almost always a grateful remedy, and is demanded in many instances by the patient. The use of bitters that contain large quantities of spirits is also very popular, and an unconscious organic memory is awakened that rarely dies out.

In some children this craving for spirits is manifest very early. A case of this kind was brought to my notice by Dr. Smith of New York, where an infant of two months old could only be quieted by a few drops of spirits. Its taste was so pronounced that it would stop nursing at the sight of the person who gave the spirits, and cry until it was gratified. Fortunately, such instances are not common; but the abnormal tastes of children, and their extreme sensitiveness or obtuseness to sensory impressions, and low powers of vitality and recuperation, are often clear symptoms of an alcoholic impression from ancestors.

This alcoholic heredity will be seen in children that manifest extremes of activity, particularly where there is a tendency to the sudden liberation of nerve energies, as in violent passion (grief or joy) or work, play, or study, which is followed by extreme prostration. The child is said to be sullen, morose, or melancholy, then suddenly manifest the other extremes, indicating a great instability of brain cells and functional control. Its life seems to be threatened with fevers, prostrations, and inanitions, accompanied with mental irritations and wandering neuralgias that tax severely the skill of the physician. These conditions may follow other heredities, but they always point to a degree of nerve and brain degeneration or retarded development, and defective co-ordination, that must be recognized in the treatment.

In all cases where alcoholic ancestors, even back to the second generation, can be traced, there are certain predispositions which must be considered in the treatment.

First. A tendency to exhaustion from feeble vitality, and low power of restoration. Tonics and nutriments that

have a direct stimulant action on the brain should not be used, such as alcohol and opium, and meat broths. These remedies have a tendency to still further exhaust the vital forces, paralyzing the nerve centers and increasing the carbonaceous matters of the system.

Second. An instability of cell and nerve function, and strong predisposition to develop into some particular form of degeneration, which is practically an exhaustion of the higher brain centers with craving for relief. All stimulants and remedies which act on the brain centers increase the existing degeneration.

Third. There is a special affinity for all nerve stimulants by those higher brain centers. Their use constantly interferes with the natural development of brain energy from food. Thus alcohol, tea, coffee, and other substances have a peculiar delusive effect.

From these facts it will be obvious that the diseases of children of alcoholic parentage are far more complex, and require greater care. In addition to whatever disease they suffer from, there is always neuræsthenia and defective control of the brain centers, which may come into prominence at any moment, from causes both known and unknown. This hereditary bias and neurotic instability enters into all cases.

The general principles which should govern in the treatment may be grouped as follows: 1. No form of alcohols are safe, and narcotics of all kinds should be used with great care. 2. The diet should not include meats of any kind, because of their stimulating character; while meats contain much food force, they act as stimulants to a brain already over stimulated and exhausted, and increase the peril of nervous disease. The pathological tendency of all these cases is to become alcohol-takers and meat-eaters, hence the diet should always be non-stimulating and farinaceous, and should be carried out with military regularity. 3. The hygienic treatment is also of the greatest importance; every means and measure which can build up a system, and avoid brain and nerve stimulation,

is required. 4. Cases of this character should be guarded against every possible extreme, both in the surroundings and physical conditions that are under the control of the physician. The tendency of all energy and nerve force is to pass off in explosions, which should be counteracted; the diseases they suffer from show this tendency to concentrate and become intensified in certain directions, also to manifest distinct exacerbations. Finally, the fact of an alcoholic heredity in disease of children that we are called upon to treat, gives a wider therapeutical range of possibilities, both in direct and preventive medicine.

Recent studies of alcohol cases show that over seventy per cent. are directly inherited. If this is confirmed by later studies, the treatment of inebriety will in the future begin in infancy, and the higher science and art of medicine will win its greatest triumphs along the line of prevention.— *American Lancet*.

DIPSOMANIA.

By J. T. NICHOLSON, M.D., Bath, N. C.

[REPORT OF THE CHAIRMAN OF SECTION OF FORENSIC MEDICINE.]

It is of very recent date that this subject has received much notice from either the legal or medical profession. If a man committed a crime during a paroxysm of dipsomania, he was taken up and dealt with according to law as regards drunkenness, and as law holds drunkenness to be no excuse for crime, I fear many poor dipsomaniacs have had to pay the penalty of death for drunkenness, while medical science says the disease of dipsomania is not drunkenness, drunkenness being only one of many symptoms of the disease. And when science declares authoritatively that dipsomania is a disease while it is yet a question with law, I think that law ought to respect and accept the teachings of science. It has been proven that the irresistible craving is beyond the control of the patient. He cannot help it. It is beyond his power. It assumes the proportions of mania. And Dr.

Hutcheson says that "this sort of mania differs entirely from drunkenness, the diagnostic sign of the disease being an irresistible propensity to swallow stimulants in an enormous dose whenever and wherever they can be obtained." Still this is not an infallible sign, for I have seen men "never refuse" to take it in enormous doses that were not dipsomaniacs, and I have a dipsomaniac residing within the limits of my professional borders who, just prior and during a paroxysm of dipsomania, is satisfied with "even four fingers," provided it is not too long between drinks. Of course a distinction must be made between the self-controlling vice of drunkenness and the irresistible impulse of the disease.

