A Note on the So-Called Stimulating Effect of Alcohol on Protoplasm

Treatment of Inebriety by Hypnotic Suggestion
By John D. Quackenbos, M.D., New York

The Great Temperance Pioneers in the Medical Profession and Their Work for the Last Century
By Henry O. Marcy, A.M., M.D., LL.D., Boston

Inebriety in its Relations to Crime
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Accuracy in Clinical Study of Mental and Nervous Disorders from Alcohol
By Joseph M. Aiken, M.D., Omaha

Alcohol and Moral Degeneracy
By D. H. Kress, M.D., Washington

Editorial
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T. D. CROThERS, M.D., Sup’t. Walnut Lodge, HARTFORD, CONN.
HAVING regard to the conflicting beliefs and statements as to the action of alcohol in the human body, it occurred to the writer that in one way — in one particular, at least — he was in a position to investigate and to see for himself the actual facts of the case, and thus to be independent of the evidence of others. This one point was the action of alcohol on simple living protoplasm as seen under the microscope. The following record of observations pursued steadily for several months seems to throw a considerable amount of light on the supposed stimulating action of alcohol.

The experiments were made upon amebae, as they seemed to be the best examples of simple protoplasm which were easily visible.

There are different varieties of amebae, but the point which makes them most useful for our purpose is the fact that although some of them are very small, and of little or no use for observation, others are decidedly the reverse. The writer has measured one such when it was extended in active locomotion, and found it to be one twenty-fifth of an inch in length, and about a quarter of that in width, that is, about one one-hundredth of an inch, other specimens only measured one five-hundredth of an inch, and others even less than that. All, however, present, according to the textbooks (Butschli, Gilbert Bourne, Calkin) an identical structure. They are said to consist of an ectoderm more or less hyaline, and
endoderm with granular appearance, in which is imbedded a nucleus or sometimes two or more nuclei. When in active condition they move from point to point by means of projections or processes of the hyaline ectoderm, into which stream the granules of the endoderm. These processes are called pseudopodia. By means thereof they attach themselves to the substances with which they come in contact, and then by contraction of the pseudopodia they move their whole body.

They find their food in the water in which they live. The ectoderm closes over nutritious particles, which then pass among the granules of the endoderm. After a time such particles are found to be enclosed in a vacuole, containing also a clear fluid, in which the particles float. These are gastric vacuoles, and it is possible to recognize among their contents a variety of different objects which have been thus enveloped by the creature, for these vacuoles grow in size and coalesce, the granular appearance of the endoderm being in truth largely due to very minute specimens of such vacuoles, several of which will attach themselves or gather round a foreign body which has been thus sequestered, and by coalescence form a vacuole large enough to contain the object and the solvent fluid secreted for its digestion. These, which may be called the secondary vacuoles, also coalesce, mingling their contents so that in the larger specimens it is easy to recognize different varieties of diatom shells, desmids, crystals, vibriones, etc. When, however, by the action of the gastric secretion, the nutritious portions of the contained particles have been dissolved out and digested, the indigestible residue is expelled by rupture of the vacuole at some point in the periphery of the body.

In the endoderm, and sometimes in the hyaline ectoderm, other vacuoles appear, from time to time, which contain only clear fluid. These, which in their earliest form, like the last described, are minute granule-looking bodies, increase in size in the same way as the others; that is to say, by coalescence until the repetition of the process causes distension beyond the retaining power of the surrounding body substance, when rupture takes place and the contents are expelled, sometimes with considerable impulsive force, as
The Effect of Alcohol on Protoplasm

testified by the sharpness of the current formed in the water outside. These vacuoles are no doubt excretory in function.

For our purpose these three functions—locomotion, digestion, excretion—are sufficient, as they are the real measures of the vitality of the animals under examination. Solutions of alcohol in water from one per cent upwards were used.

Having fixed upon the specimen on which the experiment was to be made, as soon as it was seen to be firmly attached either to the slide itself or to the cover-glass, by means of blotting paper as much as possible of the water was withdrawn from the slide without actually leaving the specimen dry. Then the solution was allowed to take the place of the extracted water, thus drenching the animal. The process of withdrawal of the liquid was then repeated two or three times and fresh solution added until the drenching or immersion of the animal was complete.

One Per Cent Solution

Several different specimens of amoebæ were treated with this solution. The following is a description of the effect of the solution on a typical example of these.

The amoeba was a medium-size one, actively moving about the field of the microscope. Immediately the solution reached it the locomotion ceased, and the granules of the endoderm stopped streaming. They massed together toward the center, the ectoderm or hyaline portion surrounding them. The animal remained stationary for seven minutes; then movement commenced in the ectoderm, movement which is best described by the word “sprawling.” Nodular pseudopodia were projected in all directions, without locomotion. A vacuole in the endoderm ruptured; this contained only clear fluid. The closure of the breach and the filling up of the cavity by the surrounding walls did not seem to be slower than usual, but there did not seem to be so much “snap” as in the natural animal. After twenty minutes the granules began moving about, but feebly, and did not stream into the hyaline portion, which continued “sprawling”; after thirty minutes locomotion recommenced,
the granules streaming into the pseudopodia. At the end of
an hour and a quarter vigorous locomotion was continuing,
and the condition of the animal seemed to be identical with
what it was before the solution was applied, although the
supply thereof was kept up. In fact, the animal was now
living, and evidently capable of continuing to do so in a one
per cent solution of alcohol.

Two Per Cent Solution

The animal, as before, a typical example of many under
observation, was streaming in an elongated shape across the
field, when this solution drenched it. Locomotion immedia-
tely ceased; an irregular spherical shape was assumed, the
granules streaming hither and thither, but not into the
processes of the ectoderm. These the hyaline ectoderm
began to form in a sprawling manner, about twenty minutes
after the solution reached it. In half an hour locomotion
was resumed, but feeble and sprawling in character. This
continued for an hour or so. Four and one half hours later
the animal was found to be quite quiescent, in spherical
form, and entirely detached from the glass. No further
change was detected, although it was watched for some hours.

On the same slide, four and one half hours after the addi-
tion of the solution, a very large specimen was found, which
was apparently quite unaffected by the solution. It seemed
quite able to live therein, but all smaller animals were either
torpid or dead.

On another slide the experiment was repeated with the
two per cent solution, but with no other result discoverable
upon two vigorous and fair-sized amœbe, than to produce
temporary check to locomotion, followed by sprawling and
irregular movements for about twenty minutes, after which
living in the solution seemed to make no difference to either
of them, though they were watched for eight hours.

Three Per Cent Solution

Movement of every kind suspended for seven minutes
after drenching. Then the granules began to show move-

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ment, and the formation and rupture of vacuoles recommenced as before immersion in the solution. But there was no locomotion. In one specimen there were two or three vacuoles containing pigmented matter, reddish-brown in color, and one that contained a clump of what looked like bacteria. This latter, about twenty minutes after drenching, ruptured, expelling its contents to a distance by the vigor of the closure of the space. After half an hour all adhesion to the glass, either slide or cover, was lost, and the amöeba was floating loose, but occasionally projecting a nodular short pseudopodium, and the process of vacuolation still continued. No change took place for about twenty-two hours, except that when observed at that time the vacuolation had ceased, the animal was floating freely, no pseudopodia were being formed; it was, in fact, torpid or dead.

In some others observed the appearances were identical with that described. One only appeared to have greater resisting power, and recommenced locomotion about seven minutes after immersion; but it was jerky and irregular, compared with that of normal life. Vacuolation also seemed to have become slow; when the vacuoles ruptured the filling up was markedly deliberate. This retardation in the formation, rupture, and filling up of the vacuoles was observable in all the specimens.

Four Per Cent Solution

Streaming locomotion, which was going on actively, was immediately suspended on drenching with this solution. After three minutes, sprawling projection of short pseudopodia commenced, with formation of vacuoles or clear fluid, then pauses lasting for periods varying from one to three or four minutes, during which no motion of any kind was detectable. About an hour later the torpidity became more marked; all attachment to the glass was lost, only a languid sprawling motion was occasionally visible. The animal assumed a mulberry shape and appearance, rolling about in every current excited in the fluid in which it was suspended. No change took place for seven hours, and though watched for twenty-four hours the condition remained the same, and was practically that of death.
Five Per Cent Solution

A remarkably large specimen was found and drenched with this solution, but did not show any signs of being affected thereby for five minutes. Then locomotion quite stopped. Granular streaming became slow, sprawling set in, until about fifteen minutes after drenching, the body assumed a spherical shape, with the granules collected in a dense mass in the center, surrounded by a smooth hyaline margin. The appearance was very similar to that seen in the animal treated with one per cent solution. It was quite detached from the glass, and in a state of complete rest. By close watching, however, about half an hour from immersion some slight movement was seen among the granules at one point. Also slight variations in the outer contour noted from time to time indicated that life was still present. Vacuoles then began to appear, first in the hyaline ectoderm, then, in about forty minutes later, in the granular endoderm. About five and one half hours from immersion there was a formation of sprawling pseudopodia, the granular streaming being exceedingly slow. This condition without any locomotion continued for about sixteen hours, and then became more vigorous with sprawling locomotion, and in about two hours more—that is, in eighteen hours from immersion—the creature seemed quite recovered and as vigorous as in simple water.

This, however, was the only specimen that recovered; six other specimens, none of them so large, were examined, and all were undoubtedly dead in three or four hours, though watched for much longer.

Six Per Cent Solution

Immediate arrest of all motion. In about twenty minutes after drenching, it was a freely floating, irregular, spherically shaped mass, all connection with the glass having been lost, although it had been gliding along it with the regular streaming movement just before being drenched with the solution. In this condition, with absolutely no sign of life, it remained for six hours. At that point of time the alcoholic solution in which it dinary was the end of the alcohol serve for when the gravity of the fact cover-glass, therewith; creatures at times after in the large cover-glass, with vacuol. In another was seen, peculiar sh hyaline por the granula some hours vacuoles. was practic specimen w exception and what motion in drenching attained. It as it was n that it was alcohol is tolerating, practically

This was attached to the projectinal axis.
in which it floated was withdrawn entirely, and for it ordinary water from its native tank was substituted. But at the end of ten hours later there was no sign of change. The alcohol seems to have penetrated deeply into the bioplasm, for when the water took the place of the solution, the specific gravity of the body was less than that of the water, as shown by the fact that it floated against the under-surface of the cover-glass, rolling about with every current, in close contact therewith; whereas, when first discovered in the water, these creatures are always resting on the slide itself, though sometimes after they begin to project pseudopodia some of these in the larger specimens adhere to the under-surface of the cover-glass. This specimen was a large and vigorous one, with vacuoles both digestive and excretory.

In another specimen treated with the same solution there was seen, following the arrest of voluntary movement, a peculiar shrinkage, the effect of which was to cause the hyaline portion of the body to appear almost to separate from the granular endoderm. In this latter there was observed for some hours a slow and irregular formation and rupture of vacuoles. But the result as to regaining activity and vitality was practically the same as that described above. This specimen was watched for about sixty hours, and with the exception of the formation of vacuoles, mentioned above, and what was thought to be a slight attempt at sprawling motion in the hyaline part, about twenty-four hours after drenching with the solution, no signs of recovery were obtained. It might have been alive at the end of this period as it was not tested with return to pure water. Admitting that it was still alive, it would appear that six per cent of alcohol is really more than these creatures are capable of tolerating, and if it be not fatal to them yet renders them practically useless from deep torpor.

**Seven Per Cent Solution**

This was a large-size specimen, streaming along firmly attached to the slide, occasionally changing its direction, by the projection of pseudopodia, at various angles to the original axis.
In it there was one conspicuously large vacuole among several others in the endoderm. This large vacuole contained a solid spherical granular mass, which slowly revolved by independent motion within the vacuole.

Directly the animal was drenched with the solution it stopped its locomotion, nor did it again exhibit that power. The mass enclosed in the large vacuole continued to revolve for some ten minutes after all other motion has apparently ceased. There were other vacuoles, smaller, and containing clear fluid — excretory — or fluid with a few granules which might be the remains of some absorbed material. About six hours later all these smaller vacuoles had discharged, and therefore disappeared. The large one was left, but the granular mass within it was disintegrated, and seemed to fill up a space. The hyaline ectoderm had become more distinct from the granular endoderm, but otherwise there was no change. It was watched for forty-eight hours, but was evidently dead, though preserved by the spirit from active decomposition.

Several other experiments were made with this solution, but the result was the same in all, death being practically caused immediately the animal was drenched.

Conclusions

No stronger solutions were used. It was evident that although these animals could live in solutions of alcohol which did not exceed five per cent, yet that the effect upon them was in all cases the same; it being simply a question of the degree of paralysis induced. There was absolutely no sign of any stimulating effect. Torpor, followed in many cases to which the weaker solutions were applied by what is known as alcoholism, was the rule; and if life was maintained, it was rarely as vigorous as before the alcohol was added to the medium in which the creature was living.

*Address
TREATMENT OF INEBRIETY BY HYPNOTIC SUGGESTION*

JOHN D. QUACKENBOS, M.D., EX-PROFESSOR OF PSYCHOLOGY IN THE COLUMBIA UNIVERSITY, NEW YORK

I have been requested to discuss before you this evening the treatment of the drink habit by hypnotic suggestion; and I shall consider the question with reference especially to the technic, the class of cases that are amenable, time limits of treatment, and permanency of cure.

