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

T. B. CROFTERS, M. D., Editor  
HARTFORD, CONN.

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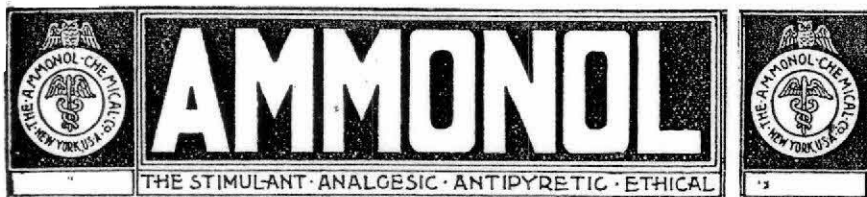
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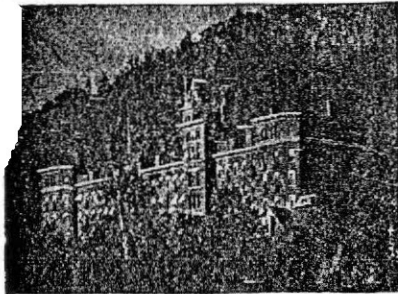
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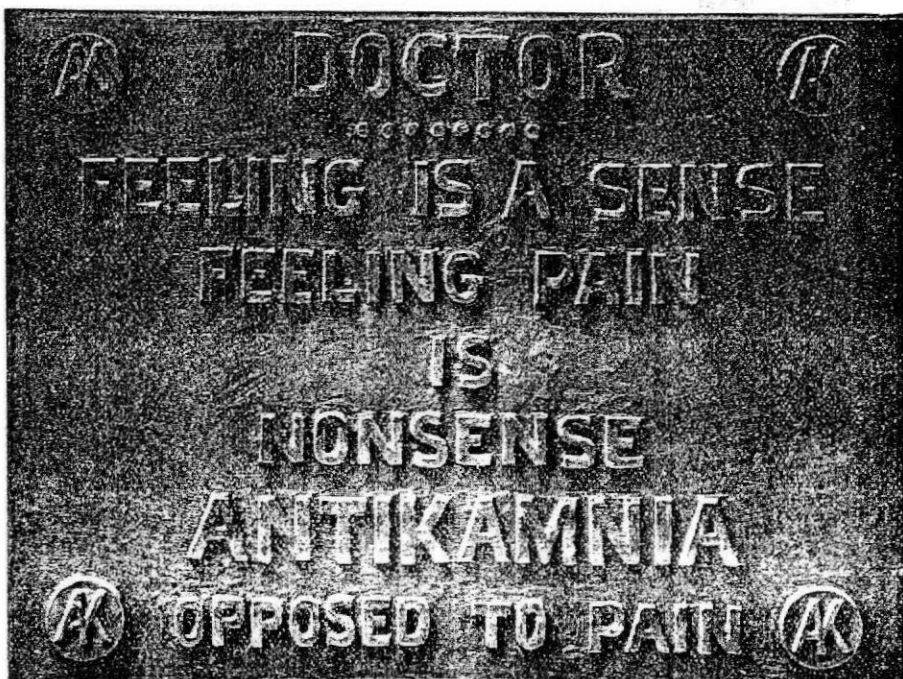
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This Journal will not be responsible for the opinions of essayists or contributors, unless indorsed by the Association.

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THE RELATIONS OF ALCOHOL AND ALCOHOLIC LIQUORS TO THE ECONOMIC, SANITARY, AND MORAL INTERESTS OF THE HUMAN FAMILY, AND THE TRUE PRINCIPLES OF LEGISLATION THAT SHOULD GOVERN THEIR USE.\*

---

BY N. S. DAVIS, M.D., OF CHICAGO,  
President of the American Medical Temperance Association.

---

Members of the American Medical Temperance Association,  
and Citizens:

At the annual meeting of this association in 1900 I gave you a brief history of the direct experimental investigations conducted by American physicians for determining the actual effects of alcohol on the living human body. By such experiments in connection with similar, and in some directions more extensive, ones, conducted by eminent scientific men in the different countries of Europe, it was shown that alcohol as it exists in the fermented and distilled liquors when taken into the stomach, "instead of being digested, assimilated, and

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\*Address delivered before the Medical Temperance Association, June 11, 1902.

converted into natural elements of the blood and tissues, entered the blood and circulated through every part as alcohol, the same as ether, chloroform, morphine, and other drugs." That while thus present in the system "it lessens the functions of all nerve structures, both sensory and transmitting, and thereby diminishes the acuteness of the special senses and the activity of the mental processes in direct proportion to the quantity of alcohol present; that it impairs the corpuscular elements of the blood, lessens the activity of the leucocytes, and favors tissue degenerations in the direction of fatty, fibroid, and sclerotic changes, and it diminishes every force or energy known to exist in the living body, *i. e.* muscular force, nerve force, mental force, heat force, and vital or protoplasmic force."

It was further shown that the presence of the alcohol repaired no tissue, and liberated no natural force or vital energy, but by its narcotic or anæsthetic properties it diminished both metabolism and the evolution of all varieties of organic or vital force in direct proportion to the quantity of the alcohol taken; and when the doses given were very large it destroyed life, both vegetable and animal. Consequently it has been classed by all writers on chemistry and toxicology as a poison more or less dangerous to both health and life when habitually used in either small or large doses; and by all writers on practical medicine as an important predisposing cause of many diseases.

By diminishing the vital resistance and promoting tissue degenerations in the parent, the alcohol equally diminishes the vitality and promotes degeneration both physical and mental in his offspring, as was abundantly shown in the paper I presented for your consideration at your annual meeting in 1899. At your annual meeting in St. Paul, 1901, after reminding you that the results of all previous investigations had clearly shown that, at least, seven-tenths of all the pauperism, crime, and degeneracy afflicting the people of all the

countries of America and Europe are caused by the use of alcoholic liquors, tobacco, and other narcotic drugs, I reminded you that "the paramount question before the intelligent men and women of Christendom today is not one of politics, or of political parties, or of social classes, but one solely pertaining to public economics, health, and morals. It is whether alcohol and other well-known narcotic drugs are really wholesome articles of drink or food, safe for general use; or are they absolutely subtle, deceptive, and dangerous poisons; stealthily destroying both public health and morals, and constantly multiplying hereditary degenerates in all classes of human society?" As I stated then, these are questions that cannot be permanently settled by votes in the ballot box; by either saloon or anti-saloon leagues; or by the expenditure of any amount of platform eloquence.

But if ever they are settled at all it will be by a truthful and fearless collation or marshaling of the facts of human experience from the time Noah exposed his own nakedness under the stupefying influence of alcoholic wine from his own vineyard, through all the centuries to the present time, aided by the positive results of scientific research in the laboratories of chemistry, biology, physiology, etiology, and therapeutics.

Human experience in every age and every climate, and in every occupation, has shown that alcoholic liquors, both fermented and distilled, are insidious and dangerous disturbers of the functions of the brain, thereby perverting the mental faculties, diminishing the sense of propriety and self-control, and rendering the user more or less dangerous both to himself and to those around him. So true is this that drunkenness, debauchery, and crime have accompanied and followed their use in every country into which they have been carried. And now, after nineteen centuries of Christian civilization, the direful effects of their use are to be seen in every asylum for the insane, the idiotic and the epileptic; in every criminal court and prison; in every police station and poorhouse; and

in the persons of not less than 1,500,000 men and women daily disabled for work, either mental or physical, in our country alone. The most careful and conservative investigators claim that, at least, one-third part of our entire adult population drink some form of alcoholic liquor from which is produced seven-tenths of the criminality, and a greater ratio of the deaths by violence. Is there any other substance or agent known to man that involves equal damage to human life and public morals? To say that all this criminality and violence is caused by its excessive use or "abuse," and not by its moderate use, is only another mode of confessing the dangerous qualities of such liquors. For, of the one-third of our adult population who drink some alcoholic liquor, estimated to number 7,600,000, there come all of the more than 1,500,000 who are annually led to use it in excessive quantities, and thereby become the victims of its so-called "abuse." Indeed, the fact that through all the ages so large a proportion of those who drink alcoholic liquors or other narcotic drugs are being enslaved and ruined thereby is abundant proof of their unfitness for use as beverages by any part of the human race. For, of the million and a half of persons in this country who are daily so much under the influence of these drugs as to render them incapable of performing useful labor, either mental or physical, not ten could be found who did not commence their career as *moderate drinkers*, and such is the dangerously deceptive influence of the drinks that a large majority of their victims still think they only occasionally drink "a little too much," but are in no danger.

And yet the records of mortality show that more than 100,000 of those who drink, whether moderate or immoderate, annually die either from the direct influence of the drinks or indirectly from the diseases produced by them. Nor is this all, for the most careful investigations show that more than one-half of all the children begotten by the habitual drinkers of alcoholic liquors are either dead at birth or die during the

first five years of life, and of the remainder, one-half are added to the ranks of the feeble-minded, the epileptics, the insane, and the criminals, leaving less than twenty-five per cent. of the whole number thus begotten to arrive to adult age either capable of self-support or safe to those around them. Careful and impartial investigations, both in this country and Europe, have proved that, at least, ninety per cent. of the criminals who prey upon the persons and property of others as thugs, highway robbers, house breakers, rioters, and murderers are made such by the use of alcohol or other narcotic drugs. It is the dulling, semi-paralyzing influence of alcohol and other narcotics that first makes the users careless, renders their hearing and vision less acute, and their sense of propriety less active. Consequently they are less alert and trustworthy as teamsters, stage drivers, engineers, or as caretakers of property of any kind. It is for this reason that many of the important railroad and manufacturing companies are refusing to employ any but total abstainers in any capacity. And it is just this lessening of the acuteness of the special senses and the diminishing conscious activity of the higher faculties of the mind that deceives the individual who drinks by making him more oblivious to his real surroundings, and thus lures him on, until by daily repetition and more constant contact of the alcohol, or other narcotic, with the protoplasm of his blood and brains, his conscience and self-control become subordinated to his purely selfish propensities and passions, and life itself is shortened by the degeneration of his tissues.

It is obvious, therefore, that alcoholic liquors as beverages constitute the most efficient agents for promoting criminality, human degeneracy, disease, impoverishment, and death that are known among men at the present time. It has been reliably ascertained that in this country they are causing from seventy-five to ninety per cent. of the crimes that are causing the public expenditure of not less than \$600,-

000,000 annually, seventy per cent. of the pauperism and degeneracy requiring the expenditure of more than \$500,000,000, and as much more caused by the sickness and death of their 100,000 annual victims from diseases induced by their use. To these vast sums must be added the cost of the liquor drank, which was for 1901, as ascertained from official sources, \$1,059,563,925. To this must be added the value of the labor lost by the disability of those who drank them, and the value of the barley, rye, corn, and other food materials destroyed in their manufacture, while it was much needed to feed famine stricken millions of human beings in other parts of the world. Can any intelligent, fair-minded man or woman contemplate the foregoing facts and figures in all their legitimate bearings and not see clearly the efficient and paramount influence of alcoholic liquors in causing the poverty, degeneracy, and criminality that is after nineteen centuries of Christian civilization still increasing faster than the increase of population both in this country and Europe?