When the desire for the intoxicant has passed beyond the power of self-control, there are clear manifestations of disease showing existing abnormal conditions of the central nervous system, produced by continual use of alcohol, which demands alcoholic stimulation. We see the patient or dipsomaniac just prior to a paroxysm (which occurs at intervals of days, weeks, or months), morose, nervous, irritable, depressed in spirits, insomnia prevails, loss or suspension of consciousness and memory. He acts automatically. Then, misled and perverted in the exercise of psychic powers, he is compelled against his will and judgment by the indomitable impulse produced by the irresistible craving or desire, he plunges foremost into dissipation, therefore he becomes not his own master. Alcohol predominates, guides, and directs him in its own way. Then arises the question, are dipsomaniacs criminally responsible? Why should they be?

They are subjects whose reasoning faculties have been dethroned by disease, therefore they are not their own agents. They know not right from wrong. And in a decision recently rendered by Justice Somerville, of Alabama, in the case of *Parsons vs. State*, he says that "if, by reason of the duress of such mental disease, the criminal had so far lost power to choose between right and wrong, and to avoid doing the act in question, as that his free agency was at the time destroyed," a crime committed by a dipsomaniac must be the

act of an unsound brain. It has been proven beyond doubt that the deterioration of the nerve element produced by alcohol is the cause of the continual, irresistible desire for alcoholic stimulants. But not only does it affect the mental capacity of man, but the physical powers also. Dr. Bartholow emphatically declares that "few structures escape the deformation influence of alcohol when it is habitually taken into the system;" while Dr. Flint says that "the deleterious influence on the mental is not less marked than on the physical powers. The perceptions are blunted, the intellectual and morbid faculties progressively deteriorate, until at length the confirmed inebriate, miserably cachectic in body and imbrued in mind, has but one object in view,—to gratify the morbid craving for alcohol.

There is a departure from normal mental life, and when the faculties of the mind have become so impaired by the deleterious influence of alcohol as to render the subject incompetent to discriminate between right and wrong, there are clear psychical manifestations of brain disease, and the subject becomes totally irresponsible, just as kleptomaniacs, nymphomaniacs, pyromaniacs, or any other maniacs. And not only do we see the damaging influence to dipsomaniacs, but the deleterious influence of alcohol to the brain is so great as to become transmissible and hereditary. And it is handed down from father to son, from generation to generation. Erasmus Darwin over one hundred years ago wrote "that it is remarkable that all diseases from drinking spirituous or fermented liquors are liable to become hereditary, even to the third generation, gradually increasing until the family becomes extinct." Our rules of criminal jurisprudence must needs undergo great changes. And how must they be wrought? The House of Correction has proven almost a failure in a majority of cases. It only gives us relief while the inebriates are confined. If science is to be respected by law, and the scientific teachings of to-day are that dipsomaniacs should never be hung for crimes committed while under the influence of alcohol, then what dis-

position should be made of them? While many subjects are arousing the public mind to the welfare of the human family, we should not be latent in this. The yearly expenditure of such enormous sums of money for the prosecution and defense of the inebriate criminals (not mentioning the disgrace and distress brought upon families) would repay in establishing in each State a place of permanent confinement. Something should be done to stamp out their propagation, either by permanent confinement or orcheotomy.

THIRTY-SECOND ANNUAL REPORT OF THE WASHINGTONIAN HOME.

This report of fifty-two pages is a year's record of one of the oldest asylums in the world. Its veteran superintendent, Dr. Day, has had the largest experience of any one now living. The limits of our space prevents us from giving but a brief notice of this report. Four hundred and thirty cases have been under treatment during the year. Sixty-one have been cases of delirium tremens. Of the year's work Dr. Day remarks:

"The year has brought its share of anxieties and disappointments, but it has also brought its fair proportion of pleasure and hope.

"During the whole time since the founding of the Home—thirty-three years—I have found some difficulty in keeping informed of the many old patients who have been under our care; scattered all over the country, and I might say all parts of the world, I have no reason to doubt a large percentage of them have been cured and remain firm in the practice of total abstinence; many of them are reticent in keeping up a connection by correspondence with an episode of life which they prefer to forget, or at least they wish to be ignored; yet I am constantly receiving letters assuring me of continued abstinence, as well as containing expressions of gratitude. Not only can I point to a large num-

ber who are 'doing well'—that is to say, men whom I believe to be permanently improved, who are living abstemious lives, managing their own affairs with tact and ability, and have been restored to their homes to the benefit and pleasure of their friends and families, but also to others whom I know, from personal knowledge, to be not only cured of all desire for intoxicants, and total abstainers, but who are fully convinced that for others, as well as for themselves, there is but one reasonable and righteous course; and this is something to say, considering that this conviction is wrought not in those already half-persuaded, but in those who have tried every possible avenue of escape from the drink crave before seeking, as a last refuge, the shelter and care of the Washingtonian Home.

"This I can say without egotism, or a desire to claim for our work more than is honestly due. It should be remembered that we are dealing with the most subtle of mental diseases, often inherited, and as often the outcome of false education and bad home influences; not alone is this true of the homes of the poor and ignorant, but of homes of the affluent and learned."