The phenomena of suggestion are explicable on the theory of self-manifestation in two distinct spheres of consciousness — a theory now generally accepted by psychologists. These spheres are distinguished as the objective or supraliminal, and the subjective or subliminal. The subliminal, superior, or better self — the pneuma or spirit of the New Testament — is that deathless entity that constitutes the true or "inner man." The objective self is the expression, imperfect at its best, of this subliminal soul through "the flesh," that is, organs of body and faculties of mind. The possibilities of subliminal control are boundless in the objective life, and the whole purpose of hypno-suggestion is the establishment of such control, either where it has become relaxed or in fields where it has not before been exercised. So long as the subpersonal mind quickens sound organs, all defects or irregularities in the fulfilment of their functions may be remedied by assumption of the natural psycho-physical control, and so diseases that are not organic are curable by appeal to the subliminal self. Still further, all attitudes of the objective mind — its trends of thought, opinions, beliefs, desires, propensities, tendencies, emotions, and passions — are controllable and alterable by this higher human personality, exclusively along lines that are moral and true. For the subliminal self of man, per se, is that principle in us which dictates what is right and inclines to good — that "spirit" in which, or under whose control, the Apostle Paul urges men to walk in order that they may neither be condemned by the moral law nor bound by the law of ceremonial.

So man in his higher personality is adequate to the extirpa-

*Address before the World's Temperance Congress at Saratoga, N. Y., June, 1908.
tion from his objective nature of any abnormal craving or passion, like the craze for intoxicants. The latter is singularly responsive to treatment by suggestion. In fact, many of the popular drink cures are in reality mere suggestion cures, there being no peculiar virtue in the drugs administered, as there is no specific for the cure of drunkenness. The temporary success occasionally met with is due entirely to suggestive action on a susceptible patient anxious for relief. The glamour of mystery plays its part in the process, and thus the charlatan differs from the regular physician who operates on the psychic centers with the full consent and knowledge of the patient.

The notable increase in the consumption of stimulants, especially among the upper classes, estimated at ten per cent during the last decade in the case of men, and a much larger percentage in that of women, is inviting anxious attention to a means of treating the victims of alcoholic inebriety, for which so much has been claimed in this country and abroad. One billion five hundred million dollars are spent annually in the United States for intoxicating drinks, and another billion five hundred million for the relief of the destitution, the punishment of the crime, and the care of the physical and mental diseases that result directly from the drink habit. Especially alarming is the growth of the practice among our women. When the American woman gives herself up to anything, she pushes her devotion to the utmost limit. She makes a god of her very religion; and if she affects a habit she affects it in the superlative degree. I have treated ladies whose weekly bill for champagne alone exceeded one hundred dollars. The punch-bowl figures at all functions, and proud-pied women dip freely therein, ten drinking to-day where one drank a dozen years ago. School misses and college girls are conspicuous among the throng. Such has become the vogue; and worse than this, girls in their teens see no impropriety in drinking publicly with men companions. Flushed with alcohol, they are likely to forget the restraints of modesty. Root passions spring into expression, the conversation tends to subjects which should not be named in decent society, and when the constraints of self-respect break down with the moral elements of the brain cells, gross
indiscretions are a natural consequence. The abstinent, unobtrusive young woman of the past generation is giving place to a coarse and boisterous bon-vivant, controlled by unworthy impulses, and wholly unfit to fulfil her function in society as an inspirer to meritorious action, or her function in the home as a character-former and a wife. Some one has pointedly said that the moral interests of the nation are in the hands of women, and the only way by which women can lead men straight is to be straight themselves.

Many women have lapsed into the drink habit from the use of patent medicines containing large percentages of alcohol. Many a clergyman can date his downfall from his first dose of Jamaica ginger. The step from "disguised boozes" (upon which $75,000,000 are annually expended) to whiskey, their main constituent, is more than easy. Not a few of our school children also have become beer and even wine drinkers, especially those of foreign parentage, and the increasing prevalence of this habit is leading to a mental sluggishness, if not defect, among the pupils of the public schools that is attracting the attention of educators and philanthropists. In few, the prevalent wholesale addiction to the use of alcoholic stimulants — with its accompanying degenerations of kidney, brain, heart, liver, stomach, and arteries, its pernicious influence in the causation of pneumonia and tuberculosis; its direct action in increasing the mortality rate in the case of all diseases; the part it plays in the induction of insanity, one third of all mental affections being due to its abuse; and its tendency to transmit to offspring not only epilepsy and mental defect, but marked degeneracy and criminal propensity, is assuming proportions so appalling that it may justly be regarded as perhaps the greatest existing menace to the stability of American institutions.

And what is it that the mass of our people are drinking? Anything and everything but pure whiskey, pure wine, pure beer. It is a poison far deadlier and more rapid in its action than the genuine articles. This fact is ignored by the temperance reformer and often by the physician. The consumption being greatly in excess of the ability of the brewers and distillers to produce wholesome beverages, notorious
adulterations are resorted to. About fifty million barrels of malt liquors represents the yearly output of the United States. Much of this, to meet the demands of trade, is sold when new and imperfectly fermented, and a great deal of sickness is the result. Beer should be stored in cool cellars (lager means a storehouse) for from five to eight months before it is fit for consumption; little of the beer sold is properly aged. Besides, the beer drinker in this country has to run the gauntlet of various preservatives, especially formalin, with its destructive action on all the organs; of artificial bitters, like salicin, strychnia, and aloes; of the well-known excitoto-motor pierotoxin, the active principle of coccus indicus, which has narcotic as well as stimulating properties and is used to impart both bitterness and headiness; and of grains of paradise, or Malagueta peppercorns, which give a hot, strong flavor and provoke thirst, so that the more beer the consumer drinks the more he wants.

Intoxicating liquors are as liable to adulteration; but it must be conceded that it is the raw alcohol as well as the admixtures that causes the chronic catarrh of the stomach, the Bright's disease, the arterio-sclerosis, the palsy, and ataxias, the nervous bankruptcy, and the moral degradation of the dram drinker. Good rum as well as bad rum will, when used to excess, gradually convert the different organs and tissues of the body into specimens of degeneration and disease. Bad rum is more prompt in its action, and almost all the rum that is retailed is bad. It is the practice of the liquor dealer to stock his cellar with casks of cheap methylated spirit or anylic ether (commonly known as fusel oil), a chemical compound which has been ascertained to produce poisonous effects in a proportion fifteen times greater than ordinary ethyl alcohol, the common stimulant. He then provides himself with a full line of laboratory-made essences — brandy essence (consisting of oil of grapes, acetic ether, allspice tincture, and alcohol), rum essence (composed of butyric ether, acetic ether, vanilla tincture, essence of violets, and ninety parts alcohol), gin essence, hot-drop essence, whiskey essence, etc., and in accordance with the instructions of a handbook furnished by the essence manufacturer proceeds to make from the same barrel of crude grain spirits,
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by the addition of the prescribed quantity of the several essences, what he advertises over his bar as *pure liquors*. The same barrel gives birth to Bourbon, rye, wheat whiskey, malt whiskey, Scotch and Irish whiskey, Jamaica and Medford rum, Schiedam-schnapps, and Old Tom, cherry, peach, apple, blackberry, and cognac brandy. The cost of the amount of essence required to manufacture in this way one hundred and twenty gallons of cognac, one hundred and sixty gallons of gin, forty gallons of any kind of rum, and one hundred and sixty gallons of any kind of whiskey, varies from three to four dollars. Such are the cheap artificial imitations of distilled spirits, the frightful compounds of fusel oil and whiskey essence, the saloonkeeper palms off with impunity upon the habitués of his cabaret. Properly matured ethyl alcohol or unadulterated whiskey, itself a degenerator of the protoplasm of the brain and nerve cell, is hardly obtainable in an American bar-room. Of every hundred drinks sold in the United States as whiskey to-day, only one is really whiskey; but so clever is the counterfeit that club connoisseurs have failed to detect it. Amylic ether, or the common whiskey of trade (and it matters not whether it is dispensed by a bishop or a bravo) is the "death's river" setting in resistless current toward murder, robbery, misusage of women, paresis, and the asylum. Whatever moral, social, or legislative measures may eventually be adopted looking to the suppression of the drink habit, we are in urgent need of power to restrain in appropriate institutions the habitual drinker of methylated spirits, who is, under the present condition, a danger to himself, a curse to his family, and a nuisance to the state.

The following case of a gentleman who drank whiskey is representative both of the alcoholic disease and its causation, and of the method pursued.

Four years ago, Mr. A., who had vainly resorted to the popular drink cures, was induced by his friends to make trial of psychic treatment. Beginning as a college boy to carouse with his mates, engaging in contests to see who could drink the most beer in the shortest time, he passed successively through the stages of occasional use for convivial reasons, frequent indulgence to brace him for task or pastime,
periodical paroxysms of alcoholic debauchery, until at forty he found himself a continuous drinker impelled by an irresistible and insatiable craving, with marked stigmata of degeneration and a growing incapacity for professional duty. His wife and daughters, for years subjected to constant humiliation at his hands, had come to feel the pinch of want, and smarted under the construction placed upon his actions by a merciless society. Affection had died in his heart, and with it both self-respect and religious sense. In such a case, at least a year is usually required of forced feeding and restricted activity to repair the damaged brain cells and restore the patient to normal efficiency. But within a week the mental attitude may be permanently changed and the craving for stimulants obliterated, without experience of the nervous exhaustion and unrest that usually accompany discontinuance of the habit. Since his first seance (now five years ago) Mr. A. has experienced no desire for alcohol. The suggestion was given that he would no longer deceive himself with the thought that he could safely take one drink and then stop, but that it was impossible for him ever to want a drink or ever to take a drink for any conceivable reason. He has abstained, not through conscious effort, but spontaneously because of an ingrained disinclination to drink, conditioned by subpersonal control. In this instance it was further necessary to forbid the use of tobacco, the inhalation of which in the form of smoke, by depressing the nerve centers and thus creating an imperious demand for its antidote (whiskey) explains seventy-five per cent. of all the cases of dipsomania. The chain of cause and effect was broken at a blow. The patient neither smokes nor drinks. And he has made amends for the suffering he inflicted on his family by exalted action meriting their respect and love. His pastor (Dr. Hillis, of Plymouth Church), writes of him: "His face is all but transfigured. I have never seen a man so happy or more grateful."

In contrast with the foregoing is the following extreme case of chronic poisoning by methylated spirit (fusel oil) excessively indulged in between the ages of sixteen and thirty-seven. Every Saturday night W. B. drank to intoxication, and committed other excesses that fill his mind with remorse,
so that his condition borders on theomania. He imagines the people riding on the car with him know all that he has done, and that the children on the street are cognizant of his misdoings and are calling him names significant thereof. He is afraid of everything. He suffers from hallucinations of vision. A woman with a baby carriage is forever following him. He sees green flashes in the dark, and men going through various motions, and cats flying in his face. Flies attend him everywhere, hovering about, showing him how to use his tools, etc. He does not know the difference between a real and an imaginary fly, and continually shoos the latter variety. Three separate voices talk to him, coming up the dumb-waiter shaft or speaking through the window. They never "let up," even while he is at work, and at times seem so real that he looks around to see who is speaking. One voice will keep repeating some message, laying stress principally on his sins. If he is reading a paper, it reads ahead of him. He hears people shouting, "Here comes the fellow with the white hat on!" Three years ago his mind gave way, and he took a flat-iron and went upstairs to kill a man who was calling him vile names, the man being perfectly innocent. He rallied from this seizure, but returning to his fusel oil, he has become subject to melancholy spells and to attacks of amnesia so that he loses his sense of identity for days at a time.

This is not a common case of three sheets in the wind, but rather of a noble brought to ninepence through incurable degeneration of the brain. There is no hope for such a victim in mental thereology.

By means of the enlightened employment of hypno-suggestion, the transliminal self of the ordinary inebriate may be placed in control. So it is no longer a valid argument for a man to hold that he gets drunk because he cannot help it. Statistics show that the treatment of alcoholic subjects by suggestion (in this country and abroad) gives at least seventy-five per cent of radical cures. All other known methods have never given more than thirty per cent.