And can any sane and intelligent man regard such liquors as anything but poisons of the most dangerous and destructive character, causing the loss of more human lives every month than are caused by all other poisons named in the statutes in a year? Then why not unite in a persistent demand that alcohol and all liquors containing not less than two per cent. of it be legally declared dangerous poisons in the same list with arsenic, strychnine, morphine, prussic acid, etc., to be manufactured and sold under the same regulations and restrictions in all respects? By such legal assignment all questions pertaining to the uses of alcohol would be speedily removed from the field of political partisan strife and mere class legislation to the domain of the sanitary police and the courts of justice. Then every man dealing in it would be legally and justly responsible for whatever damage resulted from its careless or illegal use. The fact that through all the centuries past municipalities, states, and nations have deemed



it necessary to enact special laws for regulating and restricting the sale and use of alcohol and its various dilutions in the forms of fermented and distilled liquors, ostensibly for the purpose of protecting the people against their evil effects, is a full confession of their dangerously poisonous qualities. And yet instead of treating these alcoholic fluids the same as other poisonous drugs, they have been everywhere recognized as beverages, stimulants, exhilarant drinks, poisonous only when used in "excess." And to prevent such "*excess*" their sale has been legally restricted to persons directly *licensed* for that purpose on the payment of a specified sum of money into the public treasury. This, however, instead of limiting in any degree the so-called *excesses* in drinking, only served to put a few millions of dollars into the public treasuries as a bribe for the public conscience on one hand, and, on the other, to create a combination of liquor manufacturers, sellers, and drinkers with more millions of dollars, to constitute the chief corrupting and corruptible agencies in American politics. Consequently at every annual election we have in addition to the two great political parties, each intent on the support of its own platform embodying numerous and important questions of public policy, the brewers, the wine makers, and the distillers, with their employees and patrons, thoroughly organized for voting against every candidate for office in every party who might not favor the license and sale of alcoholic liquors, and backed by many millions of capital; and the straight prohibitionist sustained only by his clean, patriotic principles and sense of justice for the hundreds of thousands of ruined drinkers and their innocent wives and children.

The last-named party spends the greater part of its time and energy in denouncing the saloons, their owners and patrons, and demanding the enactment of either *local option* or full prohibitory laws to be enforced by special police regulations; and are opposed at every point by the liquor manufacturers, sellers, and drinkers, thereby making it a perpetual

political contest between two great classes of citizens, but never deciding anything except until the next election. As the real questions before us strictly relate to public economy, health, and morals, they must be dealt with in the public schools, the departments of health, and the courts of justice, and not in the field of party politics. Already has the study of physiology and hygiene specially including the nature and effects of alcoholic liquors and other narcotic drugs been made imperative in the public schools of nearly all the states, and text-books correctly teaching the great central truth that alcohol is a deceptive and dangerous poison are furnished for their use. Let this be fostered and increased in efficiency until we have a generation on the stage of action who no longer call diluted alcohol either a beverage or a food, but simply a poisonous drug.

Let every prohibitionist and friend of temperance, morality, and justice hasten the same work by annually deluging every legislative body with the evidences of its destructive work to be found in every asylum for the feeble-minded, the epileptics and the insane; in every house of correction; every police station, bridewell, and prison; in every poorhouse and hospital for the sick; and in the records of crime and misery to be found in every issue of the public press, until the alcohol in all its forms is placed in the statutory list of poisons dangerous to the public health and morals, which would constitute the most appropriate and efficient prohibitory law that could be devised. It would be the most appropriate, because the laws on the statutes of the several states regulating the sale and uses of such drugs as arsenic, strychnine, morphine, prussic acid, cocaine, etc., are aimed at no one class of citizens either as manufacturers or sellers, but are founded exclusively on the dangerous qualities of the articles named. And assuredly every intelligent citizen must acknowledge that alcohol is every day creating more poverty, sickness, deaths, homicides, murders, and suicides than all the other poisons in

use in our country. Then why not place it at the head of the list as the most delusive and destructive of them all? Placing it in that position would constitute the most efficient prohibition, because there would be no *license fees* with which to bribe and narcotize the public conscience, and every person dealing in it would be exposed to prosecution in the courts for all damages, both public and private, resulting from his failure to comply with the law. Repeal all laws for licensing the sale of alcoholic liquors as beverages with all license fees, thereby allowing the entire responsibility for their use to rest upon the drinkers and sellers, while the enormous moral and pecuniary burdens from the resulting poverty, degeneracy, and criminality are allowed to rest upon the taxpayers in each community, and ten years will not elapse before every known place for their sale would be speedily indicted by the courts as a public nuisance and closed up. But so long as such liquors are legally recognized as legitimate beverages by any form of license, either high or low, so long will they remain the chief agents of political corruption, personal impoverishment, social degradation, and of both physical and mental degeneracy. And directly on the medical profession rests a very large part of the responsibility involved in the longer continuance of this whole catalogue of human ills. If all its members would give due heed to the wise man's proverb, that "wine is a mocker, strong drink a brawler; and whosoever erreth thereby is not wise," and would constrain all their patrons to do the same, it would soon result in giving victory to temperance, virtue, and justice in their great battle with human debauchery, vice, and crime. But I must not trespass on your time longer on this occasion.

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Professor Hoppe of Berlin calls attention to the fact that in 1899 and 1900 forty-one per cent. of the insane admitted in the hospitals of Prussia were chronic alcoholists or children of alcoholic parents.

THE BANEFUL EFFECTS OF ALCOHOLIC MEDICATION AS SHOWN BY RECENT EXPERIMENTAL OBSERVATIONS.\*

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BY J. H. KELLOGG, M.D., BATTLE CREEK, MICH.

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Although experimental researches relating to the influence of alcohol upon the human organism have been conducted by a large number of observers with numerous modifications of dose and method of administration during the last thirty or forty years, it is only within very recent times that particular attention has been given to the influence of alcohol upon the nerve structures. It is, in fact, only since the remarkable improvements in staining methods discovered by Golgi and the publication of the researches of Ramon y Cajal that it has been possible to make a thoroughgoing study of this subject.

Two facts which have been developed by the observations of Ramon y Cajal, Retzius, Sala, Waldeyer, and others are of special importance in this connection: First, the delicate branching structure of the neuron, shown in figure 1, and second, the amœboid movement of the nerve cell. It is true that the latter has not been absolutely demonstrated for the human neuron, but the extension of the olfactory neurons affords, as Testut remarks in his *Traité d'anatomie*, "a fine example of oscillatory movement," while the remarkable amœboid movements of the neurons of the lepto-dera hyalina and of other low forms of animal life establish clearly the possibility of the amœboid movements of the neurons. It must be conceded also that this theory affords the best pos-

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\*Read at Saratoga, June 11, 1902, before the Medical Temperance Association.

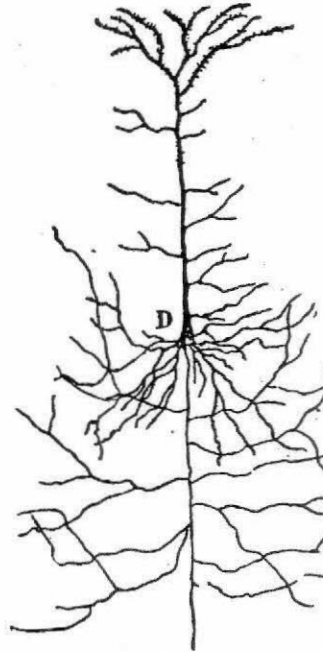
able explanation of the phenomenon of sleep and also of various morbid psychological phenomena which have heretofore baffled explanation.

Querton demonstrated in 1898 that the neurons of the marmot and the dormouse, when in a state of hibernation, were retracted and moniliform (beaded). The cell body was also modified. Other observers have found similar conditions in the neurons of mice which have been exhausted by exercise. Mlle. Stefanowska published some five or six years ago a report of researches upon the effects of alcohol, ether, and illuminating gas upon the neurons. The influence of these agents was the same as had previously been shown for cocaine, chloral, and morphia by Demoor, namely, the cell prolongations were varicose, beaded, and retracted. Various excitants were found to produce the same appearances, the effects varying with the intensity of excitement.

Duval, in describing these effects, especially noted the fact that the interlacing of the cell prolongations was destroyed by the retraction. The consequence of these changes in the neurons may be readily inferred by the following paragraph: We quote from Duval's treatise, *Théorie histologique du sommeil*, in which the author describes the relation of the structure and amœboid movement of the neurons to sleep and other mental functions.

"The contiguity of the nerve cells may be more intimate at one time than at another. Thus one may conceive that imagination, memory, the association of ideas, would become more active under the influence of various agents capable of exciting amœboid movements in the nerve extremities in contiguity, bringing their ramifications closer together, and thus facilitating the passage of nerve impressions. In the man who is asleep, the cerebral ramifications of the central sensitive neuron are retracted, as are the pseudopods of the leucocyte as seen under the microscope when anesthetized by the absence of oxygen and excess of carbon dioxide. Feeble

stimuli applied to the sensitive nerves give rise in the sleeping man to some reflex reactions, but do not reach the cerebral cortex. Strong stimuli produce projection of the cerebral ramifications of the sensitive neuron, and consequently communication of the impulses to the cells of the cerebral cortex.

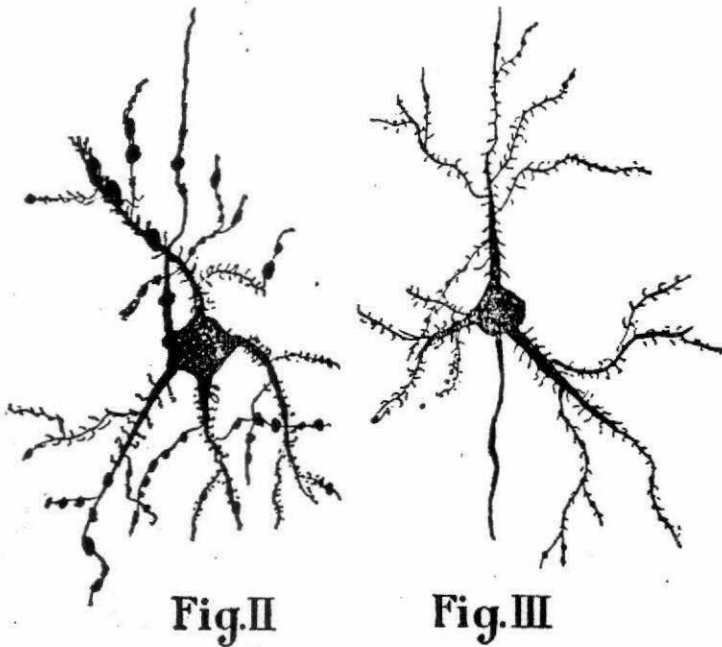


**Fig. I**

and awakening from sleep; also re-establishment of the nerve paths previously interrupted by the retraction and separation of the pseudopodic ramifications of the neurons."

Kleefeld has recently undertaken a careful study of the influence of alcohol upon the neurons by the aid of the latest histological methods of examination of nerve structures, supplemented by new methods of experimentation. A most interesting and important fact which he has brought out is that

alcohol, when introduced into the circulation, produces almost instantly a retraction of the minute branches of the neurons, at least, of a great number of them. He has also shown that alcohol produces various deformities of the neurons. When alcohol is given in less than a fatal dose, these



various effects disappear with the disappearance of the symptoms of intoxication.

Kleefeld's method of experimentation differed from those of his predecessors in the fact that the observations of the effect of alcohol were made almost immediately after the introduction of the drug into the circulation of the animal. Rabbits were generally selected for experimentation. The brains were made accessible for study by trephining the skull. Two openings were made, one on each side of the head. After the recovery of the animal from the shock of the opera-



tion a small dose of well-diluted alcohol was injected, and fifteen minutes later the wound of the scalp was opened, a portion of the brain snipped off, prepared in the usual way by the Golgi method, and submitted to microscopic examination. A couple of days later, after the recovery of the animal from the effects of the alcohol, another specimen was obtained in the same way from the opposite side of the brain. Examination showed the characteristic appearance of the effect of alcohol in the first specimen and normal cells in the second. (Figures 2 and 3.)

The valuable observations previously made by Berkley demonstrated clearly enough that the deformed condition of the cells, recognized by Querton as present during hibernation, by Manouélian as the result of exhaustion, and by Demoor as one of the effects of subjecting the body to the influence of various narcotic and excitant drugs, was always present in the habitual drunkard; but Kleefeld has shown that the retraction of the cell branches and the development of a beaded and varicose appearance is the immediate result of the presence of alcohol in the blood, appearing within fifteen minutes after alcohol has been introduced into the circulation of the animal, showing that the condition which is found permanent in the habitual drunkard exists temporarily in a man or in an animal subjected to the influence of this drug. The same effects were found to follow also the introduction of ether, chloroform, and other narcotics.