Speaking of the physical causes of inebriety, he says:

"My observations on the primary cause, progress, and ultimate results of intemperance with a professional experience and personal care over more than ten thousand cases in all their various forms, together with the writings of the judicious and accurate observers of our own and other countries on this special topic, seem to more than sustain the early conclusion of the first writers on this subject, that we are dealing with a disease which is curable, as other diseases are."

We advise our readers to write Dr. Day for a copy of this report. We hope in the next number to give full extracts from it.

WE have received Dr. Clevenger's new work on *Spinal Concussion*, and shall review it in our next. A most cursory examination will convince any one that it is one of the very few American works that is a credit to American authorship.

MODERN SCIENCE AND MODERN THOUGHT.

With a supplemental chapter on GLADSTONE'S "Dawn of Creation" and "Proem to Genesis," and on DRUMMOND'S "Natural Law in the Spiritual World." By S. LAING. Illustrated. The Humboldt Publishing Co., 28 Lafayette Place, New York.

UTILITARIANISM. By JOHN STUART MILL. Humboldt Library, No. 121. Price 15 cents. The Humboldt Publishing Co., 28 Lafayette Place, New York.

THE ELECTRIC LIGHT, AND THE STORING OF ELECTRICAL ENERGY. By GERALD MOLLOY, D.D., D. Sc. Numerous Illustrations. Price 15 cents. The Humboldt Publishing Co., 28 Lafayette Place, New York.

THE MODERN THEORY OF HEAT, AND THE SUN AS A STOREHOUSE OF ENERGY. By GERALD MOLLOY, D.D., D. Sc. Price 15 cents. The Humboldt Publishing Co., 28 Lafayette Place, New York.

UPON THE ORIGIN OF ALPINE AND ITALIAN LAKES; AND UPON GLACIAL EROSION. A series of papers by Sir A. C. RAMSAY, F.R.S., President of the Geological Society. JOHN BALL, M.R.I.A., F.L.S., &c. Sir RODERICK MURCHISON, F.R.S., D.C.L., President of the Royal Geographical Society. Prof. B. STUDER, of Berne. Prof. A. FAVRE, of Geneva. EDWARD WHYMPER. With an introduction, and notes upon the origin and history of the great lakes of North America, by Prof. J. W. SPENCER, State Geologist of Georgia. The Humboldt Publishing Co., 28 Lafayette Place, New York.

These five works should be in the library of every scholar and physician. The Humboldt Publishing Company are issuing two volumes a month, comprising some of the most valuable works in the language. The price is so low that

every scholar can afford to have these works, and, next to a dictionary, there are no more practical books published. In our advertising pages will be found a valuable list of works on diseases of the mind published by this house. They are all invaluable for students of mental disease.

HANDCUFFS FOR ALCOHOLISM. By Rev. GEORGE TURCHER, Buffalo Plains, N. Y.

This little work of one hundred and thirty-two pages describes, in a graphic way, the latest facts concerning the chemistry and physiology of alcohol; from these facts the author points out the dangers, and suggests the handcuffs which will restrain alcoholism. In many respects this book is far beyond the ordinary temperance work in accuracy of statement and wide reading of the scientific side of the subject. Such works are particularly valuable at present, giving correct views of the action of alcohol. The author is to be congratulated for his efforts in this new field, and we trust it will have a wide circulation among the clergy and laity.

The *Homiletic Review* of New York city, Funk & Wagnall, publishers, gives a very clear review of the movements in the theological world, of the new thoughts and new conceptions of old truths that are constantly appearing.

The *Scientific American*, Munn & Co. publishers, is a very stirring weekly, full of new facts and new inventions, that indicate the progress of scientific thought. It is a most valuable journal.

The *Popular Science Monthly* increases in value and popularity every month. No other magazine brings a richer class of robust, stimulating papers for its readers. No thinker or scholar can afford to miss the regular monthly visitations of this great teacher.

Editorial.

THE KEMMLER CASE.

William Kemmler was convicted for the murder of his wife and sentenced to be executed by electricity. Several appeals and stays of sentence have been granted, and large volumes of testimony have been taken concerning electricity and the legal points raised, until the case has become celebrated, and the final issue of which will form the basis of a new era in law and science. Unfortunately for the credit of common law and equity, this test case is that of an alcoholic dement, whose trial and sentence as sane and responsible, brings out in lurid colors the injustice of the law, and the mediæval theories of mind and human conduct which still govern in the court room.

Kemmler came from alcoholic and insane parents, was brought up in low unsanitary surroundings, in a drinking tenement, was given beer and spirits from infancy up. Had syphilis early and at different times, and was a huckster and street vender of vegetables, drinking but little in the day time, but for years had been intoxicated every night. He was noted for being able to drink large quantities of spirits before being stupid, and frequently drank on a wager as to who could drink the most, and generally won. He ran away with a married woman with whom he lived as his wife, and frequently quarreled when intoxicated. After a night of excessive drinking, and following an altercation with this woman, he inflicted twenty-six wounds on her with a hatchet, from which she died. In appearance he was of small stature, low browed, irregular shaped head, and sunken, stealthy, unsteady eyes. He talked in a hesitating, whining undertone, and was clearly unable to comprehend his crime or its consequences. He had suffered from delirium tremens and