Dipsomaniacs, as a rule, are easy subjects, in that they yield readily to the hypnotic influence, and accept unconditionally the suggestions communicated by the operator.
Regular drinkers may be dealt with whenever they can be induced to sober. Periodic drinkers should be treated just before the close of the cycle of sobriety. Regularly recurring debauches have periods of varying length, the longest in my experience being three years; and I have satisfied myself that in many instances a relationship exists between the abuse of tobacco and the oncoming of the irresistible thirst, the depressing effects of the nicotine instinctively suggesting recourse to the antidote. Periodic drink storms are usually forecast by significant indications well known to the family and friends of the victim — irritability of temper, unreasonable suspicion, so-described “cranky spells,” abnormal restlessness, unaccountable depression. Immediately upon the appearance of these symptoms the patient should be treated by suggestion, before opportunity is given for indulgence of the craving. Such a subject frequently recognizes his danger and sincerely wishes to be cured. He is tactfully conducted into the transliminal sphere, and then assured that in accordance with his own desire and decree, he has lost all craving for beer, wine, whiskey, that alcohol in any form is repugnant to him, and, as a safeguard, that he cannot swallow it, cannot carry the containing glass to his lips. The society of low companions is tabooed; the pleasures associated with drink and the glamour of the bar-room are pictured as meretricious and placed in vivid antithesis to the chaste delights of home life. The physical, mental, moral, and economic bankruptcy that accompanies dipsomania is held up before the view of the sleeper, and he is forced to the conviction that begotten of this apprehension has come into his soul an abhorrence for drink and all that it stands for. He realizes the presence of efficiency within him adequate to the enforcement of radical abstinence as the principle of his life; and he is rendered insensible for the future to any such combination of passion and allurement as has usually constituted temptation. So he is led instantaneously to scorn recourse to alcoholic stimulants, or to extrinsic exaltation of any kind, either for convivial reasons or in time of depression, misfortune, or sorrow, and to depend exclusively, under any mental or physical strain, on the units of energy legitimately manufactured out of nutritious food, non-intoxicating drinks,
air, exercise, and sleep. The subpersonal mind is then
directed to the vocation or the avocations, or both, as circum-
stances suggest, and a career of wholesome activities and
satisfactory success is imaged as the legitimate result of the
abandonment of the compromising habit.

Hypnouggestion here is clearly of the nature of inspira-
tion. It is a summoning into control of the true man. For
the patient freely expresses his best self post-hypnotically
without effort, from a plane above that of the will — the
plane of apprehension and spontaneous control along lines
of thought and action that are worthy and wholesome. And
inspiration, to be efficacious, cannot be mere lip work or
rote-lesson. It implies a belief in the suggestions offered,
an eloquent and incisive manner born of the courage of con-
viction; in short, it is a transfusion of personality. Per-
functory speeches are of no avail, for the mind of the subject
is endowed with supranormal insight, at once detects the
disingenuous, and declines impulsion at the hands of an
insincere or lukewarm operator.

A sine qua non of success is the consent of the patient, an
honest desire on his part to reform. Habitual drinkers,
those who "soak," as Goldsmith described it, do not, as a
rule, wish to be cured. They enjoy indulgence in alcoholic
beverages and the false pleasures that attend it, and about
ninety per cent of them, women as well as men, resent the
approaches of those who desire to save them. Sometimes,
when no other form of appeal is effective, they may be
frightened into a realization of the fact that constant use
of alcoholic stimulants will result in organic changes in the
liver, kidneys, and brain, or by lowering the general powers
of resistance and at the same time irritating the bronchial
tubes and the lungs, through which the alcohol is in part
eliminated, markedly predisposes to pneumonia and tuber-
cular consumption. In fact, immoderate drinkers may, in
sober intervals, be made to realize, not only that they are
physically depraved, but intellectually degenerated as to the
faculties of memory, attention, concentration, judgment, and
that they are deficient in business tact and in the general
address essential to success. Once apprised of their ene-
rvated mental condition, they are overcome with remorse and
honestly desire to correct the habit. Under these circumstances it is comparatively easy to persuade a patient to accept treatment, and a rescue may be effected in a week's time. To quote a Hindu proverb, "In the awful silence that follows the storm, not in the silence before it, we should search for the budding flower."

No reference is here intended to dipsomania as a true circular insanity, characterized by irresistibly compelling paroxysms of thirst and accompanied with uncontrollable nervous and mental excitement. It has been truthfully said that a sufferer from this disease is insane before he begins to drink, and would continue to be insane during his period, if whiskey were unobtainable. Thus there may be dipsomaniacs who have never tasted alcohol. The alcohol is a secondary factor. In other words, a man may drink because he is crazy, or be crazy because he drinks, or both; and a physician who grapples with the combination has a veritable wolf by the ears.

It is not claimed that the tendency to relapse is absolutely obliterated by suggestion. The cure may or may not be permanent, as is the case with rheumatism, quinsy, bronchitis, intermittent fever, with its distinct germ and distinct specific. No physician is asked to guarantee a patient against a recurrence of tonsilitis, especially when the patient deliberately exposes himself to the appropriate conditions for a relapse. More cannot be expected of the physician suggestionist who is not a miracle-monger. The utmost he can do in a prophylactic line is to reject all compromises in his treatment, suggest total abstinence, forbid exposure to temptation, and render insensible to the psychology of the saloon. Experience proves that it is always better to deal in drink-habit cases with the nearest of kin rather than directly with the patient, who naturally over-estimates his power of resistance and is singularly impatient of restraint. Courting a conflict with the 'démon de' drink, as many do, is playing with fire.

Various reasons are advanced by backsliders to explain their relapses, and some of them are most trivial, as the death of a favorite dog, dull times, inharmony in the family. Some drink when they feel best, others when they feel worst, other
some because they deem it a satisfaction to "go off on a tear and tank up." One man used the argument that he had gone sober so long he was justified in spreeing till he became "mulled"—which implied the ingestion of a quart of whiskey before breakfast and twenty-five bottles of beer of an afternoon. A lady admitted her motive to be the delight she experienced in drinking with her admirers and listening to their flattery and compliments. Another lady, with a much greater show of reason, explained her periodicals as due to the cumulative brain fog resulting from a miscellany of little worries. Many drink to dispel the blues, to induce sleep, to rouse courage or confidence.

A very intelligent inventor offered four reasons for indulgence, viz., requirement of the system in consequence of physical depression, sociability, business necessity, and cold blood or "pure cussedness." Sometimes the drinker has no object in view, but seems to be actuated by a sense of obligation to a long-standing habit, periodical conformity to which is fraught with discomfort and misery. The psychology of this latter mental state is illustrated by the following experience of a friend, who last summer met a farmer acquaintance on the public highway, trudging along to a nearby village. "Where are you bound for, Uncle Billy?" he inquired, in a spirit of neighborly bonhomie. "I am going into Johnstown," was the reply, "to get drunk, and O Lord! how I dread it!"

I have already stated that seventy-five per cent of inebriates are abusers of tobacco, and that in this latter abuse is to be found the proximate cause of much alcoholic intemperance. The real danger to the smoker consists in the habit of inhalation, whereby the volatilized poisons of tobacco are brought into immediate contact with many hundred square feet of vascular air sac walls in the lungs, and are thus promptly and fully absorbed to be diffused into the blood and carried on their fatal errand to the several organs of the body. Young subjects immediately learn to inhale. They are, moreover, markedly susceptible to the influence of these poisons, which include ammonical vapors that dry the throat and liquefy the blood—deadly carbonic oxide that induces a drowsy, dizzy condition and disturbed heart action—prussic acid in combination, and nicotine equivalents, all
virulent nerve poisons, capable in their conjoint action of paralyzing the muscles of breathing and so causing death. Schoolboys who become addicted to cigarette smoking exhibit in a brief time its demoralizing effects. Their sallow skins, sunken eyes, and discolored fingers betray the secret they would like to conceal. They are listless, forgetful, backward in study, and conspicuously lacking in power of attention and application. As the habit is pushed they become excessively nervous, suffer from shortness of breath, fluttering heart, giddiness, tremor, insomnia, irritable throat, impaired digestion, malnutrition, and often from dimness of vision, which has been known to culminate in blindness. The whole system becomes tobacco-nized, the organs and tissues of the body smelling of tobacco reek.

The mental decline is appalling. Boys who begin the use of cigarettes at six or seven years of age, as many do, break down and may become hysterically insane. Boys who contract the habit later in their youth, going to the usual extremes in the abuse of cigarette smoking, are likely to become nervous bankrupts before they are twenty-one. But gravest of all the resulting evils is the lessening or complete loss of moral sensibility, with a conspicuous tendency to falsehood and theft. The moral propensities are eventually destroyed because of the destruction of those elements of the brain cells through which moral force is expressed. The victim degenerates into an unmanly, unprincipled, irresponsible doddy-poll, in splendid settle for the penitentiary or the madhouse.

Cigarette smoking has become a stigma of degeneration, and for the best of reasons. The association with the habit of moral involution should insure its extinction among refined persons. It is the recognized brand of ethical instability. Especially to be deprecated is its spread among American women, who would do well to remember that it renders a woman not only common, but in the end morally insecure. Society may be tolerant of the abuse in men; but the bounds within which a lady may transgress and remain a lady are too narrow to make any license safe.

The circulation through the brain of tobacco smoke poisons, and alcohol destroys, the capacity for expressing through reform. able by able by administ administ
While metabol metabo cell prot cell prot blood-ve blood-ve exaggers exaggers bodies. bodies. withdraw withdraw for a da for six r for six and inc and inc resolutic resolutic brief pe brief pe capsicu capsicu a valeri a valeri sion sion, an sion, an sleep. sleep. chronic chronic times be reductio times be reductio who, to who, to relatives relatives as to the as to the are prop are prop tongue l tongue l such cir such cir self may self may The The dimin rel the bra the bra Its adv Its adv: : control control physica physica ment o ment o breakin breakin fessio fessio treatme
Hypnotic Treatment of Inebriety

through the brain earnestness and sincerity in efforts to reform. Fortunately, the damage done to the cells is repairable by the discontinuance of the poisons and the judicious administration of nourishment, general and specific.

While hypnotic suggestion may regulate a disturbed metabolism in the nerve organs or check atrophic changes in cell protoplasm, it cannot be expected to repair lesions in the blood-vessel sheaths or suddenly tone for the results of an exaggerated destructive metamorphosis in the nerve-cell bodies. Therefore, in my treatment, alcohol is immediately withdrawn; stimulating liquid food is given every two hours for a day or two; the phospho-glycerates are administered for six months to a year, with a view to refining the quality and increasing the quantity of the lecithin through which resolution and general manliness are expressed; also, for a brief period, a tablet containing strychnia, nitroglycerine, capsicum, and atropine; fluid extract of coca, if required; a valerianate to control temporarily undue nervous expression, and bromide and chloral, where necessary, to induce sleep. In the insanity of extravagant drinking, coupled with chronic nicotine poisoning, suggestive treatment may sometimes be delayed with advantage until after the compulsory reduction or withdrawal of the artificial stimulant. Patients who, to rid themselves temporarily of the importance of relatives accept an institutional life, with mental reservation as to their habits at the termination of the period of treatment, are proper subjects for suggestion while in sanatorium. "The tongue has taken the oath, but the mind is unsworn." Under such circumstances with the craving in lull, the transliminal self may be successfully impressed.

The success of the treatment outlined above bears a distinct relation to the amount of injury already inflicted upon the brain cells and the accompanying mental deterioration. Its advantage consists in the rapidity of restoration to self-control without the necessity for effort of will, without the physical discomfort or suffering that usually attends abandonment of the habit, and, most conspicuously, without the breaking of family ties and the enforced absence from professional or business duties that are implied in sanatorium treatment.
The views here advanced are based upon an experience with some eight hundred cases of alcoholic intemperance extending over a period of nine years. Of these, between eighty and ninety per cent have been permanently cured. Of the remaining fifteen per cent a number cannot be traced; a number indifferently submitted to one or two treatments out of deference to the entreaties of friends, and hence there was no objective self-surrender; a few had become paretic before the treatment was begun; a small fraction were society women who, in my experience, are almost without the pale of hope. In no other condition that I have been called upon to treat by suggestion am I so unreservedly warranted in saying to the sufferer, "If you sincerely desire to be cured of this malady, and will carry out my instructions faithfully for a year, you can be cured beyond a peradventure."

The third Norman Kerr memorial lecture is to be delivered July 18, 1909, in London, by Dr. Laitinen, Professor of Hygiene in the University of Helsingfors, on "The Influence of Alcohol on the Immunity." Professor Laitinen is a scientist of great repute, and is President of the Finland National Board of Health, and member of numerous societies in continental Europe. The lecture will be delivered in English and will attract a great deal of attention.
THE GREAT TEMPERANCE PIONEERS IN THE MEDICAL PROFESSION AND THEIR WORK FOR THE LAST CENTURY*

BY HENRY O. MARCY, A.M., M.D., LL.D., OF BOSTON

IT is often stated that the medical profession is responsible in a very considerable degree for the drink habit and the use of narcotics. To this charge the physician may in a measure plead guilty.

For the indefinite past, alcoholic preparations were believed to be, in the correct sense of the word, stimulants, although their narcotic effects were well known. When taken in large doses the direct and remote effects were accepted as injurious.

There have even exceptions to this rule, both in and out of the profession.

In American medicine we find illustrious men who have given much time to scientific research work to show the effect of alcohol upon the human system.