We quote as follows from Kleefeld's summary of his observations: "The modifications which we have observed are capable of explaining all the phenomena of drunkenness. The disorder of ideas, the suppression of the reasoning faculty, the incoördinated movements, the hallucinations, are all due, as we believe, to a partial retraction of the neurons and to pathological circuits organized in the centers. This is the explanation which we have already given of the phases of narcosis under the influence of chloroform."

In these observations we certainly have the most convincing evidence that alcohol is an anæsthetic agent and that its effects are always those of a depressant, resulting from a displacement of the neurons as well as other cells, of which abundant proof has been furnished, as, for example, in relation to the influence of alcohol upon blood cells. In the face of these facts it should no longer be maintained by anyone who is abreast with the modern progress of medical science that alcohol is a tonic, a useful stimulant, or in any other way an aid to any nutritive or therapeutic process. Kleefeld's experiments, indeed, leave us to doubt very seriously whether any drug can serve as a useful stimulus to protoplasmic activity. The experimenter remarks: "We are not able to affirm that under the influence of any excitant whatever the prolongation of the neurons may be made to extend."

Another interesting fact observed by Kleefeld which agrees with ordinary clinical observations was that the cells of the bulb are much more resistant than those of other portions of the spinal cord and of the cerebrum. This accounts for the fact that the respiratory and cardiac centers remain substantially intact, as shown by the sustained regularity of the respiratory and cardiac functions, even when the higher functions of the brain are completely annihilated, as when a man is dead drunk.

These observations certainly have a very practical bearing upon the question of alcoholic medication. If it is true that alcohol, even in small doses, acts as an anæsthetic by crippling the neurons at the centers of activity and control, it is very evident that no positive good can be expected from its use. The same influence which, through paralyzing the vasomotor centers, results in dilatation of the peripheral vessels, thus lessening the work of the heart, at the same time lowers vital tone and lessens vital resistance and impairs every organic function through the toxic influence of alcohol upon the neurons of the centers which control these functions.

Alcohol promotes sleep simply by causing retraction of the neurons of the anterior lobes of the brain through its toxic influence upon them, rather than by removing the cause of the sleeplessness, which may be an excess of blood in the brain or irritability of the cerebral cells.

There are other efficient means by which insomnia may be relieved by removal of these causes, the use of which must be regarded as rational, while the employment of alcohol is irrational and detrimental. For example, congestion of the brain may be relieved by drawing off the excess of blood into the legs or some other remote portion of the body. Insomnia is, in a great number of cases, accompanied by coldness of the extremities, due to spasm of the peripheral vessels of these parts. Hot bags to the feet will often induce sleep. The leg pack, wet sheet pack, moist abdominal bandage or wet girdle, general massage, and various other physiological measures are convenient and efficient means for combating cerebral congestion. The neutral bath and the neutral douche are most effective measures for relieving cerebral irritability.

Cardiac weakness may be best combated by an ice bag over the heart and cold mitten frictions, means which energize the heart, while at the same time lessening its work through stimulation of the peripheral heart. It is true that alcohol lessens the work of the heart, but at the same time it diminishes the power of the heart to work, so that this might easily be the source of more mischief than benefit. There are various drugs which apparently energize the heart while at the same time increasing its work; but by properly managed hydratic measures the heart may be energized while at the same time its work is diminished, a method of procedure which must certainly be considered thoroughly rational.

Kleefeld's experiments show that the injurious effects of alcohol are immediate, that as soon as the poison enters the

blood it begins its mischievous work upon the delicate protoplasmic structures of the body which are bathed by the blood and lymph. That most baneful effects are not immediately observed is due, as has been shown above, to the remarkable power of resistance of the neurons of the automatic centers, which yield only very slowly to the influence of alcohol, a fact which is equally true of other poisons as well.

Progressive medical men cannot close their eyes to the experimental facts which scientific research has brought out and which speak in unmistakable terms of the toxicity of alcohol and its uselessness in every form and in all conditions to which the human body is subject in health and disease. After centuries of devotion to the use of this baneful agent, which perhaps has been more extensively employed than any other drug, the medical profession is at last coming to recognize that alcohol is not an elixir of life as supposed by the quackish Paracelsus, its promoter, but rather a death-dealing product of microbic activity, differing in no essential particular from other toxic substances secreted or otherwise formed by micro-organisms. They are slowly learning that vital energy is to be derived only from food, and that we can only aid nature in her work of cure, as well as in the maintenance of normal life, by the employment of those physiological agents which promote vital activity and increase vital resistance. Curative power is not to be found in champagne bottles or brandy flasks; health-giving power is in the body itself, in the blood, in the tissues. Said Dietl, the pupil of the great Rokitansky, a half a century ago: "Nature alone can cure; this is the highest law of practical medicine and the one to which we must adhere. . . . Nature creates and maintains; she must therefore be able to cure."

## THE TOBACCO ADDICTION.\*

BY DUDLEY S. REYNOLDS, A.M., M.D.,

Member of the American Association for the Advancement of Science; etc.

Viewed from an ethical standpoint, all forms of the tobacco habit are offensive to society. Right conduct of an individual must be such as to avoid giving offense to others, either by the indulgence of the vulgar habit of expectoration, by the exhalation of unpleasant odors, or by the contamination of the atmosphere with noxious vapors, as in smoking. Polite society should, therefore, frown upon the tobacco habit in all its forms.

That the use of tobacco degrades the individual, blunting his moral perceptions, may be seen in nearly every assembly of men. Ordinarily, persons of refined intelligence would not willingly commit a nuisance in company. In fact, it is a moral obligation resting upon every individual to so conduct himself as not to be offensive to those with whom he associates, either from choice or by accident. Those who use tobacco totally ignore such matters, and not only openly indulge the habit in public places, but enter private offices with lighted cigars, or pipes, held sometimes in the hand, with the nauseating vapor filling the atmosphere, or boldly puff it in the hallways and doors. It has got to be a common practice to walk through the Pullman sleeper puffing tobacco smoke, on the way to the smoking room.

Men every day seek to enter my office with lighted cigars or cigarettes in their hands, and many of them are offended

\* Address delivered to the American Medical Temperance Association, at Saratoga Springs, N. Y., June , 1902.

at being denied the privilege of bringing such things into my hallway. There are many restaurants where men deliberately light cigars or cigarettes at the table, while others are eating in the same room. Recently an Episcopal clergyman of more than local reputation got into a Fourth Avenue car, in Louisville, and stood on the rear platform smoking a cigar before the public. The example of this conduct is almost sure to be followed by thoughtless young persons, and so the habit of the few soon becomes the habit of the many. It seems to me necessary for the guardians of the public health to speak authoritatively upon the evil effects of the tobacco habit upon the individual and upon society.

The effects of tobacco poisoning upon the growing organisms of the young are far greater than upon adults, yet it can easily be demonstrated that the tobacco habit in all forms so seriously affects the nerve centers as to create muscular tremor, general languor, with general depression of the nervous and circulatory functions. It enfeebles the action of the heart, inhibits cerebral activity, and thus limits the capacity for thought.

In persons long accustomed to its use, amaurosis, with limited color perception, and contracted field of vision, are commonly observed. There can be no doubt that many of the cases of so-called nervous breakdown, attributed to overwork, are really due to tobacco poisoning.

In the *American Journal of Pharmacy*, 1864, page 422, is an article by Dr. A. Vogel, giving an account of his analysis of different kinds of snuff in which he found a large percentage of lead. These observations were suggested by the occurrence of lead poisoning in persons who had not been exposed, in any of the ordinary ways, to such disaster, and who were in the habit of taking snuff, an analysis of which disclosed the presence of lead.

In boys trying to learn the tobacco habit a degree of nervous depression, amounting almost to general collapse, may be

frequently observed. They often complain of vertigo, stupor, faintness, and nausea, and in some cases convulsions.

Witthaus (Toxicology) cites a long list of cases of fatal tobacco poisoning. He says: "Nicotine, like hydrocyanic acid, may cause death without any subjective symptoms. Smaller doses of nicotine produce unpleasant sensations in the mouth and throat, salivation, headache, vertigo, dullness, sleepiness, dimness of vision, photophobia, deafness, increased frequency of respiration, weakness, prostration, paleness, cold extremities, attacks of syncope, vomiting, diarrhoea, trembling of the extremities, and stupor.

In grave cases of tobacco poisoning the same symptoms are observed, accompanied by severe chills, abdominal pain, praecordial anxiety, and deep stupor, or violent convulsions, with both tonic and clonic spasms. In fatal cases, death is due to apnoea. In nonfatal cases, great weakness, trembling, and giddiness persist for days, and even for weeks.

The toxic effects caused by excessive smoking are the same as those caused by absorption of nicotine from the alimentary canal. In some cases the symptoms have begun with violent convulsions, and in some death has occurred. When the smoke is not inhaled the poisoning is due to nicotine only, which is partly dissolved by the saliva. According to Loewenthal, fifty to sixty per cent. of that contained in tobacco passes into the smoke. When the smoke is inhaled, not only is the absorption of the nicotine more complete, but, as Gautier has shown, the carbon monoxid also produced during combustion is absorbed to some extent from the lungs." (Witthaus and Becker, Medical Jurisprudence, Vol. IV, page —.)

Pyridin is generated in the combustion of tobacco and produces effects similar to cocaine, not only benumbing the sensibilities of the surfaces over which the smoke passes, but producing an inhibiting effect upon the operations of the brain, thus restricting the range of thought.



The late John Fiske undertook, in 1867, to reply to James Parton, who, in the year before, wrote a little book against smoking and drinking as a habit among gentlemen. Fiske maintained that the habit of smoking was preventive of pulmonary consumption, and that it promoted digestion, prolonged life, and was, therefore, in every way desirable as a habit. Fiske, poor fellow, died after a general breakdown of nervous energy, due, no doubt, to the effects of tobacco. That a man capable of so much good should have perished before the age of sixty is of itself strongly suggestive. The general prostration of the nervous system from which he had suffered for more than a year before his death came from the toxic effects of tobacco beyond reasonable doubt.

It is the opinion of the medical profession and the better-informed people of the laity that epithelioma of the lips, mouth, and sometimes of the tongue, results from smoking. A most lamentable instance is that of the late Gen. U. S. Grant. If smoking ever causes cancer in any form, surely no rational person would hazard his life for the sake of becoming a tobacco inebriate. The most that can be said in favor of the habit is that it inebriates and obtunds the sense of moral responsibility. Now, if it is desirable to suspend mental activity, is tobacco the best agent for that purpose? Unfortunately polite society tolerates it, and the man with tobacco in his mouth struts out boldly before the public, expectorating right and left, or goes puffing the fumes of his pipe, cigar, or cigarette right into the faces of people who are nauseated by the odor. But the poor unfortunate creature who takes too much alcohol and exposes his weakness feels a sense of shame, and has a desire to conceal the fact of his debauch, while the hardened tobacco inebriate exhibits no sign of contrition. I conclude this an absolutely convincing proof of the greater moral degeneracy produced by tobacco, as compared to that which alcohol engenders. I have known persons unable to supply the necessaries of life to

their families who, nevertheless, went about the streets puffing well-filled pipes of tobacco.

As long as doctors and clergymen are seen smoking, the poor newsboy finds an illustrious example for indulging some form of the tobacco habit.

The question of mental responsibility naturally arises in considering the thralldom of any drug habit. Can a person fall a victim to a disgusting habit without subordinating the will power? Is it not evidence of mental weakness to yield to the desire for any sort of toxic drug? Is it not the judgment of those most experienced in treating the various forms of inebriety that some sort of mental weakness, amounting at least to moral irresponsibility, must necessarily be present as a basis for the habit?

Criminal irresponsibility is just a degree of mental weakness which is characterized by loss of the power to resist an impulse to crime. It differs from civil or moral irresponsibility in kind, rather than degree.

It seems every person who feels the necessity of assisting the weak to be stronger, and who feel the proper share of responsibility of citizenship, should feel equally bound to recognize and assist in suppressing the tobacco habit, as well as the whisky and opium habits.

Toxic drugs of any kind arrest and pervert the growth of the young; they degrade the sons of our best families; they so weaken the mind as to permit the formation of other habits degrading to the whole social fabric; they threaten the foundations of our civilization.