alcoholic delirium several times. The crime was committed in a cool, insane-like manner, as indicated by the number of wounds inflicted, any one of which would have killed the victim, and giving himself up, making no effort to escape. His general demented appearance on the trial was thought to be simulation of insanity. The assumption that a man with this heredity and history was mentally sound, and capable of realizing the nature and consequences of his acts, was opposed by all common sense and general principles of scientific truth. The delay of execution in this case has been severely criticized by the press, who, while recognizing the low order of intelligence of the prisoner, demand his execution as a brutal, vicious murderer. In reality, the execution of Kemmler will show that the barbaric sentiment of hanging idiots and insane still exists, and the supposed justice will be deplorable injustice, which reflects on the intelligence of the age. The death penalty by any means in such cases utterly fails, and never has any deterring effect, but on the contrary, increases the very crimes it seeks to check. In this delay of the law the question of the form of execution is of small moment compared with the justice of the execution. If all murderers are to be executed, irrespective of all conditions or circumstances, than the Kemmler execution is just. If we are governed by the teachings of a higher civilization, and recognize the futility of punishment among persons who are unable to judge as to the nature and consequences of their acts, Kemmler's death would be practically a legalized murder. The skill and energy displayed in the resistance of the judgment of the court, from motives largely pecuniary, reflects sadly on the ignorance and failure of the law to recognize the mental unsoundness of the prisoner, indicating that the principles of justice in the case are of less interest than the selfishness of a stock company.

All healthy vigor of body and mind depends on *nutrition*, *deputation*, and *nerve* and *brain rest*. The two latter are sadly neglected in most cases of inebriety.

INEBRIETY A DISSOLUTION OF BRAIN
FUNCTIONS.

All clinical study shows that same state of defective brain and nerve development, or some form of functional or organic degeneration, precedes the first use of alcohol. In certain cases it is clearly central nerve exhaustion, functional perversions, organic defects from injury or disease, or hereditary predisposition. The first use of alcohol, either in so-called moderation, or in toxic doses, as in intoxication, seems to concentrate and organize the forces of dissolution, which from this time move on with great uniformity and accelerating speed. When inebriety is fully developed, this is very apparent, and often traceable from stage to stage.

The action of alcohol as a paralyzant on both cell and nerve fiber, and its chemical interference with nutrition and circulation, together with the complex forces of heredity and environment, are all powerful causes readily explaining the presence and progress of dissolution.

In the more recent studies of the mind, three divisions are recognized, the emotions, the volitions, and the intellect; from these the evolutions and dissolutions can be traced. The study of inebriety should follow these divisions, and point out the changes from a healthy mind. Beginning with the present trace back the emotional, volitional, and intellectual changes, and ascertain how far they have been the result of alcohol and narcotics; or of previous degenerations, defects, injuries, or hereditaries. While the facts are numerous and complex, and often difficult to substantiate, yet when grouped and compared, they range themselves into certain outline forms of dissolution that cannot be mistaken. The following are some of the general facts seen in all cases of inebriety. The dissolution of volition is the first prominent symptom. This is loss of self-control either local or general. The coördinating brain centers are enfeebled, and the man is unable to direct his acts or conduct with consistency. The greater the loss of vital energy, the weaker the volition, until finally he is a mere creature of any functional impulse

that may be present. Alcohol not only produces loss of nerve energy, but damage to nutrition, and inability to restore this loss, and the desire for relief becomes more and more intense, demanding a continuance of spirits for this end. This dissolution process may be apparent only in matters controlling the functions of the body, and the influence of surroundings upon them, or it may extend to relations of life beyond this. Dr. Wright has very aptly termed "this paralysis at first functional, then organic." Beginning in failure to regulate the more simple acts of the body, it extends to the complex duties and relations, and finally ends in dementia. The inebriate has always more or less pronounced dissolution of volition, which increases as his case becomes more chronic.

The next prominent phase of dissolution is that of the emotions or feelings. The exhaustion from the palsy of alcohol and the derangement which may have preceded it, manifests itself in emotional changes, in great exaltations and depressions. The psychical sensory centers are in a state of intense irritation, and all impressions cause pain, both psychical and physical. Alcohol relieves this quickly. States of brain anæmia, which Meynert thinks are due to a spasm of the arterioles and an arrest of the blood supply, cause deep despair and melancholia. In the early stages an effort is made to escape these nerve depressions by the increased use of spirits. Later it deepens into despair and suicide. The exaltations and hyperæsthesia are followed by a profound lowering of all the functions with anæsthesia. These emotional exaggerations and depressions are palsies of the sensory centers and dissipations of energy. Manifest in slight changes at first, then it passes on to mania and melancholia. The inebriate has always a pronounced dissolution of the emotions. He is subject to every appeal from both within and without, and the capacity of discrimination and control becomes weaker steadily. In the temperance, political, and prayer-meeting, these cases are very interesting studies, and the degree of dissolution can be very readily seen.

The third diversion is the dissolution of the intellect and

intelligence. This function is the power of associating ideas and comparing them with others. It has been described as the process of the formation of new ideas by the union of one already impressed tract of nerve tissue with another. Or the process of utilizing new and unused groups of sensory motor cells by uniting them to those already in use; or of getting into action organized tracts of thought in the exercise of memory. Any state or condition of paralysis which will break up the complicated sensori-motor groups, or sever their minute attachments, will be manifest in the intelligence.