Dr. Benj. Rush, of Philadelphia, perhaps the most noted physician of his time, prominent in every good work, in civil as well as professional life, a signer of the Declaration of Independence, was pronounced in his opinion as to the evil effects of alcohol, both as a beverage and as a medicine. In 1785 he published a pamphlet of thirty-two pages entitled "An Inquiry into the Effect of Ardent Spirits upon the Human Body and Mind, with an Account of the Means of Preventing and of the Remedies for Curing Them." The entire article is worth a republication to-day. In an objective way he illustrates the effect of alcoholic drink by what he calls his moral and physical thermometer. I am indebted to Dr. Chas. A. Ingraham, of Cambridge, New York, for an admirable historical address in which he refers to this article of Dr. Rush in a most complimentary way. He quotes the following as a curious anticipation of the modern gold cure as it took form in the fertile intellect of Dr. Rush. The association of the idea of ardent spirits, with a

*Address before the Saratoga meeting of the World's Temperance Congress, June, 1908.
painful or disagreeable impression upon some part of the body, has sometimes cured the love of strong drink. This appeal to that operation of the human mind, which obliges it to associate ideas, accidentally or otherwise combined, for the cure of vice, is very ancient. It was resorted to by Moses when he compelled the children of Israel to drink the solution of the golden calf (which they had idolized) in water. This solution is made, as it most probably was, by means of what is called hepatus sulphuris, was extremely bitter, and nauseous, and could never be recollected afterwards without bringing into equal detestation the sin which subjected them to the necessity of drinking it.

Somewhat recently I had occasion to examine a little carefully into the practice of medicine during the early part of this century by the leaders of the profession in Philadelphia and Baltimore. I was surprised to find that Dr. H. G. Jameson, of Baltimore, emphasized the injury that occurred from the then common habit of a reduced regimen, the use of calomel and other cathartics, and that he totally forbade the use of all kinds of spirituous liquors by his patients. Referring to his frequent and continued observation as to their injurious effects, he concludes by saying, "We must content ourselves, here insisting upon the facts, whatever may be thought of our theories."

Unfortunately we gather far too little of cotemporaneous opinion from the writers of text-books. One of the chief attractions of autobiographies are the pen pictures of the period. In this respect the autobiography of the late Dr. John C. Warren, of Boston, is of exceptional interest. It portrays the so-called Washingtonian movement and I can hardly do better than let the doctor tell his own story since it is cotemporaneous and graphic.

"In 1827, I joined the Temperance Society. My father, Dr. John Warren, was vice-president in 1813.

"In the same year I brought forward temperance resolutions in the Massachusetts Medical Society; which, after a violent opposition, particularly from Dr. T——, were carried in a large meeting, with very few dissensions. The Rev. Doctors Channing, Gannett, etc., were the most active men at that time in the temperance cause.
"From that period I have followed up the temperance re-
formation. Mr. Alden Bradford, Mr. Pierpont, Mr. William
Sullivan, then gave in their aid. Soon after, the orthodox or
Calvinist clergy took up the matter; and, by a slow and regu-
lar movement, the country was more or less brought under
the influence of temperance principles.

"In 1837 I went to England, and conferred with the mem-
bers of the British and Foreign Temperance Society (who
were very cordial and acted as chairman of a temperance
meeting in the heart of the city of London.

"In the same year I had a conference with some members
of the administration of King Louis Philippe in France, and
laid before them statements showing the importance and the
progressive advance of the temperance reform.

"About the year 1840, in consequence of the formation of
the Washingtonian Societies, the Massachusetts Temperance
Society — the oldest association — suspended its proceed-
ings, resuming their labors occasionally at such opportunities
as occurred for making themselves useful.

"In 1848 we made publication of the documents of the
Massachusetts Temperance Society, recording the principal
facts in its history. At this time (February, 1849) no
licenses to retail are allowed by law in Boston and the greater
part of the state of Massachusetts. The same is true also
of several other states.

"In the summer and autumn of 1849 I received letters from
various parts of the country, requesting my opinion of the
necessity of alcohol in materia medica. After some months' re-
fection I wrote a short article for general distribution, show-
that, in many cases, alcohol was not necessary; that it
might be dispensed with in the preservation of infusions;
that in many cases of tinctures a substitute might be found
in a wine produced by the fermentation of a vegetable in-
fusion with sugar. This preparation I had made, and
tested its effect, first, by taking it myself; second, by giving
it to others. The preparation turned out to be mild, agree-
able, and efficient in its operation.*

"In the course of the past summer (1849), the famous
Apostle of Temperance, Father Mathew, visited Boston,

*This article was published and distributed by the Massachusetts State
Temperance Society."
partly on the invitation of the Massachusetts Temperance Society, on my application. I met him at the Roxbury boundary, and saluted him in a short speech, to which he replied. On the next day he drank tea at my house with Bishop Fitzpatrick, Mr. William Appleton, and others. Father Mathew employed some months in traveling about this state to give the pledge to many thousands of individuals, and afterward visited the Southern cities.

"For the last seven or eight years, I have ceased to give wine at the dinners of the Agricultural Society, and at other dinners; also at evening parties of scientific persons and others. In the early part of my establishment it was thought necessary for every young housekeeper to lay in a stock of wine, which might grow old, and ripen; and, at that time, I used two or three glasses of strong wine daily, and, at some periods, brandy and water, though not strong. When I began to take an interest in the temperance cause, in the year 1827, I gradually gave up the strong wines, and took the weak French wines. On going to Europe in the year 1837, I was led, while in England, to resume them, though not with good effect. Two or three years after returning from Europe, I gave up the use of it entirely, except as an article of the materia medica; and always found myself better without it, except in case of unusual debility, when, used as a medicine, it has sometimes appeared beneficial.

"On the whole, I can with confidence say, that, if I had never tasted wine, my life would have been more healthy and longer and more comfortable. The efforts which I have been called to make in the temperance reformation, operating, as they have done, more extensively on the prosperity and happiness of the community are a source of more satisfaction than any other labors. Probably my other occupations might have been as well or better performed by some one else; but perhaps it would have been difficult to find another person who would have been willing to undergo the opposition, ridicule, labor, and expense in the cause of temperance."

His biographer, Dr. Edward Warren, speaks of the customs of 1820 to 1830 in Boston, and states it was the prevail-
ing opinion that all mechanics, farmers, or operators of any kind should receive a regular supply of spirit. Among the higher classes, not only wine, but alcohol in some form was in daily use. The smoking punch bowl in winter or the ice pitcher in summer was no uncommon addition to the sideboard, which was generally well supplied with every variety of spirit that the taste of each visitor could demand. Dr. Warren commenced his labors with great earnestness and with an interest which never abated through life.

He prepared a series of resolutions which were heartily adopted. They declared that the use of ardent spirits is unhealthy and inconsistent with a vigorous action of physical and mental power, and that the habitual use of wine is neither necessary nor salutary. Such resolutions were signed by most of the physicians in Boston, and published with a great beneficial effect.

The number of drinking houses was diminished and laws were enacted which greatly lessened the sale of liquors. Dr. Warren published a small neat volume entitled, "The Effects of Alcohol," which was widely distributed, under the supervision of the Massachusetts Temperance Society, which was founded in 1813. In a record of this society under date of January 27, 1857, is the following:

The council met at No. 2 Park Street,—Hon. Stephen Fairbanks in the chair.

The treasurer announced the receipt of two thousand dollars from the administrators of the late Dr. John C. Warren, the same to be safely invested, and the income thereof devoted to the dissemination of temperance publications.

The limit of this paper permits reference to only one or two more of the great exponents of temperance among medical men.

The late Dr. Henry D. Didama, of Syracuse, N. Y., furnishes a noteworthy example. Early in life he became convinced that alcohol in any form was not alone unnecessary as medicine, but its use was generally harmful. For more than fifty years he was a leader in the medical profession in the state of New York, the founder of the medical department of the University of Syracuse, and a wise and tactful teacher.
and practitioner. At his death he was president of the National Medical Temperance Association. He published many articles upon the effects of alcohol in both health and disease. Many thousands still hold him in tender, loving remembrance, and I am sure he felt that one of his most valuable services rendered was from his study of the deleterious effects of alcohol upon man. He was so sweet and tactful in his teaching that he made few, if any, enemies in the presentation of the subject, and even those who differed from him in personal practice were willing to agree with him as to conclusions.

Dr. Nathan S. Davis, of Chicago, is perhaps the most noteworthy example which the medical profession has furnished in the scientific teaching of the study of alcohol upon the human system. It has been my rare good fortune to have been a colaborer with him, as well as with Dr. Didama, in medicine for more than thirty years.

I am indebted to Dr. I. N. Danforth's recent life history of Dr. Davis. His first publication upon the subject which I have been able to find was an address delivered on Christmas Day, 1854. Delivered at the request of the students of Rush Medical College, entitled, "On the Effects of Alcoholic Drinks on the Human System and the Duties of Medical Men in Relation thereto." The last of his many publications upon the subject was in January, 1904, entitled, "Is Alcoholic Medication Necessary? In other words is alcohol, as it exists in various fermented and distilled liquors, a necessary remedy in the treatment of diseases of any kind or in any stage of their progress." During all the years of his long and remarkable career, he was an active worker in the temperance cause, and no one will ever know how many men he saved from that terrible fate, the death of the drunkard. His hatred of alcohol was so intense that he was often called a "temperance crank," a "fanatic," a "faddist," and various other names which were intended to be opprobrious, but were in the highest degree complimentary.

It must be remembered that in Dr. Davis's early days the use of alcoholic beverages was rather more common than the use of "aqua pura"; nor was it regarded as improper or
specially harmful. The minister, the lawyer, and the doctor each took his "toddy," without any idea of its impropriety, and in the country stores, rum was sold as openly as, and rather more frequently than "lamp oil" or molasses. When the merchant made out his yearly bill against his customers — professional men included, the item "one gallon of rum" occurred about as often as any other item, and the farmer generally needed an extra ten gallons to "get through having."

"It was several years after Dr. Davis had been a married man, or rather boy, and had graduated in medicine and become a legal voter, before the temperance cause acquired sufficient momentum to be respected or even felt. In those days it took some backbone for a young man to allow himself to be known as a "teetotaller," as the early temperance advocates were contemptuously called, but our young doctor, standing almost alone, swerved not a hair's breadth from his principle of absolute and uncompromising abstinence."

From the very beginning of his medical practice to his last days, he absolutely prohibited the use of alcohol as a therapeutic agent, and not only that, but he talked against it to his patients, argued against it before various medical societies, and in his more public and popular addresses, and wrote against it in medical and secular periodicals far and wide.

It would be impossible at this day to gather all of Dr. Davis's essays and addresses against the use of alcohol in any form, either as a beverage or as a curative agent, but if this could be done, the collection would be about as formidable an array of anti-alcoholic literature as could be desired. Nor must it be forgotten that as long ago as he began practice, and in fact down to quite recent times, the use of alcohol in medical and surgical practice was not only very common, but its use was, by the majority of physicians, regarded as indispensable.

When he came to Chicago, in October, 1849, he brought his temperance principles with him, and they certainly seemed to thrive in the uncongenial atmosphere of this their frontier city, with its cloud of frontier vices. Of course
he preached temperance to the students of Rush Medical College, and later to the students of Chicago Medical College. A little later he delivered and published a lecture descriptive of some original experiments in relation to the effects of alcohol on respiration and animal heat.

It is perhaps a fair and just statement to say that Dr. Davis came to be regarded as one of the best equipped men in the country in regard to the treatment, or more properly the curative management of inebriety. He was chairman of the first Finance Committee of the Washingtonian Home Association; he was also chairman of the Executive Committee from 1865 to 1881. During all these years he was almost invariably present at the stated meetings of the Executive Committee, no matter how inclement the weather or how crowded he might be with professional cares. As one looks over the early records of the Washingtonian Home, one is amazed at the constancy of his attendance at the meetings of the Executive Committee, as well as the meetings of special committees which were frequently required for special duties, and of which "Dr. N. S. Davis" was pretty sure to be a member.

It is well known to all medical men, and to a great many of the laity, that Dr. Davis was regarded as the Father of the American Medical Association, now the most powerful and influential medical organization in the world. Of course his influence in the association was greater than that of any individual, and it is interesting to observe that he never missed an opportunity to urge his temperance doctrines upon this august body. Especially did he enforce his views as to the value — or rather harmfulness of alcohol as a remedy for the treatment of disease in any form. In fact, he took the positive and rather radical ground that, under no circumstances, could alcoholic stimulants be regarded as necessary or even useful. The doctor presented several papers to the American Medical Association enforcing his views, all of which are published in official reports of the "Transactions" of the Association. He also presented various papers based upon carefully conducted experiments, before medical societies or other scientific bodies in various parts of the country, all converging on the single point of
the absolutely toxic effects of alcohol, whether as a beverage or as a medicine.

By way of securing a favorable hearing for his views and of assuring their perpetuation among medical men, he aroused the movement which resulted in the organization of the "American Medical Temperance Association," in 1890, and at the meeting in Detroit, in June, 1892, he delivered an address on the "Objects of the American Medical Temperance Association," in which the work of the association was admirably set forth.

The experiences of the illustrious men which I have referred to in this paper cover the period of American history from the establishment of our independence to the present. They had many co-laborers of less note, but my object has been to show that the influence of the drink habit upon the nation has long been a subject of serious thoughtful scientific investigation. Such men live on in their influence into the indefinite future.

Their mantles have fallen upon worthy successors. Others in their turn will continue in the good work, for the battle is not for the day, and in one form or another injurious effects of alcohol will probably continue for generations yet to come.

Coffee inebriates in Paris are regarded as the most hopeless cases for hospital treatment. The brain and nerve degeneration is so extensive that dementia and insanity is the rule and recovery the exception.
INEBRIETY IN ITS RELATIONS TO CRIME*

BY DR. G. FRANK LYDSTON, OF CHICAGO, ILL.