Let us all turn upon the worst of the drug habits and stamp it out, for, if tobacco does not directly degrade the boys and young men, it, at the very least, brings them into association with degenerates and perverts who frequent the smoking rooms and club houses in all our towns and cities, and all our railways and steamboats.

PSYCHOLOGY OF INEBRIETY.

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The following extracts are taken from Dr. Howard's recent work "The Perverts." The author makes the hero of the story utter some most suggestive statements, which open up a new field for study. We commend this book to those who write as if inebriety was well known and little could be learned from further study. The author, in the form of a story, has pointed out realms of abnormal life that will be explored for a century to come.

"Evils are, with scarcely an exception, old. That which is new is the intelligence which discerns and the humanity that renders them.

Leigh was not a drunkard, not a chronic alcoholic, not an individual lacking moral sense, defective as it might be at times, nor did there exist in him a continuous unstable mental equilibrium.

The public gazes at the club-footed child, or the deformed adult, and utters a sigh of sympathy or an expression of regret that the parents or friends have allowed the sufferer to go uncured, the deformity uncorrected. The child whose twitchings are the symptoms of St. Vitus' dance is the cynosure of its playmates, and often the victim of their ignorant ridicule. The child's distressing uneasiness and odd muscular movements, however, are recognized as the effects of disease, and the social attitude of young and old adapted to this recognition. Does the public ever realize that any group of the cells which make up the human body are liable to be distorted, undeveloped, or misplaced during their formative period? That, while we pity the man with the deformed bones, and appreciate the fact that the deformity is due to no fault of his conduct, the man who was born with an

analogous psychic defect is shunned, ostracized, and meets with social degrading? It is the same old story. The world is ever too eager to censure what it does not understand. What is objective it accepts; what is subjective it ignores or ridicules.

With its knowledge of modern corrective surgery, the world blames the parents who allow their children to grow up deformed, rightly holding them responsible for not having had the defect remedied. But if the child grows up with some defect in its controlling centers, if the nervous system is a little unbalanced, the neglect and ignorance of the parents increase the instability, and the result in the adult is some form of impulsiveness. For the objective signs of this impulsiveness the helpless one is thrust aside, and the real offenders — the parents — meet with the sympathy of the world.

If this symptom of a nervous affection exists in the man of ordinary intellect, if this man periodically demonstrates his restlessness by resorting to alcohol to relieve his horrible feelings, it is called by the unthinking masses vicious drunkenness. This condition, however — the disease inebriety, or its rabid form, dipsomania — rarely prevails in the man of ordinary mental powers.

The psychic conditions producing the unreasonable passion to consume enormous quantities of alcohol, morphine, and allied drugs is as distinct an affection as is the physical epilepsy seen daily on our streets.

Dipsomania — not drunkenness — is mostly seen in the man with extraordinary mental powers, the genius. It is here the laws of nature reveal themselves most plainly in the extreme of their manifestation. The world tries to excuse, palliate, or smooth over with specious and unscientific methods the moral eccentricities of these individuals. It calls them unfortunate vices, when in truth they are symptoms of disease.

In a genius we have the development of a single faculty at the expense of others. When this greatly developed faculty has for the time being exhausted itself the other undeveloped faculties run riot, and we have the sad phenomena of some form of psychic epilepsy. This psychic riot, if inherited, does not necessarily take the form it had in a past generation. Environment controls the phenomena. The fundamental cause remains the same, but the effects are governed by circumstances. Hence men are more like the times they live in than they are like their fathers.

Bad social conditions, unfavorable environments, a predisposition for alcohol through heredity, faulty training, drunkenness, and its concomitant vices; but aside from the vexed question of heredity, we have none of these conditions existing as the cause of true dipsomania, but only as the effect during the attack. The unfortunate victims of this form of defective nervous inheritance are generally those whose surroundings are the best, individuals of genial and honest natures, bright and highly intellectual; many have been the most brilliant of their time.

As the majority of the individuals who suffer from attacks of dipsomania are those who live at a high nervous and mental pressure — physicians, literateurs, artists, and musicians — exhaustion of nervous energy is frequent and often continuous, and the reserve brain power is soon used up.

Such mental spendthrifts as Cromwell, Humboldt, Goethe, and Dante had no capital to transfer to their sons. The almost simple-minded Duke of Reichstadt — "L'Aiglon" — the legitimate son of Bonaparte, was the result of the ruined mental vigor of the hero of forty campaigns.

Histories of men who have stamped their individuality on the world show many of the traits which denote a lack of equilibrium in their mentality.

The struggle, the painful demand for alcohol, the determination to control the crying yearning for some relief from

the horrible restlessness, the knowledge of the fact that the higher centers are so disturbed as to make the carrying out of daily duties impossible, are too fearful for even a person perfectly conscious of the ultimate disastrous results, to stand against. One drink only will he take to relieve the woeful uneasiness. He steps into a saloon, an act which a few days ago he would have considered degrading. The drink is taken, after which there does not appear to be any limit to the amount of alcohol he is capable of consuming. His thirst is savage, uncontrollable, unlimited. Now hours pass as minutes. The individual becomes voluble, boasting, egotistic, and self-contented; he delivers philippics, and enters into polemical discussion with his bar-room companions, considering himself an oracle, the center of every movement. No food is taken, and when midnight comes he departs with his newly made acquaintances to some low, all-night hole, which is like a palace to him, the parasites being his willing knights. A short doze on a dirty sofa, and the morning will find him without the mental or physical energy to leave the rum hole; and humored, flattered, cajoled, and contented he will remain in this lycanthropic condition — dirty, filthy, regardless of such personal appearance — until the nerve storm has spent all its fury. This storm, which approached with its undulations of fast-gathering tumults, its psychic murmurs, its sighing, its slow but insidious strength, finally bursts forth in all its horrible and destructive fury, followed by rapid subsidence, leaving the hurtle, flotsam, jetsam, and moral wreckage to be gathered and dispersed by an interval of normal life.

The duration of the storm from its first fitful gusts to its last distressing sigh covers a variable period — generally about three weeks. During this interval but little food is taken, and that at irregular intervals. The mental condition during this period is not the one of maudlin drunkenness; not the one of violent, inhuman, tigerlike brutality seen in alcoholic frenzy and pseudo dipsomania, but one in which the

speech is tenuous, light, airy, and teeming with idle gasconade. The ideas expressed are emaciated, weedy, macilent. There seems to be only a slight clouding of the mind as regards surrounding details; the whole mental condition and attitude is in harmony with its companionship and environment. He has not the drowsy, sleepy stare of the drunkard, nor does he have the appearance of being insulated in the gloomy umbrage of alcohol. Regarding his true life — his normal condition — there is a hazy, vague state of intellect if his attention is called to it; generally total oblivion of his duties and responsibilities. The return to his former self is comparatively rapid; and after the recrudescence he will have but a slight recollection of the time passed or the places where he has been. Often close questioning and leading questions will throw a ray of light on some obscure act, but even then he is not convinced that the fact is not a phantasy, a dream, or else idle banter of his questioner. He desires no liquor now, and has neither thought nor idea of ever again wishing for a drop of alcohol. It is not the moral determination of the drunkard never to drink again, nor the sickening, repulsive, abhorrent feeling of the inebriate for alcohol due to temporary excess, but a condition of psychic contentment. There is no demand, desire, or physiologic craving for alcohol in these unfortunate persons when the nerve storm is over — a radical difference from the drunkard or the inebriate.

It is questionable if patient Mrs. Carlyle had not preferred some periodical outbreak, such as dipsomania, to the continuous nervous irritability exhibited by her talented husband. Such irascibility, such acerbity, as Carlyle ever evinced would have made itself prominent in some form of rabid impulsiveness in a less phlegmatic man.

It is this rabid impulsiveness and temporary mental alienation that distinguishes dipsomania as a disease. Its force, fury, sudden onslaught, and periodicity demonstrate the mental disturbance. The line between the drunkard and the pseudo

dipsomaniac is not an incised one, the conditions being those of correlation. The pseudo dipsomaniac is an intermittent drunkard; he will drink to excess whenever an opportunity occurs, and at no time does he have that repugnance for, or fear of, alcohol which possesses the dipsomaniac during his lucid intervals. The drunkard will enjoy every opportunity to drink to excess, but ceases with the opportunity. The dipsomaniac knows no halt, no restriction; he must, he does, he will succumb to the impulse to drink to the extent of causing total oblivion of all honor, respect, and fealty due himself, and all duties, obligations, and responsibilities due others.

Drunkenness was no excuse in the eyes of the law, and the psychologic fact and medico-legal problems of his double personality would not be understood by the courts.

As has been explained, Leigh had shown no signs of being under the sway of alcohol. He felt now that imprisonment for criminal acts of which he honestly believed himself guiltless. Was it strange, then, that we should find men whose lives were in revolt against society for the injustice done them?

To this legal aspect of the case he had not heretofore given much thought, but now clearly saw it needed close attention by students of criminology. His conclusions, crude as they were, came to him while waiting for the first train to take him away. The law must act upon the deed; it is all we can expect until modern advances in psychology are understood by courts, and lawyers are taught something besides how to evade statutes.

If an individual knows previously that he as a victim of psychic epilepsy will burst forth in all its uncontrollable phases if alcohol is taken, and that during this condition he has no control over volition or will, and while in full possession of his normal will he places himself in such a position as to bring about this psychic epilepsy, a certain degree of responsibility attaches to him for any crime he may commit.



Such were Leigh's conclusions. But this would not cover the cases governed like his, where the loss of volition and will preceded the taking of alcohol. In his case it was a procrustean bed he was stretched upon, and forced him all the more to be determined to seek some method of strengthening his riotous brain. "Death — disgraceful, misunderstood death — if I don't," he said to himself; "or, should that end escape me, a criminal — a man held up before the public as one of the lowest types of criminals, and nauseating lessons and homilies derived from the downfall of a cultivated, wealthy, and once refined young man scattered throughout pulpits and journals. The curse of liquor will then be shown in all its fancied horrors by priest and parson, while these same preachers will turn from their superficial admonition to join in wedlock individuals unfit — through heredity on one side and personal vices on the other — to breed anything but a neurotic, who grows up only to be punished by unjust laws for the stupidity of the priest and the ignorance of society."

Leigh was fighting a battle for himself. He was making an epoch study in medicine. His physical system had received no alcohol — no stimulant in any form — yet for weeks he had been physically ill and mentally erratic. He could not control his higher thoughts sufficiently to read the daily papers, sentences and headlines being uncorrelated, incongruous. The subconscious mind was always intruding upon the conscious, and ideas were hazy and disconnected, like the half-reality of some dreams.

He was a pitiful sufferer, melancholic at times, at other moments exceedingly witty, while in conversation the mere suggestion of love or affection in animals would bring tears. He knew that the condition, the symptoms, resembled a form of insanity. His horrible restlessness, frightful introspection, morbid fear of self, and the imagined suspicion of others were recognized by the true self, but, nevertheless, these awful feelings were uncontrollable. These uncontrollable fears are

the impelling forces of the dipsomaniac — the potential that drives with irresistible energy the brain-poisoned individual from the fireside to the gutter.

The ravings of the typhoid-poisoned patient, the insanities and suicidal tendencies of the poisoned woman in puerperal fever, or the mental palsy of the man intoxicated with the toxins of certain bacteria, are no longer to be separated from the effects of toxins which accumulate in the faulty system of the neurotic, and which are demonstrated by a periodical insanity — the disease dipsomania. This physiologic phenomenon is the baneful result of some careless, thoughtless, or sinful waste of nervous energy on the part of our ancestors. Were parents and grandparents as thoughtful of their children's physical wealth as they are of their worldly wealth, many a genius might have lived to enrich the nation with his powers and many a wretched home turned into a happy one.

Numberless Americans who are descendants of several generations in this country are unfortunate. They are the victims of the disturbed physiologic rhythms of one or both parents or grandparents. There is little left to them of a strong, virile force. They are, perforce, compelled to resort to stimulants to temporarily pass over periods of mental restlessness and physical discomforts. When they have been unable to throw off the normal poisons of the body, the disturbed nerve cells shriek for artificial stimulants for relief, and from relief the conditions soon demand a habit; and what could have been at first physiologically adjusted becomes a psychic and somatic wreck, wallowing between the banks of drug empiricism on one side and disheartened and pessimistic periods of perversity on the other.