The delusions, the false beliefs, the strange unreasonings and credulities of inebriates are common in all cases. Beginning in simple matters pertaining to the bodily functions, it grows until it includes all the relations of matter and mind. With the decline of nervous energy, and impairment of the higher functions of the brain, the lesions of intelligence increase. It may be for a long time apparently confined to the care and control of the body, but as dissolution goes on it embraces every function of the brain. In some cases a degree of automatic intelligence remains long after general brain failure appears. This has given rise to a false belief that an inebriate may possess unimpaired judgment and intelligence on to the end of life. In these three ways the march of dissolution can be traced in all cases. Beyond this there is a phase of dissolution not so clear, because it concerns the higher and more obscure functions of the brain called conscience. The inebriate early exhibits failure of this, the latest formed element, the character. His conception of truth and duty to others, and his recognitions of the higher relations and duties of life, undergo a marked dissolution. His veracity, his honor, his pride of character, his sense of duty, all suffer, and are finally paralyzed.

Thus in all cases of inebriety there is a chain of dissolution which can be traced back to causes and conditions which may be reached by therapeutic aids and means of prevention. This is the line of scientific study from which the real facts may be discovered.

MARRIAGE WHILE INTOXICATED.

The general law insists that marriage shall be contracted with intelligent consent of both parties. When the mind is in any way impaired, or deficient in general understanding, no clear rational consent can be expected. The brain enfeeblement in intoxication of necessity renders the person incapable of knowing what he is about. The brain is in a state of palsy, and sense and volition are absent, and all contracts should be voidable made in this state, unless ratified or confirmed after. Where the degree of intoxication is slight and not observable to any extent, a question of sanity is raised. Or, suppose the man to have been a habitual inebriate, and have a free interval of sanity, the same question has been raised. In Scotland intoxication in any degree is sufficient cause for setting aside marriage contracts. In this country the facts and condition of the marriage and the general history of the parties determine the question. A man who was greatly intoxicated at the time of marriage was considered by the court to have sufficient capacity to enter upon such a contract. A man who had drunk to imbecility for many years was married, and although he was not intoxicated at the time, was decided to be incapable of entering into this contract. The confusion of judges as to what degree of the use of spirits renders a man incapable of contracting marriage is lamentable. No marriage should be permitted when either one or both of the parties are intoxicated or inebriated in the most general sense. No man or woman who uses spirits or narcotics, at intervals or continuously, is of sound mind and capable of realizing the nature and consequences of the marriage act. This is not only sound law, but sound physiology. All marriages contracted by inebriates should be voidable, unless it can be shown that they have recovered. If it can be established that one of the parties was an inebriate before the marriage, a knowledge of which the other did not possess, the marriage should be void. Clergymen and civil officers should be held responsible for marriages performed with a knowledge of the inebriety of the parties. Public sentiment

is shocked at the marriage of lunatics, and yet every day the lunatic inebriate is permitted to marry, and persons are ready to join themselves in such a contract for the purpose of curing them. In a recent murder case it appeared from the evidence that the murderer's father was married when intoxicated, and died a few years after by suicide. The murderer was the first child, and was a low paroxysmal drunkard, who had spent years in prison for crimes of drunken violence, and finally killed a passing stranger. In another case the courts refused to grant a woman a divorce who had recently married and found her husband an inebriate; a few months later this husband killed her in a drunken frenzy. In a certain family of entailed wealth there are living to-day, in the third generation, ten direct descendants who are feeble-minded, idiotic, and insane; all clearly traceable to the marriage of an inebriate ancestor. The failure of the law to prevent and regulate such marriages, and the delusion that inebriety is a *vice* that is under the control of the victim, is one of the great obstacles toward social and legal reform. The efforts to raise the poor and degenerate inebriate and his family, are practically of no value as long as marriage with inebriates is permitted. Recently the legislature of the state of Victoria in Australia has passed a law, which gives a wife the right of divorce if the husband is found to be a habitual drunkard. If after marriage she discovers that he is an inebriate she can also get a divorce. The husband can do the same with a wife if she is proven to be an inebriate. This is a clear anticipation of the higher sentiment which demands relief from the barbarous law which would hold marriage with an inebriate as fixed and permanent.

DISEASE is the essential consequence of repeated poisoning from alcohol. It may begin at the first poisoning or excessive use of spirits. The brain tissue may be injured at that time in some way, and require ever after spirits to relieve the system of organic change.

M. FERRY, in a recent study of criminals in Italy, found, in four hundred confined in jail for aggravated crimes, all but one devout religionists. All were devoted to prayer and ardent believers, and sought aid in all sorts of crime from the Diety. Some of them expiated their crimes, as they believed, by dipping their fingers in their victims' blood and making the sign of the cross. Brigandage to them was legitimate and moral, and they were devout criminals. Thus, the insanity of criminality may leave all the moral faculties intact, but by cutting them away from other faculties leave them deranged and perverted.