ALCOHOL is one of the best of man's servants and unquestionably his worst enemy. Alcoholism is primarily a toxemia, pure and simple, whether it be acute or chronic. It should really be regarded as a double toxemia. Every function of the body is vitiated and perturbed by it. Metabolism and the integrity of the glandular system especially are perverted, and, as usual under such circumstances, secondary toxemia results. Auto-intoxication, then, may be inferred in every alcoholic subject. So far as crime is concerned we have to do only with the effects of the double toxemia upon the nervous system; which effects may be primary or secondary. The effects of alcohol upon the circulation are important here, only in so far as they are productive of functional or organic change in the nervous system.

The inebriety question is as important from an evolutionary standpoint as is any other condition bearing upon the physical and social welfare of the race. The moral factor per se bears no more relation to the causation of inebriety than it does to typhoid fever. Certain moralists claim that, inasmuch as the inebriate wilfully took the first drink, the question is of moral significance only. This is as logical as that typhoid fever is to be cured by moral persuasion, because, forsooth, the victim voluntarily drank water containing the germs of the disease.

The moralist forgets that he is not confronted by the man as he took his first drink, but by one who has systematically abused his physiologic functions. Admitting that in certain cases the insatiable craving for liquor is a result and not a cause of alcoholism, the physician must accept the physical conditions as he finds them. Whether or not the inebriate was primarily predisposed to drunkenness is a secondary matter. He is called upon to treat a man whose tissues and organs have been saturated and thoroughly poisoned by a

*Address delivered by invitation at the meeting of the American Society for the Study of Inebriety, Chicago, June 5, 1908.
Inebriety in its Relations to Crime

No logical physician claims that a morphinomaniac is to be treated entirely upon moral grounds. Such subjects are none the less diseased if the craving for morphia is a result of the drug and did not exist primarily. In brief, alcoholism should be regarded as a disease-producing vice, and a vice-producing disease.

Susceptibility to alcohol varies as much as susceptibility to other poisons. Some persons would be killed by half a grain of morphine, whilst others tolerate many times this quantity. What is temperate indulgence in one man is gross intemperance in another. The amount of alcohol tolerated by a robust man would be most disastrous in its effects upon a child or woman. Nervous susceptibility, the condition of the eliminative organs, and the sensitiveness of the circulatory system modify the effects of alcohol. This susceptibility is often discovered late in life. Alcohol prescribed as a remedy has wrought great harm in such cases.

What are the results of alcohol taken in quantity sufficient to produce physiologic effects?

Briefly, alcohol produces primarily a pseudo-stimulation, and secondarily exhaustion and perhaps a varying degree of inhibition of the heart’s action, and paralysis of the blood-vessels. It causes congestion which, if prolonged, is followed by a deposit of connective tissue, with resulting condensation of the tissues of the brain, spinal cord, nerves, and important organs of the body.

The effects of alcohol are well shown by the drunkard’s liver. Here, as a consequence of long-continued congestion produced by alcohol, occurs the formation of new tissues as hard and firm as those of an ordinary scar. This contracts and strangles the liver substances, and finally so reduces the size and functional capacity of the liver that it ceases work altogether, with a fatal result. Similar changes occur in the kidney. Considering the extreme toxicity of the biliary and renal secretions, an element of secondary toxemia may be readily appreciated. Moral persuasion will not restore a gin liver or kidneys to a normal condition.

The conditions described in the liver and kidneys occur in greater or less degree in the brain, its coverings and blood-vessels. Even where there is as yet no permanent thicken-
ing of tissues, there is produced by the temporary influence of alcohol disturbed circulation. That diseased brain circulation and structure cause defective reasoning and will is incontestable. Moral means of restoration of the will where such changes have occurred are mere moonshine. This is not, however, an argument against judicious moral means as an adjuvant in the correction of inebriety in general, nor is it a denial of the fact that the strong emotional influence of religious conversion often cures inebriety.

In the majority of cases of inebriety there is a primarily weakened will power, incidental to unstable nervous equilibrium. This may be due to acquired organic disease or to heredity, or may be peculiar to the individual himself. Its recognition is imperative, in studying the general relations of alcohol to vice and crime, for it is the key to the entire situation.

The question of heredity in alcoholism is important. Whether the acquired drunkenness of the parent may be transmitted to the child has been seriously questioned. Probably, in most instances, a bad nervous heredity in the parent is responsible for his own and his child’s inebriety, but I firmly believe that indulgence in alcohol in one generation may appear as neuropathy and inebriety in the next, or perhaps in several succeeding generations. Whatever the explanation, a considerable proportion of the children of inebriates become drunkards. Example and early training, of course, often play a subordinate role here.

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

The same primary instability of will is often responsible for other forms of vice, and for crime. This instability is enhanced by alcoholic indulgence. The intimate association of alcoholism with all forms of viciousness and criminality is easily explained upon this basis.

The existence of an unstable will may be unsuspected until its development by the first indulgence in liquor. Add to this primary feebleness of will the poisonous effects of alcohol on the brain, and it is easy to understand that after the individual has been a drunkard for some years he is in a condition in which moral means, and too often even physical means, are of very little service.

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

Physical degeneracy alone excepted, alcohol is unquestionably the most potent factor in the vice and crime problem. Here is the only phase of the subject in which the materialist and moralist have ever met upon common ground. Arguments against the truth of the proposition that inebriety is the most important factor in the etiology of vice and crime have had for their basis the cupidity of those who manufacture and sell liquor, the apologies of those who resent any reflection upon the social glass,—the "moderate" use of alcohol,—and, finally, the egotism of the respectable inebriate who sees in the proposition an implied reflection upon his own moral character.

Statistics on the relation of alcohol to vice and crime have
been juggled with *ad nauseam*. Communities in which alcoholic beverages are freely indulged in have been compared both favorably and unfavorably with those in which blue laws prevail. I unhesitatingly state my belief that statistics bearing upon this question are worthless. The relation of alcohol to vice and crime is not to be settled by mathematical computation and comparative statistics, but by physiologic and clinical facts.

Let us revert again briefly to the action of alcohol upon the nervous system. We will begin with the premise that a maintenance of nervous equilibrium is absolutely essential to right thinking and right acting — this from the physiologic, not from the moral viewpoint. If this is true, it is obvious that anything that seriously impairs nervous physiology must necessarily impair the individual's conception of his proper relation to the community. Granting that this is not seriously impaired, but is over-balanced by animal impulses, all that is necessary to impel to criminal or vicious acts is a corresponding inhibition of the will. That alcohol brings this about cannot be denied. The loss of environmental control is of especial importance, for with it comes the removal of the thin veneer imparted by civilization in its broadest sense, and the immediate cropping out of the animal that this veneer so difficultly and so imperfectly conceals. The results vary with the dosage of alcohol and the innate susceptibility of the subject.

The dosage and individual characteristics determine, in conjunction with environment and hetero-suggestion, the degree of viciousness or criminality that results. Theft, murder, suicide, assault, sexual crime, indecency, sexual perversion — any or several of these may accrue from the action of alcohol on the nervous centers. That the sense of moral responsibility can remain unimpaired by the excessive use of a poison that seriously disturbs all the viscera, and particularly the brain, is impossible. A drug which impairs brain functions down to the point of coma is not likely to leave the moral sense unscathed.

Alcohol is not a cause of all classes of crimes. Great crimes, demanding mental activity, keen perception, cleverness of conception, intrepidity, fixity of purpose, great me-
chanical skill, fertility of resource, or a profound knowledge of human nature, are not perpetrated by alcoholics. Many crimes, such as gigantic swindling schemes, demand the highest degree of intelligence.

Petty crimes, and crimes of impulse and emotion especially are characteristic of alcoholism. The occasional drinker is more likely to commit crimes of impulse than the steady drinker, whose consciousness of right and wrong is palsied, it is true, but who is too sodden and inanimate to respond to sources of acute brain excitation. Fully seventy per cent of crimes of impulse, brutality, and emotion are committed by persons whose brains are alcoolized. The central organs of control are out of use for the time being, and at such times certain subjects are very dangerous. I say certain subjects advisedly, for, as already shown, all do not act alike under alcohol. Whiskey is a great demonstrator of character. The old adage, "What's in a man when he is sober comes out when he's drunk," had more than a germ of truth in it. *In vino veritas* was meant in a literal, not a figurative, sense.

The true dipsomaniac almost invariably has criminal tendencies that may develop at any time. His criminality, like his periodic spleen, is of an explosive type. The impulse to kill is especially likely to develop suddenly, like an epileptic seizure.

Alcoholism is often a cause of crime which is so plain and direct that he who runs may read. Excessive indulgence in alcohol often so lessens the earning capacity of the victim that sooner or later he cannot obtain the wherewithal to purchase his enemy. His moral sense is lowered and his appetite for liquor increased from day to day. Should necessity demand, he will steal either liquor or money to buy it, or goods that he can sell to obtain money. Few realize what the craving for liquor means. I have known dipsomaniacs to drink the alcohol from specimen bottles in a museum of pathology. Pure alcohol is often drunk by persons who claim that it gives them more drink for less money than any milder tipple. Among the lower classes even benzine is drunk as a beverage.

Whether alcoholism is on the increase in this country has
been discussed from all sides. As usual, statistics have been invoked to prove the question. I have already expressed an opinion as to their value in the issue under consideration. Although the per capita consumption of spirits has decreased of late years, I am convinced from personal observation, that it is on the increase among the higher classes, especially among women. The high pressure life of America has had its effect here as elsewhere. Tippling among women was once rare, and subject to taboo, whilst now it is so common in our large cities as to pass without comment. The frequency with which even respectable women may be seen in public drinking an anteprandial cocktail is a matter of common observation. At ladies' social affairs cocktails are often served; cocktails at women's clubs pass without comment; indeed, they are so common that the situation is often a source of embarrassment to the female teetotater. If the increase of tippling on the part of women does not indicate a lowering of the moral standard of society, the observations and deductions of physicians and sociologists on the effects of alcohol on women are fallacious. The drinking American woman, already neurasthenic, is fostering degeneracy for the race. No pretext is now too flimsy to excuse the taking "bracers" by society women, whose lives are spent in enervating dissipation and excitement. The shrewd "nerve tonic" patent medicine man takes advantage of the fashionable woman's appetite, and has no difficulty in selling his soul-destroying, nerve-wrecking mixtures of alcohol, morphine, cocaine, and other drugs. The only apparently logical attempt to legislate against drunkenness has been made in England. Its practicality has been demonstrated by experience, but it will surely have the effect of lessening crime. The new English law interferes in no sense with personal rights. The right to sell and to drink liquor cannot be denied. The right to get drunk and become a menace and a burden to society, and the right to further debauch and practically rob a drunkard may logically be denied.

The chief features of the act concern saloonkeepers, associations known as clubs, grocers, drinkers, and drunkards, and even "treaters." The saloon-keeper is forbidden to
sell to drunken people. The burden of proof is upon him to show that drunkenness, when reported, was not his fault; that he took all reasonable means to prevent it. The penalty for supplying a drunkard with liquor is a fine, varying in amount, or imprisonment for a month, with or without hard labor. This applies generally to the person who "treats." There are special penalties for saloon-keepers and club managers.

If a man or woman has been convicted as an habitual drunkard, notification, with photograph and description, is made to every establishment in which liquor is sold, and all license holders, saloon-keepers, club managers, and grocers are warned against selling the person liquors. There is a fine of fifty dollars for the first offence, and one hundred dollars for subsequent ones. Clubs must be registered, and must report on their organization and rules. They may sell liquor only on the premises to members and their guests. These restrictions are aimed at bogus clubs, and are fortified with penalties. Grocers are licensed on the same terms as public houses. The grocer who sells liquor under the name of "groceries" is prosecuted.

Other provisions relate specifically to the drunkard. The police may arrest him, even if not disorderly, if he is not capable of taking care of himself, and he will be held until sober. If the drunken person is accompanied by a child under seven years of age, punishment by fine and imprisonment is provided, being aimed particularly against drunken mothers. Habitual drunkenness is a ground for marital separation. Habitual drunkards may be black-listed for three years, and penalized for soliciting drink.

Licenses have been surrendered since the law went into effect. One paper says, "For the first time for a long period not a single case of drunkenness came before the Kettering Bench yesterday. The presiding magistrate said this was due to the new licensing act, which statement was confirmed by the superintendent of police."

The rise and fall of crime in Chicago has been found to correspond with the privileges accorded the all-night saloon.
ACCURACY IN CLINICAL STUDY OF MENTAL AND NERVOUS DISORDERS FROM ALCOHOL*

BY JOSEPH M. AIKIN, M.D., OMAHA, NEBRASKA

It was my privilege to begin the study of medicine under a man who constantly urged, by example and precept, close observance of the mental and nervous phenomena in each patient, for comparison with their normal psychic and neuronic activities. He counselled that the motive in this was equally as important as the physical examination, and that the attention given them should be no less exacting.

As experience increases I am more and more deeply impressed with the thought that possibly in our zeal for an accurate diagnosis based on correct pathology, we too often neglect to familiarize ourselves with our patient's personal equation and the factors composing it — information which is often of vital importance. The pathologist tells us of structural changes in bodily tissue.