The paralysis of the higher centers of Leigh's brain had now completely disappeared. He was calm mentally, restful physically. The ego which had supplanted his normal ego had run its short life. The second personality, which for the

time being had been absolute master of his physical body, was now nonexistent. Its only memorial was a blank — a hiatus — the cause of which was well understood by the present, the real self of the man. He had made a special study of double and varying personalities, and felt certain that in appearance and action he had passed as a rational, sane man; that he had had all the outward signs of reason and self-consciousness. In reality he had been only an ambulant somnambulist, this second personality being the symptom of a disorganized nervous system; the force, energy, and power to carry out the physical acts of this second personality being supplied by alcohol; the quantity needed and the frequency of supplying it being unknown factors to the primary self. However, in this state of conscious unconsciousness — to use a seeming paradox — no pronounced state of maudlin drunkenness is ever exhibited. Individuals in this insane condition have no recollection of the abnormal self. The separation between these two phases of a dipsomaniac's life is nearly, if not quite, absolute. The dipsomaniac does not have, as is the case in double consciousness seen in hysteria and some forms of mental disturbances, a second self which exhibits rare attainments, wonderful memory, and surprising talents. It is simply a wandering, restless, careless existence from place to place, saloon to saloon — objectless, purposeless. Leigh had no recollection of his movements of the past few days; there was an entire absence of any memory of effort. We recognize ourselves, our personality, by our efforts, the consciousness of our efforts of movement and thought. The movements of the dipsomaniac during an attack are automatic, will-less, effortless.

The feeling that he had was akin to the agoraphobia-afflicted individuals. These unfortunate victims of a morbid impulse are not few. Normal in all other respects, there is always some particular place, generally a height, some tower or monument perhaps, or a dark room, which they must, even

at the cost of severe injury or death, jump from, escape from. In these persons, as with the dipsomaniacs, there is an ever constant increase of extreme nervousness, loss of judgment, volition, and personality. These individuals are wholly irresponsible for acts arising from temporary insanity. The most common of these symptoms of an inherited nerve cell exhaustion is shown in the disease inebriety, and its more distressing form, dipsomania. In the United States it is probably true that the ordinary drinking of strong stimulants is on the decrease. This is so because the normally developed man recognizes its curse, sees its fearful ravages on those who suffer from a disease which tyrannically demands alcohol, and later on morphine, to quiet an agonizing unrest, and profits by the lesson. But, unfortunately, it is also a fact that the conditions which produce the rabid impulse to consume enormous quantities of stimulants — the disease dipsomania — is on the increase in this country. Nothing but an early knowledge, either in the parents or in the individual himself, of a tendency to neurotic disease, will check the progressive and forceful growth from gradual stimulation to the disease inebriety, or the insane conditions of dipsomania.

Let the parents be as careful in watching for some direct or atavistic neurosis as they are in watching the child's physical and religious formation, and the question of intemperance will be seen to be governed by natural laws, and the cure of inebriety and dipsomania shown to rest on a purely physiologic basis. The vices and habits of man, as vices and habits purely, will always be with us. But the increase of vice can be controlled by a frank admission of facts.

When Aristotle said that drunkenness was voluntary madness he was correct only so far as his statement regarding the mental alienation. Modern clinical researches in nervous diseases and physiology show that in the case of periodic inebriety and dipsomania we have an involuntary insanity, and this mental disturbance is the cause of the excessive drinking, and not the effect.

Have we yet reached a real state of civilization? No. While the youth of this country are taught the beauty of freedom, that individual rights are supposed to be the essence of civilization, the rights of the unborn are ignored, unrecognized.

Thousands are existing today in a supposed land of freedom under a tyranny more fearful and despotic than any potentate of Eastern lands dares to exercise. Freedom is a good word to juggle with, a good idea to put in the mind of the young and ignorant, but a sad thought to the child who inherits it not. The tyranny of a bad inheritance knows no laws, no mercy. It bends to no authority but the sway of impulse and the license of passion. It is absolute.

The man who wastes his vitality early in life through excessive zeal to pile up a wealth of gold for the future generally leaves physically bankrupt descendants. The drunkard who marries, the morphine fiend who essays the role of motherhood, are looked upon by the world as unfortunate beings doomed to misery, and their children partially or wholly excused for any loose habits or moral eccentricities they may possess. Yet the man or woman who has been reckless in vital expenditure, who has been careless and regardless of his or her physical capital, and drawn upon it to the last struggling piece of reproducing protoplasm, and then marries, is the greatest sinner of all.

When a woman with animal instincts so powerful as to cause moral obmutescence, obscuration of physical rights, and an incoherence of maternal duties marries a pronouncedly weaker — physically and mentally — man, the child of the union is apt to show all the beastly traits of the mother.

The training, education, and temperament decide the manner in which the born criminal thinks and acts. Pre-meditation has no absolute value in criminal psychology, for premeditation depends especially upon the extent of mental growth and environment.

Those who look upon criminal instincts, immorality, and moral debasement from a purely metaphysical viewpoint, who see in the criminal individual the absence of some inward, mysterious, unknown attribute, which for want of knowledge they call 'divine power' — both meaningless and unscientific terms — are antagonists to all useful curative and preventive methods of dealing with anthropological abnormalities. Continued immoral or dishonest acts of a man are only external expressions of the individual's diseased, distorted, or undeveloped physiological organism. It is the organic, physiologic matter-of-fact conditions existing through heredity, plus the environments and education, which determine the moral and immoral character of the individual, and any attempt to correct a pathologic condition through persuasive appeals to unknown powers is a humiliating exhibition of superstition and ignorance of nature's laws.

Psychic intoxication, in any form it takes, follows the law of all intoxications. At first pleasurable and exhilarating, it seemingly gives energy and vigor to the mental processes. Uncontrolled and often uncontrollable, this symptom of an unbalanced nervous organization merges into a habit which widens and deepens as the nerve cells become fixed and habituated to their weakness.

As the chronic alcoholic gradually loses his mental grasp, has his memory impaired until all interest in self is lost, so does the unfortunate psychic inebriate find that his astuteness, powers of introspection, and outward government of morbid, and oftentimes disgusting, impulses and passions pass from his control. Wrought up to the point of passion, the cleverness of the past and the caution of the future are submerged by the overwhelming impelling neurotic force, and the individual sinks to the level of the beast; aye, beneath the level of the lowest beast.

Science has changed many of the old views of the order of things in the last decade, but in nothing has she been so

gracious as in taking away the stigma of drunkenness too long attached to that American genius, Poe. Born with intellectual powers beyond the ken of his contemporaries, he also tried to struggle through his physical life heavily burdened by a psychic form of epilepsy over which he could not possibly have control, and which at intervals held him in its impulsive grasp. Literature always recognized Poe's genius. Science now recognizes his disease."

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#### TOBACCO AND DEAFNESS.

Any relation between deafness and the use or, rather, the abuse of tobacco is generally due to the irritant effect of the latter on the upper passages, whereby catarrhal conditions are induced which may spread up the Eustachian tubes to the middle ear. Thus the best explanation for the chronic hardness of hearing sometimes observed by smokers is that it is due to a simple middle ear catarrh. The possibility of a chronic neuritis of the auditory nerve analogous to tobacco amblyopia, which Moss assumed to be the cause of smokers' deafness and tinnitus aurium, cannot be denied; but, so far, no adequate proof of its occurrence has been placed before us. In the December number of the *Birmingham Medical Review*, however, Stanley published the interesting case of a soldier, invalided home from South Africa for enteric, who, on the voyage home, smoked largely of a coarse, strong twist, the only merit of which appeared to lie in its cheapness. He developed a tobacco heart from this indulgence, and with it complete deafness. The condition was evidently one of internal ear deafness. The patient was told to give up smoking, and when this order had been carried into effect for a month, both heart and hearing were greatly improved. It is unlikely that the deafness can have been due to the enteric fever, as the labyrinthine complications following that disease are very unfavorable, and are certainly most unlikely to improve without treatment. As far as we can judge, the case must have been one of auditory neuritis due to tobacco poisoning, a condition of such rarity as to make the case referred to of great importance.

THE RELATION BETWEEN THE ALCOHOLIC  
MEDICATION AND DRUG ADDICTION.\*

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The number of individuals who yearly become hopeless victims of the various forms of drug addiction is increasing so rapidly that it will soon be a practical question whether the drug fiend is not ultimately to become as common as the drunkard now is.

Conservative estimates, based upon the observations of a large number of reliable persons, have placed the number of abject slaves of the morphine habit in one of our large cities at 60,000. The very fact that almost every issue of some of our popular magazines contains a number of alluring advertisements of various remedies or institutions purporting to cure drug habits is of itself an indication that there are multitudes of victims to patronize them. Dr. Crothers, after years of extensive investigation and observation in this field, has already called attention to the frequency of drug addiction in the ranks of the medical profession.

There are thousands of people so ignorant of physiological law that they imagine that they can eat the most unwholesome and unnatural foods and indulge in almost any wrong habit of life and then, when outraged nature utters emphatic protests against her wrongs, they may then secure permanent relief by swallowing some magic powder or pill that will juggle away the unpleasant *symptoms*. Modern civilization is rapidly developing an enormous army of neurotics who do not possess the physical capacity for enduring the

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\* Read at the Medical Temperance Association, Saratoga, N. Y., June 11, 1902.



pains and hardships that are incident to life. This class intuitively seek any agent which affords them immediate relief from their present suffering, and each time the irritated nerve centers are thus artificially quieted it is only preparing the way for the demand for a larger quantity. For this class of semi-invalids the road which leads to hopeless drug slavery is so short that it does not take long to travel it.

It would be interesting as well as useful if we had the data at hand by which we could know to just what extent the unscientific and irrational use of alcohol as a medicine by the fathers and mothers of the present generation has been an active factor in producing the large number of neurotic individuals who are now so hopelessly dependent upon felicity-producing drugs.

Various enterprising patent medicine firms, by persistent and extravagant advertising, and partially by taking advantage of that superstitious reverence which exists in the public mind for drugs put up under mysterious names, succeed, according to Dr. Jacobi, in annually disposing of \$200,000,000 worth of nostrums, quack remedies, and other more or less harmful stimulants. A large share of the so-called stimulating and tonic properties of these remedies is due to the high percentage of cheap whisky which so many of them contain. These manufacturers are beginning to discover that the average invalid demands something more effective, and as no other agent furnishes such immediate relief as opium, and no drug produces such satisfactory exhilaration as cocaine, these drugs are rapidly finding their way into the patent medicine bottle, and they undoubtedly assist the manufacturers very materially in securing reliable and convincing testimonials to the remarkable efficacy which their particular drug possesses in bringing immediate relief from pain and mental distress.

Unfortunately many of the medical profession have been very slow to recognize that such a drug as alcohol, which is

capable of producing an exhilaration of spirits which is not the result of physiological activities, must be mischievous in its effects, particularly when used day after day by individuals who have strong neurotic tendencies. Chemical activity is no respecter of persons nor of conditions; therefore the persistent use of alcohol necessarily has the same effect upon the human organism when it is dispensed by the druggist as when it is obtained from the bartender. In either case there is created a morbid condition of the nervous system which constantly demands an increased amount of either this stimulant or of some other drug similar in its effects. The patient who has been using alcohol for its therapeutic effects, when he arrives at the stage where he can no longer secure from it its characteristic effects, will not be slow to discover that he can obtain the results very satisfactorily by merely substituting some form of opium for the alcohol.

Not only are the physiological effects of alcohol similar to opium, but clinical experience in dealing with the victims of drug habits shows that it is not difficult to temporarily deprive a morphine fiend of his accustomed drug if he is allowed to use liberal quantities of alcohol. When we take into consideration the enormous amount of alcohol that is annually consumed for medicinal purposes it can readily be seen that the merest accident would suffice to discover to a number of these susceptible invalids that opium can produce the same characteristic effects as alcohol and in apparently a much more satisfactory and prompt manner. The fact that there are thousands who might be termed medicinal alcoholics who have not been so unfortunate as to learn this, neither lessens the force of the argument nor diminishes the danger that is lurking in the present extensive use of alcohol for therapeutic purposes.