We take great pleasure in calling attention to Dr. Clouston's paper, the first part of which is published in this number. In many respects this will be found to be one of the most suggestive studies of inebriety recently published. The author, Dr. Clouston, is one of the leading teachers and writers on insanity in Europe, and has had a very large clinical experience with all the varied forms of mental disease. Hence his statements may be considered to a very large degree authoritative and representing the most advanced studies in this field. To the American student of inebriety, one of his classifications, the dipsomania of excess, will be entirely new and unknown practically. The moralists and temperance reformers have called all inebriety something that sounded very much like this dipsomania excess, but careful clinical study has failed to find any such cases in this country. The thanks of our readers are due to Dr. Clouston for this excellent and most timely study of this great topic.

EVERY man comes into the world entangled in the moral bankruptcy of some one who has gone before, he knows not who or whose. There is never any consciousness of identity, or sense of guilt or notion of responsibility.

Two hundred tons of the bromides and fifty tons of chloral hydrate are used in this country annually.

THE American Medical Association, at their Nashville meeting in May last, applauded most heartily that portion of Dr. Davis's address in which he condemned the use of alcohol as a medicine, and urged the profession to study its actions and use it with the same caution as they would use any other poison. The Section on Neurology and Medical Jurisprudence devoted an entire session to the responsibility of inebriates. The president, Dr. Evans, gave an address on the Responsibility of Dipsomaniacs, and Drs. Crothers, Wright, Kerr, Hughes, Mason, Quimby, and Axtell read papers on the same subject, which were fully discussed by Drs. Kernan, Brower, Knapp, Cook, Searey, and many others. The interest manifested in this subject was an unmistakable promise of a larger and more accurate study in the future, and a great encouragement to the pioneer workers in this field.

A SUMMONS complaint was served on James McCarthy and Orvin S. Bacon, as the surviving executor and trustee of James McKechnie, deceased. The plaintiff is Cora R. Fish, the wife of Frank Fish, who was convicted of murder in the first degree, at the Court of Oyer and Terminer held in Canandaigua last week, and sentenced to be executed during the week beginning Saturday, July 12th. It is alleged that the last drink of beer taken by Fish was drank within a few minutes of the time he took the life of James Cullinane in the saloon of McCarthy, one of the defendants, while Fish was very much intoxicated. The saloon kept by McCarthy was leased to him by the trustees of McKechnie for saloon purposes, and therefore this action is begun under the damage act against the person who sold the liquor and the owner of the building. Mrs. Fish claims damage against the defendants for \$10,000.

THE number of barrels of beer manufactured in 1889 was 26,098,765, an increase over 1888 of 539,083 barrels.

Clinical Notes and Comments.

LUNIER PRIZE.

The French temperance society against the use of alcoholic beverages have received from Mrs. Lunier one thousand francs, to be called the Lunier prize, to be given to the author of the best essay on the following questions: *What are the consequences of hereditary alcoholism, and what are the best means of prevention, or means to limit or lessen its effects?* Authors are expected to follow out the lines of inquiry suggested in Lunier's work "on alcoholisms."

The society does not limit this study and research, but wishes it to embrace all the questions of moral, social, and therapeutic means, for prevention and restoration of inebriety. The society will accept parts of printed works, as pamphlets on this topic that have appeared before January 1, 1890, associated with what has been written since this date, to compete for the prize. All manuscripts should be received before December 31, 1890, and should be addressed, Dr. Motet, secretary-general of the French temperance society, 161 rue de Charonne, Paris, France.

ENCOURAGING SCIENCE.

The Vermont Microscopical Association has just announced that a prize of \$250, given by the Wells & Richardson Co., the well-known chemists, will be paid to the first discoverer of a new disease germ. The wonderful discovery by Prof. Koch of the cholera germ, as the cause of cholera, stimulated great research throughout the world, and it is believed this liberal prize, offered by a house of such standing, will greatly assist in the detection of micro-organisms that are the direct cause of disease and death. All who are interested in the subject and the conditions of this prize, should write to C. Smith Boynton, M.D., Secretary of the Association, Burlington, Vt.

TO MEDICAL MICROSCOPISTS.

In behalf of "the American Association for the Study and Cure of Inebriety," the sum of one hundred dollars is offered by Dr. L. D. Mason, vice-president of the society, for the best original essay on "The Pathological Lesions of Chronic Alcoholism Capable of Microscopic Demonstration."

The essay is to be accompanied by carefully prepared microscopic slides, which are to demonstrate clearly and satisfactorily the pathological conditions which the essay considers. Conclusions resulting from experiments on animals will be admissible. Accurate drawings or micro-photographs of the slides are desired. The essay, microscopic slides, drawings, or micro photographs, are to be marked with a private motto or legend, and sent to the chairman of the committee on or before October 1, 1890. The object of the essay will be to demonstrate: *First*, Are there pathological lesions due to chronic alcoholism? *Secondly*, Are these lesions peculiar or not to chronic alcoholism? The microscopic specimens should be accompanied by an authentic alcoholic history, and other complications, as syphilis, should be excluded. The successful author will be promptly notified of his success, and asked to read and demonstrate his essay personally or by proxy, at a regular or special meeting of the "Medical Microscopical Society," of Brooklyn. The essay will then be published in the ensuing number of THE JOURNAL OF INEBRIETY (T. D. Crothers, Hartford, Conn), as the prize essay, and then returned to the author for further publication or such use as he may desire. The following gentlemen have consented to act as a committee:

Chairman — W. H. BATES, M.D., F.R.M.S., London, Eng.,
(President Medical Microscopical Society, Brooklyn.)
175 Remsen Street, Brooklyn, N. Y.
JOHN E. WEEKS, M.D.,
43 West 18th Street, New York.
RICHMOND LENNOX, M.D.,
164 Montague Street, Brooklyn, N. Y.