The bacteriologist discovers the microbe that seemingly causes these material alterations, and we are apt to expect definite and constant perverted mental or nervous activities. Experience in the animal kingdom does not justify these conclusions.

I would not in the least discourage autopsies and laboratory studies, but it seems conclusive that our diagnostic and prognostic knowledge will evidence efficiency, as we enlarge our logical clinical study of the living. With our multiplied and simplified instruments of precision for examination, we have attained a degree of accuracy in detecting the presence and nature of pathologic conditions in practically every vital organ and fluid of our bodies, not possible to physicians a generation since. Many advances have thus been achieved. The least progress, however, it seems to me has been made in our definite knowledge of conduct sequential to disordered nerve cells. We know that a focal lesion central to a particular motor or sensory nerve will produce definite conduct on

*Read at annual meeting of the American Society for the Study of Inebriety at Chicago, Ill., June, 1908.

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the part of the muscles which they supply, but it would be
an assumption not warranted by clinical facts to state an
equation between known cellular disorders in the brain
cortex of a man and his mental conduct.

Biology certifies to the existence and operation of laws
governing physiologic growth with its attendant mental and
nervous activities; it does, not, however, tell us of any rule
controlling the phenomena of life evolved through pathologic
tissue.

We hale with delight these additions of knowledge regarding
the material changes of bodily tissues, but is it not just
possible that our fascination for the beauties revealed by
pathology have obscured our recognition of psychologic and
neurologic evidence? The young physician with a modern
education finds structural changes and predicts results in
direct ratio to the existing degree of retrogression. The
older physician, not so certain of the tissue changes, weighs
more carefully the evidence of hereditary handicap, and
habit in the individual. It is possible that exceptions are
offered against this comparison of physicians, for we are
training our young men as men before, by bedside experience
in our hospitals and the out clinics of our medical colleges.
True, and that fact is an admission of our prior neglect.
The older physicians of the present, who have acquainted
themselves with the methods of detecting physical conditions
in disease, are our astute clinicians. One may be a veritable
encyclopedia of physiology and pathology and make a brilli-
ant diagnosis, but wisdom in using that knowledge is not
possible of possession except through experience. In the early
months of my experience in hospital work among the
insane I observed with unusual interest one patient, who
passed rapidly through an acute mania to convalescence. He
was intellectual and well educated. A shrewd observer of
men and events, he saw I was a novice in judging the words
and acts of those about me, and their real motives. This
observation, on his part made me the special object of
his petitions for liberty. I asked our senior physician why
this patient was not released and will not soon forget his
simple but wise reply. "Observe him a little longer, then
we will discuss the wisdom of dismissing him." It is need-
less to tell you my judgment was wrong. It stimulated my
desire to investigate the whole personal and family history
before making a diagnosis, and predicting the prognosis.
Family history merits a larger valuation than is usually
placed to its credit in the syndrome of mental and nervous
disorders. In so far as heredity relates to these conditions,
it implies degeneracy acquired through two or more genera-
tions. Any factor at work weakening cellular organisms in
the individual will most certainly show mental or nervous
disorders in succeeding generations.

We are often confronted with mental and nervous delin-
quents, whose personal habits negative the assumption of an
acquired degeneracy and in whom we cannot discover by our
most accurate physical examination any causative tissue
changes. In these the clinical symptoms are our primary
guides toward the physical cause for existing abnormalities.
It was the ever present clinical evidence of some agents,
somewhere, causing mental and nervous deterioration in our
fellowmen, that gave origin to this association of physicians
for the study of inebriety. It was the clinical evidence
called mental deficiency that impelled this association to
name the efficient committee who made diligent and accurate
investigation into the cause or causes of this appalling con-
dition in our school children.

When Dr. MacNicholl reported for his committee that of
fifty-five thousand school children examined fifty-eight per
cent were below the normal standard of intelligence, seven-
eteen per cent were actually dullards, and twenty-five per cent
were very deficient, these surprising facts were the product
of clinical observation. When in the history of the parents
of twenty thousand cases it was found that fifty-three per cent
of the children were dullards where the parents were alco-
holics, and only ten per cent of dullards came from abstaining
parents, we were astonished. Could it be possible that the
time-honored whiskey toddy, good for every ache and pain
of infancy, middle age and dotage, is not constructive but
actually destructive to the nervous tissue of our bodies?

The work of this association has clearly shown the inade-
quacy of laboratory training in qualifying physicians for
"recognition on sight" of psychoses and neuroses proxi-
mately or remotely caused by alcohol. Through the efforts of this association the eyes of our profession are beginning to recognize the wealth of opportunity for interesting and profitable clinical study of conduct on the part of the nervous system, in those with whom we touch elbows every day.

We are learning to rightly interpret the source of mental and nervous acts, classed as peculiar, unusual, strange, or eccentric, and give them a proper setting in the whole range of individual conduct. As medical men we see underneath it all a crippled nervous system which is the dynamo to generate, transmit, and control every thought and act.

We know that nutritional changes in certain nerve cells are primary to weakened, perverted, or lost physical powers, and no less certainly do like conditions in other neuronic tissues cause weakened, perverted, or lost mental powers. The evidence, too, abundantly supports the fact that uniform results are not a necessary sequence to similar pathologic changes in different individuals, nor at all times in the same individual. The particular poison responsible for these changes may not with certainty be determined in every case, but the most obtuse observer knows that alcohol is the most harmful of all. The unlearned pugilist, the more cultured gymnast, the traveler in torrid or frigid zones, the soldier on duty, each regard alcohol as a hindrance to their best efforts.

Lord Roberts forbade its use among his troops in the Soudan, and Sir Frederick Treves said concerning the British troops in the South African campaign as the column of thirty thousand moved on Ladysmith, that the first men who dropped out were not the tall men, or the short men, or the big men, or the little men, but the drinkers, and they dropped out as clearly as if they had been labeled with a big letter on their backs. That was clinical evidence that needs no microscopic nor bacteriologic corroboration.

The clinical experience of Dr. Henry O. Marcy as a physician and surgeon in war and in peace makes him an authority of merit. A man of keen intellect, large experience, and a judicial mind he gleaned the evidence from the great mass of testimony explaining why in twelve months we had the high mortality, so many cripples, and such enormous property losses in the operation of our well-organized railroads
in the United States. These facts revealed many causes, but the paramount cause was the drink habit among employees. An operator who is a temperate drinker gives a wrong order. The train dispatcher neglects to execute a proper order. An engineer under but a single drink, "don't know and don't know that he don't know," and by reckless running invites disaster. These clinical facts should stimulate closer observation, and a more critical analysis of each patient in whom mental or nervous signs are present. This duty well done will lead us to conclude that the overwork, worry, business reverses, religion, or complaints of domestic infelicity, are not etiological, but the logical outgrowth of alcoholism, the psychoses or neuroses which we are asked to treat, coming as secondary or tertiary products.

It seems a bit illogical to condemn any use of alcohol where physical efficiency is wanted, and then to advocate its use, where mental and nervous stability are most desired. Of the many toxic substances whose use disturbs mental and nervous function, the one best known by its clinical signs is alcohol.

Where we see a diminished power of apprehension and elaboration of external impressions, with release of inhibitory control over voluntary impulses out of harmony with the customary conduct of the individual, we should suspect alcoholism. Want of control of the motor elements of speech and dissociation of thought are alcoholic signs. In the alcoholic, judgment in the choice of two movements is not exercised and the act often precedes the decision. The increased purposeless muscular activity represents motor nerves freed from their normal inhibition under will power. The thoughts are migratory, not easily gathered, and the solution of problems, easily and quickly analyzed by the individual not under alcohol, are difficult or impossible under its use.

Alcohol blunts the moral sense, increases the sexual desire, but lessens its power and courts venereal excesses. The thoughtful, careful, astute man of affairs whose opinions we seek, and on whose judgment we rely, becomes careless, indiscreet, and unreliable. As the muscular activities increase, the voice grows louder, expression of character decreases, the smile broadens to silly laughter, proprieties in language become improprieties, contentment gives place to fault-finding,
and love becomes hatred. The clinical evolution of alcoholic poisoning is completely told in the proverb, "A man takes a drink, the drink takes a drink, the drink takes the man."

The clinical picture in chronic alcoholism is a gradual progressive mental enfeeblement, decreasing power for mental or manual work, faulty judgment, defective memory, moral delinquency, occasional delusions, frequent hallucinations, multiplied and multiform neuroses.

It was the clinical observation of the world's greatest writer of epic poetry that "Inflaming wine, pernicious to mankind, unnerves the limbs and dulls the noble mind." Contemporaneous with him was Isaiah, that master teacher of the Hebrew nation who said: "The priest and the prophet have erred through strong drink, they err in vision, they stumble in judgment." Two centuries earlier than these, the wisest of finite men gave it as his clinical observation that, "Wine is a mocker, strong drink is raging, and whosoever is deceived thereby is not wise." Meditating on these indisputable records of the ages, we appreciate the clinical experience of Sir Benjamin Richardson, who wrote that, "Of all men brain workers are the least able to bear up under the ravages of alcohol, this traitor who enters the most precious treasury, the citadel of the mind." These observations are amply corroborated by men well versed in pathologic and bacteriologic work. This needs no higher authority than Dr. Sims Woodhead, of Cambridge University, whose pathologic observations led him to say: "A man under the influence of small quantities of alcohol has no right to believe his own senses. He cannot trust them to give him correct facts, and he cannot rely upon his judgment for the interpretation of facts."

Of the many nervous disorders that affect humanity, no one is so distressing as convulsions. Occurring in the infant, we may find a proximate cause in the food taken, but why should the mother's milk in a normal stomach provoke pathologic action on the part of brain cells? We scrutinize our clinical records for evidence and find that in an equal number of children by alcoholic and non-alcoholic ancestors, the former show the highest ratio of convulsions during in-
fancy. The appearance of convulsions in early childhood, and their cessation when the higher cerebral centers are sufficiently developed for inhibitory control over the motor centers, is a bit comforting to parents, and not a few medical men encourage the belief that with the close of dentition convulsions will cease. The clinician who sees a convulsive boy or girl is apt to suspect epilepsy.

The clinical study of epilepsy is so closely connected with alcoholism that Bevan Lewis in his studies on the pathology of epilepsy brings to light the important fact that the microscopic appearances of the brains of epileptics are similar to those found in subjects suffering from chronic alcoholism. The fact that the structural changes in the cell of the epileptic are not peculiar to epilepsy, but are found in other diseases, and especially alcoholic brain diseases, justifies our clinical observation that epilepsy is often an indirect result of alcoholism.

Spratling’s clinical analysis of one thousand epileptics showed that where epilepsy did not prevail in parent or grandparent alcoholism was the most potential of all poisons in preparing the tissues of their offspring for completing the epileptic cycle. Kovalevsky, speaking from clinical observation among the natives of Caucasus, Russia, says that in no other place does he find so large a proportion of epileptics among his patients. He says, too, that there they use wine more commonly than water to quench thirst.

It is the clinical aspect of the moderate drinker we should analyze most carefully. They are the great class who believe there is benefit from alcohol and regard it as a food. They honestly and strenuously disclaim that the existing mental and nervous instability in their children can possibly be caused by such moderation in drink as they have ever practiced.

It is accuracy in clinical observation by the management of corporations who employ mental or manual labor that impels them to seek the total abstinence employees. It is accuracy in clinical observation that is to-day causing the whole civilized world to understand that any use of alcoholic beverages is detrimental to the commercial interests of the individual, community, state, and nation. It is clinical
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evidence that impels the members of this association to a personal abstinence and the professional non-use of alcohol as a stimulant, much less for constructive purposes. It is because of overwhelming clinical findings by the best observers of every age — that we implore our associates whose intellectual moral and social worth we esteem, but whose belief in the constructive properties of alcohol we think are disproven by clinical and pathological evidence — to join us by example and precept in the social and therapeutic nihilism of alcohol. As members of the broadest and most useful vocation man can occupy, we can only rise to the privilege of our opportunities by advocating the noble and eschewing the ignoble things in life.

THE POISONOUSNESS OF CAFFEINE

Dr. H. H. Rusby, dean of the College of Pharmacy, of the city of New York, Columbia University, and joint author of the Standard Dispensatory, after deprecating the exaggerated misrepresentations of the injurious effects of tea and coffee drinking, for which certain commercial adventurers are responsible, states that "it is nevertheless true that caffè is a genuine poison, both acute and chronic. Taken in the form of a beverage, it tends to the formation of a drug habit, quite as characteristic, though not so effective, as ordinary narcotics. While not cumulative in substance, it is so in effects, permanent disorders of the cardiac function and of the cerebral circulation resulting from its continued use. When the caffè is taken in more concentrated and seductive forms, as in confections and the like, such as the 'stored energy' cubes sold some years ago, the danger of habit formation and the cumulative results become correspondingly greater." — Druggists' Circular, Vol. LII, No. 1, p. 24.
ALCOHOL AND MORAL DEGENERACY*

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Among the ignorant, alcoholic beverages are considered to be highly nutritious, and because they tend to increase body weight their use has been frequently recommended to the emaciated and the sick. It is not uncommon for nursing mothers to take beer to increase their flow of milk, or because of the soothing influence they exert on the nursing child.