It is certainly a hopeful sign of genuine progress that so many physicians are beginning to substitute for alcohol other drugs which are far more efficient and which do not possess

the habit-forming tendencies which are so characteristic of such drugs as alcohol, opium, cocaine, and similar felicity-producing agents.

It is also encouraging to note the important position which is being assigned to the subject of physiological therapeutics. No artificial tonic can compare in efficiency and permanency of effects to the results which can be so readily obtained by the intelligent use of the various hydiatic measures. As we develop more and more in a scientific manner the possibilities that are lying before us in the domain of physiological therapeutics we shall find that these healing agencies may be used to the full limit of their therapeutic effects without creating demands for themselves as do the habit-enslaving drugs, or producing disastrous after effects which sometimes are so serious that they more than counterbalance the temporary benefits derived from their use.

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#### METHYL ALCOHOLIC AMBLYOPIA.

Moulton reports a case of blindness from drinking bay rum and compares it to the reported cases of wood alcohol blindness due to the use of cheap essence of Jamaica ginger and other substitutes for whisky. Under a recent improvement in preparation, methyl alcohol is sold under the name of "Columbian spirits," and is free in a degree from the objectionable features, and on account of its cheapness it may be expected in many essences and similar preparations sold at a cheap price, particularly in the stores of rural prohibition districts. On this account it is important to make an immediate diagnosis. The most important toxic symptoms are gastroenteric disturbances when small quantities have been taken, and coma after large doses; followed by rapid failure of vision, which later improves, but soon fails permanently. There are contraction of the fields, absolute scotoma, usually central, and sometimes total blindness. These symptoms are similar to those of retrobulbar optic neuritis, but the prognosis is far different. In more than ninety per cent. of the cases of wood alcohol amblyopia useful vision is permanently lost.

ALCOHOLIC PSYCHOSES, CLINICAL ASPECTS,  
AND DIFFERENTIAL DIAGNOSIS.

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Of the 996 cases of insanity (553 male, 471 female) admitted to the Connecticut Hospital for Insane for the years 1899 and 1900, ninety-five were of alcoholic origin. Eighty, or sixteen per cent., of the male admissions were due directly to alcohol. From this statement it would appear that alcohol exerts a most deleterious effect on the mind, producing psychic debasement.

In seeking the truth regarding the evil effects (immediate and remote) of alcohol, the tendency today, I believe, is to underrate its poisonous and deteriorating influence on the race.

The vine is supposed to have had its origin in India. The Romans introduced it into England. It was not, however, until about the sixteenth century that winebibbing in Great Britain became the common practice of all possessing sufficient means to indulge the habit. In speaking of the prevalence of the drink habit in our own time, Dr. Kerr (alienist and author of work on inebriety) states that there is scarcely a family in the United States or Great Britain which has not at least one relative who has been the subject of inebriety.

The symptoms of alcoholic intoxication described by medical men of olden times differ materially from those ascribed to the alcoholism of today. The physician of today not only has to note the poisonous effects of the narcotic on the in-

dividual, but must also study the individual himself. In other words, individual inheritance plays a prominent role in the alcoholism of the present day. Unfortunately the greatest *predisposing* factor to the disease today lies in the individual himself. Until comparatively recently the writings of medical men contain no mention of the neurotic or narcotic diathesis of which we hear so much at present and which undoubtedly is the underlying cause of many nervous and mental diseases. Evidences of degeneration, of alcoholic origin, in individuals and families are only too apparent. Anstie puts it very forcibly thus: Nervous enfeeblement produced in an ancestor by great excesses in drink is reproduced in his various descendants with the effect of producing in one insanity, in a second epilepsy, in a third alcoholic excesses, neuralgia, hysteria, and the whole train of nervous disorders. Idiocy, imbecility, and criminality might also be added to the list.

Nearly if not all the symptoms of the different forms of insanity are obtained in one or other of the phases of acute alcoholic intoxication. In the rapid release of ideas and motor impulses generally, the excitement, restlessness, talkativeness, and distractibility of the beginning stage or stage of exhilaration is noted a marked resemblance to *periodical insanity, maniacal form*; on the other hand, the symptoms of depression, with slowness of speech and retardation of thought and action, of a later stage, are characteristic of *depressive mania*; and lastly the expansiveness, extravagant speech, rapidly changing emotional states, unequally dilated pupils, ataxic gait, sluggishness, stupor, and paralysis, of the last stage of alcoholic intoxication, furnish a picture of *general paralysis*.

By repeated poisonings of the system with alcohol, chronic alcoholism results, with the effect that the moral sense is perverted and enfeebled; the will is weakened and becomes uncertain and vacillating; and, at last, the intellect is progressively invaded until psychic debasement is complete. The

process of deterioration, so gradual as to be scarcely detected at first, finally becomes general, ending in moral and mental ruin.

In chronic alcoholism there may develop a condition resembling general paralysis of the insane, which has been denominated alcoholic pseudo-paresis. It is often difficult to differentiate the two diseases. In both there is gradual and progressive impairment of memory and judgment, with stupidity, hallucinations, weak expansiveness, a sense of well-being, and delusions of persecution and infidelity. Physically each is accompanied by muscular tremor, absent or exaggerated tendon reflexes, ataxia, disturbance of speech, and not rarely by epileptiform attacks. In alcoholic paresis, while the course may be protracted, yet in time the more marked symptoms disappear or remain stationary; in general paresis the course progresses to a fatal termination. The paretic is more indifferent and less logical than the alcoholic, reacts less to hallucinations, delusions, or emotions of fear, etc. In both diseases, the pathological changes in the brain are similar. The granulations in the ventricles of the paretic are absent in the alcoholic, according to Krafft Ebling.

In a small group of cases of chronic alcoholism, with no clouding of consciousness, persistent, but feebly systematized, delusions of jealousy gradually develop. Although scarcely worthy of being designated a psychosis, it is known as *alcoholic paranoia*. The most marked and diagnostic symptom of the disease is a delusion of infidelity entertained by wife for husband or husband for wife, growing out of the estrangement which naturally arises from excessive indulgence in alcoholics. Failing sexual powers due to alcoholism may also be a factor. The patient's jealousy is aroused by the most trivial circumstance, such as a word or a glance. Neighbors, chance callers, and others are often drawn into the family strife. Delusions of poisoning also are sometimes associated with delusions of infidelity. Frequently the pa-

tients react emotionally to their delusions, concerning which their reasoning is weak and absurd and with which their actions are often strangely at variance. The disease is differentiated from true paranoia by the lack of system in the delusions and by the symptoms of chronic alcoholism. Prognosis is poor in these cases. They may be made comfortable by change of environment and abstinence from alcoholics, but a return to their homes and alcohol soon relights the same train of symptoms.

Finally, upon a basis of chronic alcoholism, two very important psychoses may arise, viz., alcoholic delirium and alcoholic delusional insanity.

Alcoholic delirium is sudden in its onset and attended by more or less clouding of consciousness. Its peculiar symptoms are due to nutritional changes in the cell element of the gray matter of the brain, and may occur either after excessive indulgence in alcoholics or after their sudden withdrawal. One of the most striking peculiarities of the delirium relates to the hallucinations which accompany it. These are almost without exception visual in character, although illusions or hallucinations of any or all of the other senses may also be present. The erroneous perceptions are numerous, embrace all manner of living creeping things, often grotesque in form and terrifying in character, and which are always in constant motion. In contradistinction to the above, in ordinary delirium (of pneumonia, typhoid fever, etc.,) the hallucinations are single and fixed. A second peculiarity is noticed in the restlessness of the delirium. The patient is uneasy, always on the alert, and finds rest nowhere. Emotionally he is apprehensive, fearful that some calamity threatens or that some evil is about to befall him. Reacting to hallucinations he peers beneath the bed and into corners and closets in search of some realization of the fears that torment him. His fear is increased to terror by the every varying but constant hallucinations, and in his endeavors to escape he may do bodily injury to himself or others.

Physically the chief diagnostic symptom is tremor; gastritis may also be present. Often no recollection of events occurring at the height of the psychosis is retained. With the above symptoms and a history of alcoholism, little difficulty is experienced in diagnosing it from psychoses of alcoholic or other origin. With supportive measures generally the main indication in treatment is to promote sleep. With this accomplished the delirium subsides in from three to twelve days. Recovery is the rule; death occasionally results from exhaustion or complications, and chronic insanity claims now and then a case, especially where there is a bad hereditary basis.

Finally, one of the most interesting of the alcoholic psychoses is that described and denominated by Prof. Kraepelin of Heidelberg as *alcoholic delusional insanity* in which the clinical picture is as clear as that in delirium tremens. With a sudden or subacute onset, and no obscuration of consciousness, the most marked and characteristic symptoms of the psychosis are delusions of persecution based on hallucinations of hearing.

Why, under the same causal conditions, alcoholic delusional insanity should develop in one individual and delirium tremens in another, or why, in the same individual, alcoholic delusional insanity should develop at one time and delirium tremens at another, has not been explained. Unlike delirium tremens, in alcoholic delusional insanity consciousness is not clouded. Loss of sleep, headache, dizziness, and irritability may for a brief period precede the actual attack. Sleep is disturbed by strange sounds which suddenly arouse the patient from his slumbers. Later, these sounds take shape, are clearer, are heard in the daytime as well as at night, and are finally resolved into voices. At first a single word, an oath, or it may be the patient's name, is heard, and finally sentences which have direct reference to the patient. The voices seem to be those of nearby shopmates, acquaintances, etc., and



may seem to come from the wall, from an adjacent room, or it may be over the telephone. The patient hears himself accused of crimes, reminded of past misdeeds; is called thief, liar, murderer, traitor; he is to be hung, shot, burned; he hears that his children have been drowned, that his wife is unfaithful. All that he hears is derogatory to himself, defamatory, to all of which he is a powerless and unwilling listener. Delusions of reference are especially prominent in all cases of this psychosis. Everything going on in the patient's vicinity has reference to him, all his thoughts and actions are commented on. He is watched, jeered at, shot at, and pursued for imaginary crimes. Reacting to his delusions, he becomes alert, suspicious, distrustful, fearful, and often antagonistic. In his desperation he may commit suicide, or, in response to hallucinations, having been called a vile name, he may suddenly strike the supposed aggressor.

The patient's actions, especially in the beginning of the psychosis, may be well directed; he often performs his accustomed employment for days before his psychosis attracts attention. Physically: impaired appetite, loss of weight, insomnia, tremor of hands and tongue, occasionally exaggerated reflexes.

The course of the psychosis, like its onset, is acute or sub-acute. Usually in two or three weeks the symptoms rapidly disappear, sometimes very suddenly; occasionally they persist from one to eight months, gradually passing away. The alcoholic history, acute onset, delusions of persecution based on hallucinations of hearing, with clear consciousness, form a symptom group by which it may be readily recognized.

The prognosis is usually favorable. It is rendered less so by marked physical changes of chronic alcoholism (arteriosclerosis) and by a defective constitutional basis, according to statistics at Connecticut Hospital for Insane.

Frequency: seven per cent. of all alcoholic psychoses; treatment consists in careful watching to prevent suicide and in the promotion of sleep.

The epidemic of insanity among our soldiers in the Philippines in the late war, and which was chronicled in the newspapers at the time, was probably one or other of the two last-named psychoses, caused by the excessive indulgence of our men, in a warm climate, in some alcoholic drink mixed with the juice of a native plant containing a narcotic principle.

I have shown that sixteen per cent. of the male admissions to the Connecticut Hospital for Insane for the years 1899 and 1900 were alcoholic psychoses. These were severe and protracted cases, demanding special care. While it does not necessarily follow, yet the above figures would naturally lead to the conclusion that the lighter forms of alcoholism must be common in the state. These milder cases of inebriety, in which there are no organic changes due to alcohol, and in which there is a simple and uncontrollable thirst for drink, are cared for at home or in private sanitarium. It would be manifestly unfair to make a comparison between cases ordinarily admitted to a "cure," sanitarium, or similar institutions and those met with in an insane asylum. Most cases of acquired alcoholism, taken in their inception, are curable, under good hygienic conditions, change of environment, suggestion, and abstinence from alcoholics. According to good authority, the use of the double chloride of gold and sodium, reinforced by nitrate of strychnia, has been productive of good results. A certain percentage of cases so treated make quicker recoveries, with less danger of the development of delirium tremens, than those treated with strychnia alone.