A lithographic group of nine of the most distinguished physicians who have made inebriety a special study, has been made by the Photogravure Co. of New York City, and are for sale at this office. They are mounted on cardboard suitable for framing, and are sent post-paid for one dollar to any address.

The ever-progressive house of Parke, Davis & Co. are out this month with some seasonable suggestions as to eligible remedies for prevalent diseases of hot weather. They have a very convenient list of intestinal sedatives, antiseptics, antispasmodics, and anodynes for diarrhoeal and dysenteric affections, some new expectorants of note for coughs and colds, and a normal liquid ipecac always reliable as an emetic in cases of gastric disturbances due to accumulated fermented food so frequent a cause of infantile diarrhoea.

Dr. Strong's Sanitarium is a most delightful place for physicians and their families, who wish to spend a short time at Saratoga Springs. In addition to first-class hotel accommodations, they have excellent baths of the most modern character at the command of their guests.

Warner's Effervescent Bromo Potash approaches very near a cure of inebriety. In all cases it gives great relief to the irritation and depression which follows from the use of spirits. It should be kept in every family as a household remedy for headache and sleeplessness.

Lactopeptine can be used in a great variety of cases, especially in the summer, in all forms of digestive troubles, with the best results. We have always found its combination with mineral tonics to be unexcelled in the various drug combinations of every day's practice.

We call special attention to the *victor safe* noted in our advertising columns. This is a practical safe for every physician, and will be found very useful for all office uses.

Fellows' Hypophosphite has come into very general use, and its sales have reached enormous proportions, showing that it has a merit that is appreciated by the profession.

Horsford's Acid Phosphate continues to grow more and more popular, and is now one of the very few remedies that is used by both the profession and laity to any great extent.

The *Phrenological Journal* has a very appreciative sketch of Dr. Parrish, and also gives each month a very entertaining sketch of some noted character of the world.

DR. BRUSH'S *Koumiss* is of peculiar value in irritation of the stomach, arising from alcohol or opium. It is also of great value as a nutrient in cases of general debility.

Bromidia is very highly extolled by all who have used it, and can be given with the best results in neuralgia from alcohol and opium.

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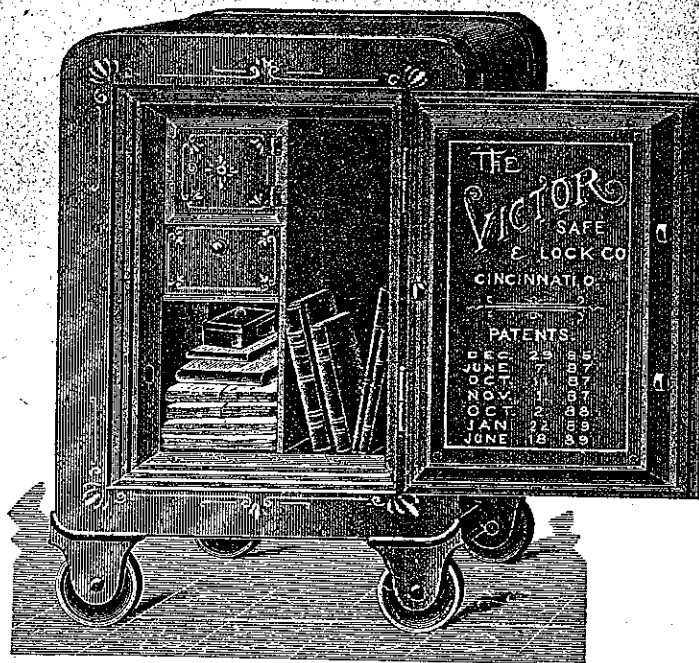
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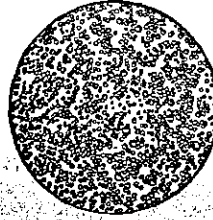
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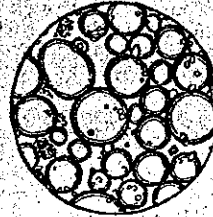


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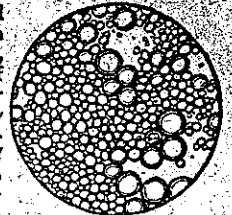