As a result of these views drunkenness among women has been increasing in such an alarming manner that one of the most serious problems that confronts Great Britain is how to check this growing tendency. So rapidly has the drinking habit increased among women in the city of London, that at present more women are said to be arrested for being drunk and disorderly on the streets than men. The degenerative influence of this upon the coming generation can be readily appreciated, since the drinking mother disorganizes and demoralizes the home, she neglects the training of her children, and she is unable to hand down to her offspring a healthy heredity. Mothers who believe that alcoholic beverages are valuable nutrients naturally encourage their use among their children as far as their means will permit.

In France it is not uncommon to see the mother press the wine bottle to the lips of the infant in her arms. In England the same thing is seen, only beer is used in the place of wine. As a result the working classes of these countries spend a large proportion of their income on drink.

In our English cities on Sunday mornings rows of little children may be seen at the side entrances of saloons, waiting their turn to have the jug or little pail filled with beer for family use. When empty they return to have it refilled. This is repeated again and again during the day. In this way the Sunday is spent by the family of the average British laborer.

*Paper read at the World's Temperance Congress, Saratoga Springs, N. Y.
Alcohol and Moral Degeneracy

By paralyzing or deadening the mind these beverages lead to a forgetfulness of poverty and misery, for the time, and produce a feeling of wellbeing. They also remove the restraint which the mind should ever exert over the baser passions and lead to sensual gratifications. For these reasons these poor unfortunates associate with drink their highest form of enjoyment. That which gives them the inspiration to work during the week is the expectation of having what they term a good time on Sunday.

In the past, woman has been the redeeming factor in race decay, but with this increase of drink among women, one of the greatest barriers to race decay has been removed, and it does not require a prophet or a son of a prophet to predict that race degeneracy, both physical and moral, during the next few years will make rapid strides in civilized lands such as it has never made in the past.

We cannot deny that these beverages produce body weight, but we know that this is no evidence that they are nutrients. The increase in weight is a pathological rather than a physiological process and may be produced with equal success by the use of arsenic, phosphorus, opium, and other poisons. It is known to every physician that while in appearance the drinker may be the picture of health, in reality he is a physical degenerate incapable of recovering often from the mildest disorders. Many are ignorant of the facts and are easily deceived by the fair promises made by alcohol and which it appears to fulfill.

Baron Liebig’s statement, “If a man drinks daily from eight to ten quarts of the best Bavarian beer, in the course of twelve months he will have taken into his system the nutritive constituents contained in a five-pound loaf of bread.” The poor ignorant man who judges only by what he feels, and by what he sees, can hardly appreciate how true it is, that, “wine is a mocker and he that is deceived thereby is not wise.” Alcohol makes the poor man quiet, and believe that he is rich, when in fact he is poorer than he was before taking the drink. It makes the sick man feel and believe he is well and improved in health while under its influence, when in fact he is in a worse condition. It produces a feeling of exhilaration which is interpreted as strength, when by actual
test it is found that the one under the influence of alcohol is weaker, although he feels and believes himself to be stronger.

It produces the fat and weight which so many desire, but this is found to be mere bloat. Judging only and wholly by what the moderate user of alcohol feels and sees, is it any wonder that he is deceived thereby and led to believe that, while it is a curse when taken in large quantities, which all are forced to admit, it is a blessing when taken in so-called moderation.

It is just as difficult to convince the sick man or woman that he or she is actually no better after taking the accustomed glass of beer, or the dose of medicine containing it, although he feels better, as it is to convince the poor man that he is no richer while under its influence, or the weak man that he is no stronger, although he feels stronger. A knowledge and belief of the truth concerning alcohol alone can save men and women from this universal deception.

Upon the physician, above all men, falls the work of undeceiving the poor deceived slave of alcohol. Let them teach the poor that the cost of eight or ten quarts of beer per day, which would total up to about two hundred dollars per year, is too much for the poor laboring man to pay for the amount of nutrition he might obtain from a five-pound loaf of bread, which can be purchased at the moderate cost of ten or fifteen cents. He will, then, if not already a slave to the habit, cease to spend "money for that which is not bread, and his labor for that which satisfieth not." Let them teach the truth that health can only be acquired by a removal of the causes of disease, and never by the use of alcohol or any other drug. Alcoholic drinks produce a species of degeneration of all the vital organs of the body. This was shown during the late war between the British and the Boers. The majority of those who applied as volunteers for the British army were rejected owing to a diseased condition of the heart.

In Germany, it is said, over one half of the young men are incapable of bearing arms on account of the degenerate state of the structures of the heart. In the year 1903, during the Spanish American war, over two thirds of the young physicians who applied as volunteers for the army were rejected for the same reason. At the time when these matters were
 Alcohol and Moral Degeneracy

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discovered it was heralded from the lecture platform, the
pulpit, and the press, but it was soon forgotten, and men and
women, instead of making reform, go on as before, and con-
tinue to do that which is responsible for this condition.
What can we hope for in reference to the future?
In America the increase in diseases of these organs has
been especially noticeable during the year 1907. The average
mortality in American cities from heart disease has increased
about twenty per cent over the preceding year.
There has been almost a corresponding increase in the
number of deaths from pneumonia and cerebral hemorrhage,
or apoplexy. Tissue deterioration and increased blood
pressure, the after-results from the use of alcohol, are without
doubt the chief causative factors in this high mortality rate
from the diseases named.
Dr. Bollinger, of the city of Munich, says, “It is rare to
find a normal heart and a normal kidney in an adult resident
of that city.” But the degenerative effect on the organs
named is not the worst feature of this excessive consumption
of alcohol. Alcohol affects the brain in the same manner as it
does the heart and kidneys. It causes brain degeneracy as
truly as heart and kidney degeneracy, and moral degeneracy
is always associated with brain degeneracy. The most perni-
cious effect of alcohol is its demoralizing and brutalizing
influence on those who habitually use it. I have no hesitancy
in saying it is impossible for any one to be morally what he
might be if he uses alcohol even in minute quantities. For
this reason, if no other, it should not be prescribed by physi-
cians. In speaking of the influence of beer on the German
nation, Professor Edward Von Hartman says, “Although of
all nations the German has the greatest capacity for culture,
the general culture of its higher classes is undergoing fright-
ful retrogression because of the beer consumption of its
students.”
Dr. A. Forel, of the University of Zurich, says: “To be
convinced of its moral effect one only need to study in Ger-
many the beer jokes, the beer conversation, and the beer
literature. Among the academic youth of Germany the
drinking of beer has truly killed their ideals and the ethics
and has produced an indescribable vulgarity.” Any one
traveling in Germany who is at all observing cannot help but be impressed by the truthfulness of Dr. Forel's statement. This is not only the case in Germany and among Germans, the same may be observed in America and in all countries and among all classes where alcohol is either a beverage or a medicine. I believe we shall yet discover that crime and immoral acts are usually committed while the mind is under the influence of alcohol or some other narcotic poison, either directly introduced in the food or drink, or formed within the alimentary canal through fermentation or decay of foods resulting from errors in diet. Just to the extent that drinking becomes more prevalent will vulgarity, immorality, and every form of impurity become more common. In speaking of those who tarry at the wine, the wise man said, "Thine eyes shall behold strange women." I would say to all, therefore, who would be morally pure, "Do not drink wine or strong drink, that ye may put difference between clean and unclean."

About fifteen years ago I had the privilege of assisting in opening up a helping hand medical mission in one of the most degraded portions of the city of Chicago.

That such a place was needed became more and more evident as the increasing multitudes flocked to us for aid. The misery, the sorrow, the degradation — physical, mental, and moral — we there witnessed was appalling and indescribable.

Noting the degenerates in this portion of the city the thought frequently came, "What is responsible for this wretchedness? To this there came but one answer, ignorance and alcohol.

A knowledge of the nature of alcohol places a certain restraint upon its use, but where ignorance exists concerning its nature and deceptive influence, the devotee takes it because it affords a short period of freedom from cares and anxieties. His aim is to get all the enjoyment possible out of life, but this enjoyment is associated with drink and sensuality. A very similar condition I found when visiting some of the South Sea Islands a few years later. I have dwelt upon the condition found in the slums of our large cities because the very same causes which are responsible for the physical and moral degeneracy there I found to be responsible for the rapid degeneracy taking place among the innocent natives of the South Sea Islands.
The natives of these islands at first manifested the utmost confidence in the white man, innocently they received as a blessing anything the white man had to offer — tobacco and whiskey were two of the chief commodities brought to these people by the white race. They at first regarded the feeling produced by alcohol as something to be desired to make them courageous. In civilized countries where the nature of these poisons are better understood the use of tobacco and alcohol is confined to adults and chiefly to men. Its use is discouraged among women and youth. But among the natives of these islands its use is encouraged by men and women, by boys and girls. They reason and reason correctly, why should it be withheld from the young if it is a blessing to the old? Its use leading to the gratification of the baser passions lead them to associate with the use of alcohol, their highest form of enjoyment. The results of this upon these races, some of which were at one time ideals in physique, is sad indeed. The ungoverned passions of these savages stimulated by drink have dragged them down to a degradation before unknown, and it has become an almost hopeless task to send missionaries to these lands.

When Captain Cook first landed on the island of New Zealand he described the natives, both men and women, as being perfect in form and features. He declared them to be the finest race he had encountered in his travels. There were no skin or other diseases among them. Men and women at ninety were still muscular and active, showing little evidence of decay. The Moris were probably the finest specimens of humanity with which the Anglo-Saxon race had been brought in contact.

How changed the picture appears to-day, they are fatter but less muscular a nation of bloats. Drunkenness is common, and as a result lewdness and immorality of the worst type exist among men, women, and children. The Moris of to-day are physical and moral degenerates, hanging around wherever whiskey and tobacco are obtainable and wherever opportunities for vice present themselves. They have been reduced in numbers from one hundred and twenty-one thousand to about forty-eight thousand, and the prospects are that degeneracy during the next few years will be much
more marked than during any previous period. The Moris are rapidly nearing extinction. Chief Justice Stout, of Wellington, New Zealand, in recently passing judgments in the case of a drunken Moris, said, "If this drinking among the Moris is not checked, we are in measurable distance of the time when the Mori race will be exterminated."

While the natives of Australia have never been equal in physique to the natives of New Zealand, they too were at one time a strong, robust people. To-day they are almost extinct. I shall never forget the pitiable sight which met my eyes when visiting some of these people on their government reserve. Degeneracy, physical and moral, I found, is stamped on every countenance. Should time continue in but a few years the native Australian would be eliminated by the white man's whiskey and the vices which result from its use.

The Hawaiians were once physically a finely developed people. But whiskey has been doing the same deadly work among them. They are to-day an aimless lot with but one ambition in life, and that ambition is to secure tobacco and drink. They know no enjoyment aside from sensualism. This race is also rapidly nearing extinction.

The Commercial Advertiser of Honolulu a few years ago made the prediction that "There are to-day men living of voting age who will witness the death of the last full-blooded Hawaiian."

The natives of Samoa and Figi are more like the natives of New Zealand in physique. Some of the finest specimens of humanity in the world to-day may still be seen on these islands.

I had the pleasure of visiting a native village. We were invited into the home of the chief. I found the chief a remarkably well-preserved man of fifty-three years, measuring over six feet. His son was somewhat taller. Both were muscular, elastic, well built, and straight as an arrow. These people were no longer savages. They manifested the same courteous, polite, and considerate manner that we could expect to find in a refined American home. They use neither alcohol, tobacco, tea, nor coffee. Their food is most simple. The meal I took with them was composed of tarra root, bread fruit, bananas, and oranges. Such foods do not cultivate a desire for alcohol and tobacco.
Before leaving the chief took a piece of sugar cane and vigorously with his teeth tore off the outer portion, then handed it to me to taste. I noticed his fine teeth and asked him if all his teeth were sound. In response he opened his mouth wide, allowing me to examine them. Every tooth seemed perfect. But what a contrast there exists between these noble Figians and their less fortunate brothers who live nearer the towns. The great majority of the Figians and Samoans, especially those dwelling near harbors, show the same mark of degeneracy that is seen in the slums of our cities.

We owe a duty to the remnant of the people of the South Sea Islands. The white man who should have brought to them a knowledge of something better than they possessed has brought about their degradation and ruin. We need to send to them medical missionaries who are thorough temperance advocates, who recognize not merely the existing physical and moral degeneracy, but also their causes, and who will consider it their chief burden to assist in the removal of these causes. To elevate them morally it is necessary to correct their physical habits. The reason why degeneracy is so very rapid among these people is that women as well as men use alcohol and tobacco. France stands as representative of the highest form of civilization. During the year 1907 there were nineteen thousand more deaths than births in France. How can we arrest this evil which is threatening the extinction of both civilized and savage races. A united educational campaign should be inaugurated, the aim of which should be to make known to old and young, by lectures in halls and churches and schools, the deceptive nature of alcohol. These talks should be clothed in simple language — if need be, using charts or stereopticon views. But more than this must be done. Why should we continue to punish criminals, then sanction by law an evil which is responsible for nine tenths of the crime? Why tax the people to build large insane asylums and reformatories and prisons, and then permit the manufacture and sale of that which makes these a necessity? Strange that we should with one hand liberally support at an enormous expense our police force to maintain order, then with the other hand put the bottle to our neigh-
bor's lips, or legalize the sale of that which steals away the brain, making men and women disorderly.