Of eighty-seven cases of alcoholism under treatment in the Connecticut Hospital for Insane, taken in the order of their admission, twenty-five were diagnosed as delirium tremens, twenty-three as alcoholic delusional insanity, and thirty-two as chronic alcoholism, and the remainder as pseudo-paresis and alcoholic paranoia. As a large percentage of these cases are recoverable, the question of the advisability of committing the alcoholic to a hospital for the insane

arises. Should not some other provision be made for his care and cure, thus avoiding the inevitable stigma which must attach to one adjudged to be of unsound mind and legally committed to an asylum for the insane? One who has been so committed, after his cure and release, often labors under a disadvantage in obtaining employment and otherwise, to say nothing of the unenviable heritage of his descendants.

The indirect and remote effects of alcohol are most damaging and most difficult to calculate. Probably the worst effects of intemperance in the use of alcoholic liquors are least known and least noticed. It is in the silent destruction of the nervous system, the slow poisoning of the great centers of thought, that it exerts its most injurious and far-reaching effects, and in the transmission by inheritance of the evil from parent to child from generation to generation.

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#### THE VALIDITY OF AN HABITUAL DRUNKARD'S WILL.

According to the *Evening Sun*, Surrogate Varnum dismissed a contest on the admission to probate of a will, opposition to which was based on the ground that the testatrix was an habitual drunkard. The will was contested by a daughter to whom but a small sum was left, the bulk of the property being left to "strangers in blood." The surrogate said:

"The worst drunkards have times when they are sober, and have perfectly lucid intervals when their acts are legal and valid. The fact of habitual drunkenness raises no presumption that at the time the act was done the inebriate was intoxicated."

Upon the general subject of intoxication the surrogate also remarked: "A dissipated person is not precluded from making a contract or executing a will, even though he be partly under the influence of liquor when performing such acts. If fixed mental disease has resulted from such indulgence, or the person is so excited thereby as not to be master of himself, then only are his legal acts void. Less mental capacity is required to execute a will than a contract or a deed."

THE USE OF ALCOHOL IN THE TREATMENT OF  
ACUTE INFECTIOUS DISEASES.\*

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BY HENRY F. HEWES, M.D., BOSTON, MASS.

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The employment of alcohol in the treatment of many of the acute infectious diseases or conditions, notably pneumonia, typhoid fever, and conditions of sepsis, has always been and still is a very general practice in medicine. This practice, whatever its actual merits may be from a practical point of view, presents a very striking anomaly in modern therapeutic practice. For it is a just tenet in this practice of therapeutics, in modern medicine, that drugs and remedies shall be used only with an understanding of their action, based upon what experimental and clinical observation of a scientific character we possess and in accordance with this understanding. And in the case of the use of alcohol (the routine or continuous use) in pneumonia or typhoid or sepsis, practice is in direct disregard or ignorance of and contradiction to what understanding of a scientific character we possess at the present time in regard to the action of the drug. What is the evidence obtained by the experimental investigation of the action of alcohol upon the animal body in conditions of health and disease, the pharmacological study of alcohol, which is today very complete, or, in other words, what knowledge we have of the action of the drug other than that knowledge based upon general impressions gained in its use in practice, would distinctly contraindicate its use (certainly its continuous use) in these special conditions of typhoid-pneumonia and sepsis.

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\*Read at Medical Temperance Association, at Saratoga, June 11, 1902.

Such being the case, it is a matter of urgent necessity that the profession shall make this branch of the practice a matter of careful consideration, with a view to so correcting it that it may in future stand supported by the weight of evidence deduced only from an intelligent consideration of the subject.

Our evidence bearing upon this question of the use of alcohol in pneumonia, typhoid, and other infectious conditions comes to us in two forms. The first consists of the collection of the facts of the action of alcohol upon the body in conditions of health and disease as established by experimental investigation of the subject, the facts of the pharmacology of alcohol.

The second consists of the general impressions obtained by the observation of its use in the practice of medicine.

The evidence of the first form with its bearing upon our question is briefly stated as follows: Pharmacologically considered, alcohol belongs to the group of narcotics or anæsthetic substances which act as intoxicants upon the higher nerve centers of the body. When introduced into the body it acts, whenever the dose is sufficient to produce any demonstrable action whatsoever, as a depressant of the nervous system generally, and through this as a depressant of the circulatory and neuro-muscular system. The total effect of its continuous use upon the efficiency of the body to work or to endure sustained labor is, in conditions of health, to decrease this efficiency.

The alcohol, while circulating in the body, is in great part oxidized there, less than five per cent. being eliminated from the body as alcohol. Through this oxidation it may spare the fats of the body tissue and after a time, if the dose is not too large, even the proteids. It is thus to be regarded in a physiological sense as a food.

In addition to thus acting as a narcotic and as a food, alcohol also acts upon the body as an irritant. This irritant

action upon the mucous membrane of the mouth and stomach causes, by reflex action when the alcohol is not sufficiently diluted, a certain momentary excitation of the nerve centers.

These are the chief pharmacological characteristics of alcohol, and the only ones known up to the present time which can have any bearing on the use of the drug in these acute infectious conditions under consideration. These characteristics have been established as the result of a large amount of accurate and carefully conducted investigation upon animals and men in conditions both of health and disease.

The investigations with the use of the drug in febrile and infectious conditions, such as those under consideration, indicate that the drug possesses the same characteristics here as in conditions of health. There is, however, in rare cases a quantitative variation in evidence, the narcotic effects often appearing to be less marked in proportion to the dose in the febrile condition than in health.

This variation may be due in part to the fact well understood by investigators, that oxidation is more active in the body in febrile conditions.

It may also be true, as Roseman suggests, that the toxic effect of the drug is less felt in these conditions, where the cells are already under the influence of poisonous substances. This same fact of increased oxidation would probably also give alcohol a greater proportional value as a food in these diseases than in health, although this matter has not been worked out.

The bearing of this evidence of pharmacological and physiological investigation upon the questions at issue, the use of alcohol in continuous dosage in pneumonia and septic conditions, is clearness itself.

The evidence distinctly contraindicates this use or limits the use, as that of all narcotics, to conditions in which to obtain certain results it is necessary to risk the harmful effects.

In conditions as these, where the heart is severely taxed and needs every ounce of strength which it can get, a substance like alcohol, which, whatever partial beneficial effects, as narcosis or nutrition, it may produce, under all conditions lessens the efficiency of the heart for work and the body to endure the labor, is one, like morphia or chloral in similar conditions, to be avoided as far as possible.

It is not a stimulant but a depressant. Its effect of momentary stimulating nerve energy by the reflex of its irritant action is offset by a corresponding depression and, though perhaps useful for momentary stimulation, produces not this, but a contrary effect when used in continuous dosage.

Its food properties may give it some value for supporting nutrition. This value, being obtained with alcohol bases only at the expense of decreasing the neuro-muscular efficiency of the body, can serve as an experiment, for its use only in conditions in which the same nutrition cannot be obtained from other foods which have no depressing or other drug effects, a condition very rarely met with, even in pneumonia.

This is the testimony of the known facts of the pharmacology of alcohol at the present time. That the drug may have certain special action in infectious conditions, unrecognized in pharmacological studies, which makes its total effect in these conditions beneficial rather than harmful does not concern us at this point. We are dealing simply with the knowledge of this action which is at the present time scientifically demonstrated, and the indications of this knowledge are definitely as just stated.

The second form of evidence which we possess in regard to the efficiency of alcohol in the conditions under consideration is that made up of the general impressions of practitioners drawn from their practical experience with the drug. If we study this evidence we find it divided in its indications.

Many physicians, probably a majority of those in active practice, uphold the opinion that the continued use of alcohol

in conditions of pneumonia and sepsis, or at all events in those cases of these affections in which heart weakness is in evidence, is advisable, exciting a causative or beneficial effect upon the disease.

This opinion is based, in the case of many of these advocates, upon the evidence which the actual observation of considerable numbers of cases under this special therapy has given them.

A considerable number of physicians, on the other hand, through this same means of practical experience have arrived at an exactly opposite opinion, holding that the total effect of the administration of the drug in these cases is deleterious.

If we study carefully the demonstrable results of the administration of alcohol in a case of pneumonia we find them to be as a rule the following: The immediate effect of the dose, when any effect can be noticed, is an apparent increase in the force of the heart beat and in the tension of the pulse, with sometimes an acceleration of the rate. This effect quickly passes; later a slowing of the pulse rate with, in cases where restlessness is a marked feature, a greater quiet and appearance of being refreshed, ensue.

It is this combination of results which is, I think, in great part responsible for the impression of the practitioner that the alcohol is helpful in its effects in these cases. He is wont to consider them as evidences of a substantial action of the drug upon the heart and nerve centers. If we study the signs closely and analyze them, however, we see that they are in total evidence not of a stimulant effect of the alcohol, but of the opposite, a narcotic effect. The immediate effects, the increase in the rate and force of the pulse, are as far as they exist results of the irritant action of the alcohol exerted upon the mucous membrane and nerve centers, and not of the generic action of the drug after absorption into the body fluids.

If the alcohol is diluted to avoid irritation of the mem-



branes, and the patient is kept quiet to avoid nerve and muscular excitement following the irritant action of the drug upon the cellular tissues these effects are found to be absent. The later effects which are due to the genuine action of the alcohol after its absorption into the body fluids, the slowing of the pulse and the greater quiet and appearance of comfort, are all signs of narcotic action, not of a stimulant one.

They are the same which follows the use of chloral, morphine, and other narcotics.

The impression which is generally held, that these effects of the drug bear evidence of stimulant action, or that alcohol is a stimulant, are due to a faulty interpretation of the signs, based upon a definite knowledge of pharmacology or physiology. There is with the use of the drug in the ordinary manner a reflex excitation from the irritant action, of short duration, which may be of service for producing momentary stimulation or awakening of the nerve centers in conditions of collapse or shock.

This first effect is followed by the depressant or narcotic effects, always greater in degree than any initial stimulant effects, the total result then being depressant in kind and thus not such as would indicate continuous use with the idea of stimulation of the heart.

The impression that alcohol is in continuous dosage useful in pneumonia may or may not be correct, but in as far as it is founded upon the theory that alcohol acts as a heart or nerve stimulant in the case it is incorrect. Observation from pharmacological experience and that from clinical practice rightly interpreted agree that the demonstrable effects of alcohol are those of a narcotic.

It is my opinion that much of the general impression of the usefulness of alcohol in pneumonia and sepsis is due to this single observation of the initial excitation of the pulse and the subsequent quiet and refreshment incorrectly interpreted.

If that be cleared away, it is a question how much evidence the advocates of the usefulness of the drug have left to support their impression.

They may say that, granted that the drug is a narcotic, the apparent beneficial action of quiet still remains.

That is true, but if one admits that this result is one of narcotic action rather than of stimulation, it would certainly modify his use of the drug in asthenic conditions as these in question.

Narcotics in continuous use are not advised in these conditions, unless we are convinced that the value of the rest thus gained offsets any possible depression of the vital centers which may occur. The usefulness of alcohol as food is one of the arguments adduced for its use in the conditions in question. Doubtless it has such an effect, and possibly its value in this respect here is even greater than in conditions of health. Its effect in this respect cannot, however, be the foundation of its usefulness, if it has any. For its food value, considering the possibilities of absorption, caloric value, and all essentials cannot, save in the very exceptional cases where no other food can be borne, exceed that of the ordinary food substances properly given.

And when food substances with no drug effects can be utilized there can be no argument from a point of view of nutrition for the use of a food which exerts a poisonous effect upon the nervous system.