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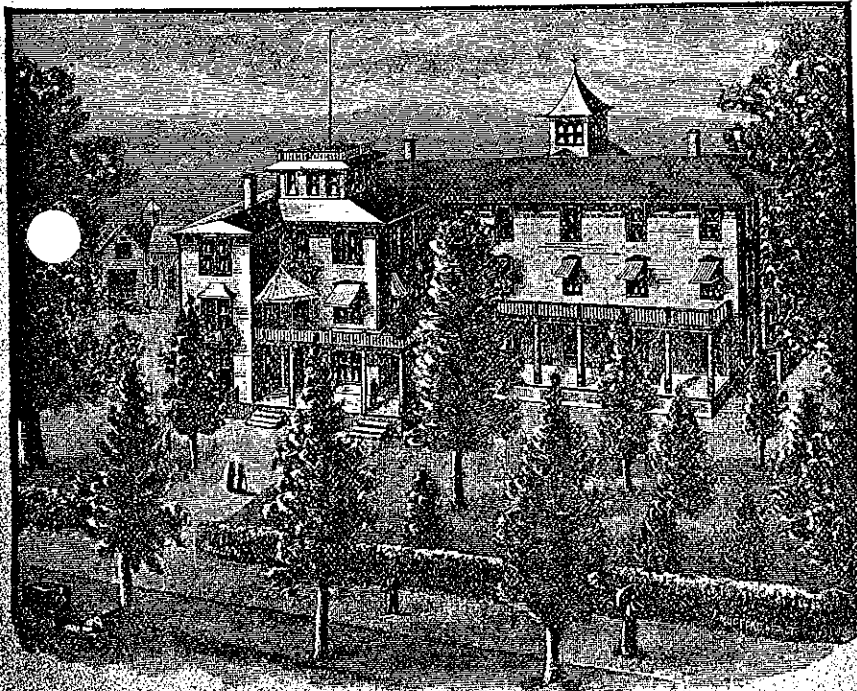
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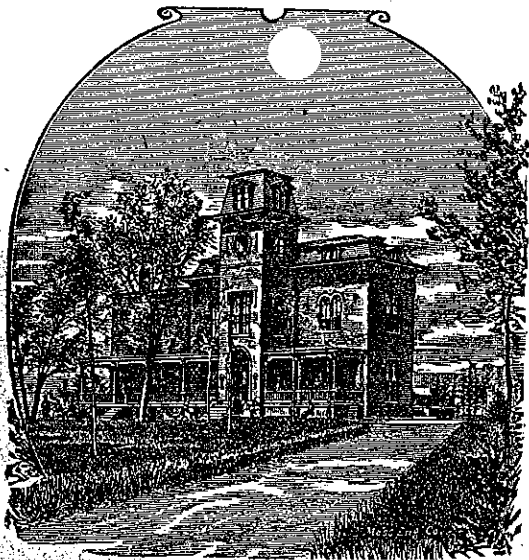
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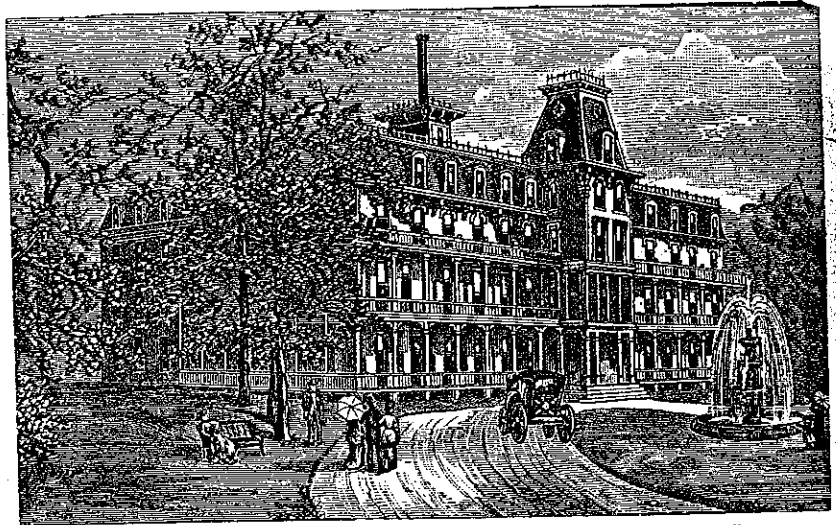
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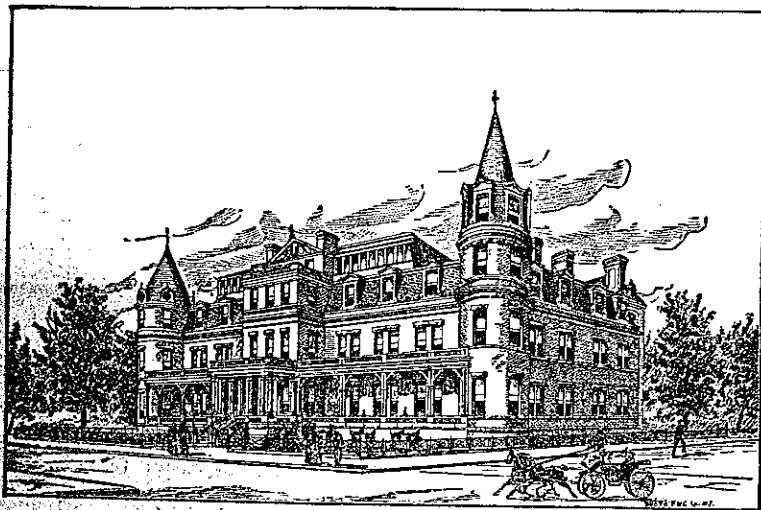
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