The time has come when in the interest of the dying races every lover of humanity must arouse and do all he can by voice, pen, and by vote, to suppress the manufacture and sale of alcoholic beverages to an innocent, ignorant, and deceived people.

In the Southern states so demoralized have the negroes become that the white inhabitants of country districts feel unsafe without police protection. Men dread to leave their homes, fearing that some terrible thing may befall their wives or daughters during their absence. The passions of the ignorant colored man, fevered by drink, make him worse than a brute. As a means of self-protection the whites, who themselves are not abstainers, and who otherwise would favor the saloon, are forced to close the saloon and stop the sale of drink.

It will only be a question of time until the Northern states will be forced to follow the example of the South. Alcohol is brutalizing the ignorant whites of the North as truly as the blacks of the South.

Each state will yet reap the woe that must come to it as a result of placing the bottle to the lips of its people by legalizing the manufacture and sale of alcohol. Our country owes much, how much we shall never be able to tell, to the faithful efforts put forth by temperance organizations and workers to arrest the sale of drink. Although the sale of intoxicants has increased greatly during the past few years, had it not been for their efforts the marks of degeneracy would be much greater than it is.
EDITORIALS

The Journal of Inebriety is not responsible for the opinions and conclusions of contributors.

The Work of Our Society

The annual meeting at Chicago brought out some excellent papers which were read and discussed with great interest. The temperance lunch which followed was largely attended and marked by some very striking speeches, showing the interest in the subject, and that it had become a feature to continue in our future meetings.

The meeting at Saratoga was literally a historic event. It was the first time in history that a few medical men addressed an enthusiastic lay audience on the purely scientific aspects of the subject. It was the opinion of many that this occasion with its four sessions, in which seventeen papers were read either by the authors, or by title, was equally historic with that of Dr. Clark's first temperance society a century ago.

It was also an occasion to meet and become personally acquainted with leading temperance reformers and persons who were promoting the great temperance cause from the moral side, and this in itself created an interest for future co-operation that will be marked. It was very evident that the great leaders in the temperance reform movement recognize the need of scientific assistance and direction and much of the prejudices of the past and criticism of physicians will disappear from this time.

It is the intention to publish all the papers read in the Journal of Inebriety, and our readers may congratulate themselves on being able to read what is said at these two great conventions.

New Studies into the Etiology of Inebriety

A number of prominent writers, among them may be mentioned Dr. Kellogg, in this country, have pointed out states of auto-intoxication that were very active and always predisposing causes of inebriety. Clinical studies show a very close connection between toxic states and
the impulse to take spirits, and many cases are noted where these conditions occurring in perfectly temperate men were followed by a drink mania.

It is well known that after the impulse to drink has become established, derangements of metabolism always provoke increased use of spirits. This is strikingly confirmed by treatment, especially addressed to stimulate excretion and promote more perfect digestion and assimilation.

Several authors have pointed out that hyperleucocytosis is a frequent symptom of inebriety, both preceding and following the use of spirits. There can be no doubt that toxic states follow the use of spirits, and while these conditions provoke other diseases there is strong evidence that they have a very large influence in exciting the desire for relief from spirits and narcotics.

Recent researches show that without any question deranged circulation in the cortex, following intense heart action, and the presence of toxins circulating in the blood, derange the rhythm and uniformity of the flow of the blood current, and the osmotic processes, this is followed by depression and intense desire for spirits.

It is entirely possible that many cases of inebriety begin from deranged circulation in the cortex, and the extensive damage found afterwards in the occlusion in different areas of the finer capillaries, suggest a distinct physical cause.

Whether these causes are primary or predisposing is not yet clear. In cases of inebriety that have been preceded by great emotional changes and excitement, there must of necessity be capillary derangement in the cortex, with imperfect nutrition and assimilation.

These two lines of approach to the first causes of inebriety suggest some very fertile fields which seem to have considerable clinical evidence to support them.

Fallacy of the Statistics relating to the Mortality of Inebriety

A critical physician who asserted that the statements of the mortality from alcohol made by reformers were gross exaggerations, was startled to find so small a percentage of death rates attributed to this cause.

In a careful study of one hundred records of deaths by inquiry from physicians and persons who were in a position to know the causes, showed that twenty per cent of all grown persons had used
alcohol to such an extent, that its degenerative influences were pos- 
itive active causes in the mortality.

His studies extended to five hundred cases and the proportion in-
creased, particularly in one village where fully thirty per cent of all the 
deaths were due to alcohol, and yet there was no mention made of it 
as a cause. He finally concluded that the statements of reformers 
varying all the way from sixty to two hundred thousand deaths annu-
ally were specifically due to alcohol was a minimum statement.

This conclusion is confirmed and indicates the fallacy of the 
present vital statistics. We have long ago pointed out the delusion 
that death from alcohol implied a vicious moral element, which the 
fr ends thought to cover up by naming the last symptom as the cause 
of death.

This is strikingly confirmed by the enormous increase in death 
supposed to be due to pneumonia and cerebral hemorrhage. Also 
Bright's disease, and the very vague uncertain term heart disease. 
If an accurate study was made of the causes of death, both exciting 
and predisposing in almost every community, the influence of alcohol 
would occupy a very large place.

Thus in one hospital where the authorities boasted of their exact 
diagnosis, and exact statements of the causes and mortality, there 
were only four cases marked alcoholic and thirty-six pneumonia. 
The alcoholic cases died in attacks of delirium tremens, and could 
not otherwise be classified. Of the pneumonia case twenty-three of 
the thirty-six were inebriates and excessive users of spirits. Pneu-
monia developed in each one of these persons after they came to 
the hospital and was recorded as the cause of death. Fourteen 
were brought in with acute inflammatory conditions of the lungs and 
more than half of this number had a history of the excessive use of 
spirits. Of the twenty-two recorded as dying from pneumonia eight 
were brought in intoxicated and suffering from injury requiring 
surgical assistance. Four of the others who were admitted to the 
hospital for severe attacks of rheumatism and others suffering from 
acute indigestion, enlargement of the liver with jaundice, all having 
drank heavily for years, and when pneumonia developed they were 
recorded as dying from this cause. At a medical meeting, a physician 
having a large practice said that he had never had a man die from 
alcoholism or inebriety, and hence he deplored the statistics of persons 
who claimed that alcohol was the cause of death in a large proportion 
of hospital cases. Another man in large practice affirmed that he had
never signed a certificate stating that death was caused by alcohol, for this was an unnecessary reflection on the character and conduct of the patient, also that no physician should ever put the stigma of alcoholism on a patient in the public records. These are by no means startling statements of the actual conditions and show how imperfect our knowledge of the mortality is in cases of this kind.

The following extract from an address by an eminent clergyman is a most significant hint for future work.

"The presence of a body of medical men at the World's Temperance Congress held at Saratoga Springs, N. Y., discussing the alcoholic problem along purely scientific lines to an audience of laymen and reformers marked a new era in the study and growth of reform work. When the physician is trained to advise and council along the new lines of practical philanthropy, and take an active part in general hygienic preventive medicine as seen by the masses, much of the present confusion will disappear."

The best work of our society is not confined to educating the profession, but to pointing out to the laymen means for prevention, and the fallacy of the popular delusions concerning alcohol as a tonic and stimulant, and the safety of moderate drinking.

An army of very enthusiastic reformers are constantly growing, in numbers, and their efforts to change the existing customs and theories concerning alcohol, are becoming more and more intense. It is our duty to become educators and teachers along the lines of exact cause and effect.

The Temperance Federation Bureau

The Temperance Federation Bureau at Boston has received an offer of an exceedingly valuable building lot in the suburbs of Boston for the erection of a permanent library building. No doubt this will be followed by gifts for the erection of a building. There is no charitable work of far-reaching importance that can be compared with this. Every temperance and scientific man in the country recognizes the need of a central library for the accumulation of the rapidly increasing literature concerning alcohol and its evils. A bureau, where the facts can be collated and grouped and made available in scientific and educational circles is a great need of the times. The exhibit at Saratoga Springs was a revelation, indicating the possibilities and helpfulness of such a work. The bureau is incorporated by the
Editorials

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state with power to receive and dispense funds. The work of the last year has indicated its necessity, and so far this year the accumulation of matter and the demands for help are increasing enormously. All of our readers should be subscribers to this bureau and thus be able to make use of its accumulated matters. The fee is only two dollars per year, and brings with it a journal and abstracts, and authors' reprints, some of which are very valuable. Authors who wish their papers circulated can have this done through the bureau, and be sure of reaching a very appreciative audience. Address the Secretary, Miss C. F. Stoddard, 23 Trull Street, Boston, Mass.

Action of Alcohol on the Blood Cells

The leading article of this issue is strikingly confirmed in its conclusions by the recent lecture from Professor Metchnikoff, before a large London audience, in which he proves that alcohol in very small doses paralyzes the sagacities and renders them useless to protect the body against microbes. Incidences were mentioned where persons brought for treatment suffering from hydrophobia and given large doses of alcohol died soon after. The alcohol had paralyzed the white cells and destroyed their protective power. He showed also that this paralysis was particularly fatal in infectious diseases and declared that all use of alcohol as a protection had just the opposite effect. This lecture will be published in the near future and our present purpose in calling attention to it is to show the trend of new investigations showing the destructive effect of alcohol.

Report of Work in Three Inebriate Hospitals

The Dalrymple House at Richmansworth was one of the first inebriate hospitals opened in England in 18—. It receives and treats during the year about fifty patients of the better classes, and those not considered incurable. The treatment extends over six months and one year, and is thoroughly scientific, and represents the very best work done in private institutions in England.

Over sixty per cent of all patients are reported after from five to ten years as temperate and doing well. The Superintendent, Dr. Hogg, in his last report is very emphatic in urging the necessity of a longer stay, and shows by statistics that those who have remained a long time invariably do better than those who go away in a few months.

A number of cases received during the year were drug habitues. They all did well, but required a great deal more care and attention.
A number of patients were discharged on parol, and did well. The
difficulty of getting accurate statistics from persons who leave the
institutions was mentioned, and the remark is made which is so com-
mon in American Institutions, that the patients who do well conceal
their treatment and are rarely heard of again, while those who relapse
become very prominent and advertise their condition as the fault of
the institution and are often the most bitter detractors and critics.

The doctor reports that eight per cent of the patients are physicians.
This is one third less than that noted in this country.

Walnut Lodge Hospital, at Hartford, reports for 1907 one hundred
and forty-four patients admitted. Of these forty-four were drug
takers; four were insane and transferred to other institutions and
thirty-one were physicians. The results of treatment were very hope-
ful, a large number of persons being discharged with every pros-
pect of permanent restoration. All were improved. A large part
of the report concerns the methods of treatment by hydropathic,
electrical, and radiant light measures. This institution organized
in 1878 is the oldest private institution in America that has been under
one continuous management. Dr. Crothers is the superintendent,
and the hospital is chartered by the state with the similar powers of
insane asylums.

A third report is of the Washingtonian Home, Boston, Mass., and
is of unusual interest. This hospital was incorporated in 1859 and
from that time up to the present has cared for and treated over sev-
ten thousand patients.

Last year the number admitted was over nine hundred, making it
one of the largest inebriate hospitals in the world. A great many of
the patients are in acute stages and are admitted for temporary relief.
Others remain longer, and the results as reported by the Superin-
tendent, Dr. V. A. Ellsworth, are exceedingly gratifying and hopeful.

The number of physicians are about eight per cent. This particu-
lar fact is mentioned for the purpose of giving emphasis to the very
sad failure of medical colleges and physicians generally, who still
continue to recognize only the moral side of inebriety. As a result
they are too often the victim.
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J. H. Lowrey, M.D.

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AUGUST NUMBER

Chas. H. Hughes, M.D., Editor

The August number of the Alienist and Neurologist contains, besides the usual number of selections, reviews, correspondence, obituaries, etc., the following: An Insane Hospital Annex Reformatory and Sanatorium for Insanoilds or Semi-fous.—Sleep States.—A Case of Sensory Aphasia in an Octogenarian.—Legal Obscenity and Sexual Psychology.—Woman’s Testimony and Doctor’s Danger.—The Price of Pure Milk.—Vivisection Without Sympathy.—Men who Mistake Insanity.—Clear Water.—Hardin the Editor.—Mr. Bush and Lincoln’s Saloon Relations.—Pharmaceutical Houses.—The Case of Colonel Stewart.—Miracle at the Tomb.—The Battle Creek Sanitarium.—Thomas A. Edison and Mary Baker Eddy, President H. L. Burrell’s Theme.—A Tyrannous Court Decision.—The Peril of the Big Navy Gun.—The New England Medical Monthly.—The Wistar Institute of Anatomy.—Prince Zu Eulenburg as a Kleptophile.—Esperanto.—Dr. Conolly Norman.—Union Labor Take Notice.—Legrain’s Sculptured Picture of Inebriety, etc.

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