Between the two direct impressions drawn from clinical experience, the one that alcohol is useful, the other that it is harmful in these infectious conditions, argument can at the present time go no further. The clinicians who decide for the deleterious action have what evidence of an experimental nature we possess at the present time to support their impressions. The advocates of the continuous use of the drug have this evidence against them.

If, however, these advocates claim that as a result of a

considerable experience they are convinced that the cases of pneumonia in which the alcohol is used continuously for longer or shorter periods do better than those in which it is not used, it is impossible in the present light of our knowledge to adduce arguments which will weigh with them against such use, and unreasonable to expect them to discontinue the use.

What we can expect, however, is that all practitioners shall consider their impressions carefully in the light of all the knowledge of the subject which we possess and correct them if their conclusions are thereby changed.

NOTE. — For full discussion of this subject and references, see "The Value of Alcohol as a Therapeutic Agent in Medicine," by H. F. H., Boston Medical Surgical Journal, March 13, 1902.

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#### TOBACCO HEARTS IN HIGH SCHOOL PUPILS.

Cigarette smoking is held responsible by the medical examiners of the Chicago school board for a startling increase in heart disease and nervous ailments among the pupils of the high schools. The condition was revealed by examinations recently held for admission to athletic sports. Twenty-one out of one hundred were found unfit, and all but three suffered from some form of heart trouble.

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City hospital physicians of St. Louis have asserted that ninety-five per cent. of the patients treated there for sunstroke are users of intoxicants in one form or another. While the greatest danger is to those who have drunk to excess, the person who attempts to find relief by drinking wine, whisky, or beer, even in moderate quantities, has placed his system in first-class shape for a subsequent visit to the isolation ward. It was said by Dr. Cartright of New Orleans, during a fearful cholera epidemic, that 5,000 cases of cholera were found among the frequenters of the saloon before a single abstainer was attacked. — *California Voice.*

ALCOHOL AS A PREDISPOSING AND EXCITING  
CAUSE OF DISEASE AND CRIME.\*

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BY HENRY D. DIDAMA, M.D.,

Vice-President of the American Medical Temperance Association.

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James Thacher, M.D., was a prominent physician and surgeon throughout the Revolutionary War. He was a man of keen observation and sound judgment. In addition to his valuable Military Journal, he published his celebrated Modern Practice of Medicine in 1826.

I quote from this work his opinion regarding the effect of ardent spirits only, for it was not generally believed seventy-five years ago that wine, beer, and other "soft drinks" were injurious.

He states that "the effects of distilled spirits may be divided into acute and chronic. The progressive symptoms of the immediate results are unusual garrulity, unusual silence, captiousness, a disposition to quarrel, uncommon good humor, insipid simpering, profane swearing and cursing, disclosing secrets, his own and other people's.

"These primary signs of intoxication sometimes appear in women, who when sober are uniformly remarkable for chaste and decent manners.

"Occasional and natural sequences of intoxicants are a clipping of words, a black eye or swollen nose from a hand-to-hand fight.

"Drunkenness resembles certain hereditary and contagious diseases.

"I have known it to descend from a father to four of his five children.

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\* Address at the Annual Meeting at Saratoga, June 11, 1902.

"There are marked *chronic* effects of ardent spirits upon the body and the mind. On the body they *dispose* to every form of disease. Moreover, they excite various diseases, as obstruction of the liver, jaundice, dropsy, cough, consumption and other pulmonary diseases, eruptions on the face and nose, called rum buds (we call them rum *blossoms* now), and gout in all its forms.

"Ardent spirits often incite fatal diseases without producing drunkenness. I have known many persons destroyed by distilled liquor who were never completely intoxicated during the whole course of their lives. The solitary instances of longevity which are now and then met with in hard drinkers no more disprove the deadly effect of ardent spirits than the solitary instances of recoveries from drowning prove that there is no danger to life from a human body lying an hour or two under water.

"Not less destructive are the effects of distilled spirits upon the human mind. Dr. Waters of Pennsylvania Hospital tells me that the insanity of one-third of the patients there was induced by alcoholic drinks. They impair the memory, debilitate the understanding, and pervert the moral faculties. Not only falsehood is produced by them, but uncleanness, fraud, theft, and murder. No more affecting spectacle can be exhibited than a person whose condition has been generated by the habit of drinking ardent spirits.

"Is he a husband? How deep the anguish which rends the bosom of his wife! Is the drinker a wife? Who can measure the shame and aversion which she excites in her husband? Is he a magistrate, or has he been called to fill a responsible position in the councils of the nation? What humiliating fears of corruption in the administration of the laws appear in the countenance of all who see him! Is he a minister of the Gospel? Here language fails me! If angels weep it is at such a sight. Poverty and misery, crimes and infamy, diseases and *death* are all the natural and usual conse-

quences of the prolonged use of ardent spirits. And this death is *suicide*.

“ But the use of distilled liquors is believed by many people to give strength to the body in certain circumstances. They are said to be necessary in *cold weather*. This is not true; for the temporary warmth produced is always succeeded by a greater disposition of the body to be affected by cold. They are also declared to be needed in very *warm* weather. Experience shows that increasing instead of lessening the effect of heat upon the body is the result of their use. Dr. Bell of the West Indies declares that rum always diminishes the strength of the body and renders men unfit for any service in which vigor and activity are required.

“ Ardent spirits do not lessen the effect of hard labor upon the body. Look at the horse; with every muscle of his body swollen from morning till night when attached to a plow or in a team! Does he make signs for a glass of toddy to enable him to do his work? No! he requires nothing but cool water and substantial food. There is no nourishment in ardent spirits. So great is the danger of contracting a love for distilled liquors that the smallest amount possible should be prescribed by a physician. A physician of eminence who died near the close of the last century in London lamented in pathetic terms that he had innocently made many sots by prescribing brandy and water in summer complaints. Smoking and chewing tobacco, by rendering water and simple beverages insipid, dispose to the use of ardent spirits.

“ No man ever became a drunkard suddenly. By gradually accustoming the taste and stomach to ardent spirits a habit is formed, and the desire for more liquor increases; the odious nuisance of a dram drinker's breath becomes a permanent acquisition, with the accompaniment of downright stupidity and impotence.

“ Ministers of the Gospel of every denomination in the

United States, aid me with all the weight of the influence you possess, by your precept and example, to prevent the multitude of crimes and miseries the offspring of strong drink!

"It is highly probable that not less than four thousand people die annually in the United States from the use of intoxicating drinks. Where are all the Indian tribes whose numbers and arms formerly spread terror among their civilized neighbors? In the words of the famous Mingo Chief, 'the blood of many of them flows not in the veins of any human creature.'

"They have perished not by pestilence or war, but by a greater foe to human life than either of these, ardent spirits. . . . The loss of four thousand American citizens by the yellow fever in a single year awakened general sympathy and terror, and called all the strength and ingenuity of laws to prevent its recurrence. Why is not the same zeal manifested in protecting our citizens from the more general and consuming ravages of distilled spirits?"

Dr. Thacher mentions several methods which have been employed successfully to overcome the love of strong drink. One of these seems to have anticipated the Keeley cure. He says: "I once tempted a negro man who was habitually fond of ardent spirits to drink some rum (which I had placed in his way), and into which I had put a few grains of tartar emetic. The tartar sickened and puked him to such a degree that he supposed himself to be poisoned. I was much gratified by observing that he could not bear the sight nor smell of spirits for two years afterwards."

As I have already indicated, it was believed 80 or 100 years ago by temperance men, like Dr. Thacher, that, while distilled liquors were desponents and excitants of disease and crime, wine, porter, and strong beer were harmless, healthful, and nutritious. Modern investigation shows that the nutriment

in these beverages is almost a negative quantity, while the amount of alcohol which they contain varies from six per cent. to twenty-five or more, and that as disease and crime producers they are a close second to ardent spirits in the vicious race. Physicians know, or *ought* to know, that diseases are produced or aggravated by the use of alcoholic beverages, and that the records of police courts demonstrate that the mass of criminals arrested are hard drinkers. In the earlier years of the republic it was estimated by Thacher and others that four thousand people died drunkards every year. Now more than a hundred thousand graves are required annually to hold the victims of alcoholic poisons. How many of these victims were started on their downward course by the prescriptions of reputable medicine-men may be known only by the Recording Angel, but we have reason to believe that every week if not every day there is added to the list of physicians one at least who can truthfully and proudly answer the charge that doctors make drunkards: "Thou canst not say *I* did it."

It is to be regretted that not only our daily newspapers, but reputable magazines for family reading, and even medical journals, advertise in prominent type such intoxicants as "Diabetic Whisky," "Old Crow Rye," and "Silk Hat Bourbon Whisky." And recently our friends, the fraternity of druggists, are not only demanding a reduction of the fee for a license to sell wines and liquors, but have declared that if their demand is not granted by the political party now in power they will as a union vote for its overthrow.

A prominent author in this country, after an almost literal transcription of Thacher's list of diseases induced by the use of alcohol, declared in the first edition of his masterly Practice of Medicine, and repeated it four years afterwards, without a word of Thacher's wise and altruistic caution, the imprudent and dangerous statement that "alcohol in moderation may be taken throughout a long life without impairing the general health."



As an offset to this opinion, reference may be made to the expressed views of a constantly increasing number of scientific physicians, chemists, and pathologists, of world-wide reputation, who testify from experiments and observation that alcohol as a beverage or medicine is not only useless, but harmful.

What an immense influence for good, what gratitude would be expressed and blessings be invoked by multitudes of our citizens, if those who occupy high positions in our government would discontinue the practice of drinking the health of foreign visitors and domestic friends on festive and other occasions. And how much more good might be accomplished if a majority, or even less than a majority, of the one hundred and fifty thousand members of the medical profession in the United States would fraternize with the American Medical Temperance Association and actively engage in the effort to prevent alcoholic diseases.

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The Swiss government has appropriated a large amount of money this year for the publication and distribution of five books against the use of alcohol. These books are scientific as well as practical and indicate a most pleasing advance in the effort to make the people acquainted with the subject. One of these books has the following striking title: "The Effects of Alcohol on Work, being a Result of Researches of the Krapelin School." The other is on "The Longevity Diminished by Alcohol."

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M. De Tera, general director of the German railroads, has announced that an embargo will be placed on all employees on the railroads who are not total abstainers, and all such persons will be discharged at the earliest possible moment. Others who are abstainers will be favored and promoted at every opportunity. It is the intention of the director to drive out all moderate drinkers from the service.

## SPECIFICS FOR INEBRIETY.

The British Medical Journal has made a detailed inquiry into the claims and workings of the specific cure asylums for inebriety now in England. After describing in detail the plans of treatment, taken from the circulars and the statements of managers and superintendents of a large number of cures, the editor concludes as follows:

"From the foregoing account of the certain 'cures' for alcoholism sold or administered in this country, it will be seen that the majority are of American origin. One hails from South America, three come to us from the United States, and one from Canada. Three of the remedies — the Hutton Dixon, Tacquaru, and Tyson 'cures' — can practically be purchased and taken at home. Two of the companies — the Tyson and the Tacquaru — send forms of questions respecting the patient to be filled up for the guidance of the medical adviser of the company, and one — the Tyson — advertises that the London medical adviser has only once out of a series of 29 cases, the results of which are published in a pamphlet, personally seen the patient. Three of the 'cures' — the Leyfield (Hayden), Keeley, and Hagey — only undertake patients in special homes or as boarders or patients under special conditions.

"The three remedies which may be purchased are taken by the mouth. The Keeley, the Hagey, and the Leyfield (Hayden), are given by hypodermic injection. Three of the remedies — the Hutton Dixon, Tacquaru, and Tyson — are said to be entirely vegetable in composition. The Leyfield (Hayden) and Keeley are called 'gold cures,' but what exactly is to be understood by this we have been unable to ascertain. Four — the Keeley, Hagey, Leyfield, and Tacquaru — permit

alcoholic liquors to be taken during the treatment. One — the Hutton Dixon — makes total abstinence a *sine qua non*. The Tyson 'cure' appears to be advertised as a restorative to those who have periodical outbreaks of alcoholic excess, but who are unwilling to remain total abstainers. All claim a large percentage of cures. The Hutton Dixon, it is claimed, cures all cases, the Hagey 80 per cent. Two — the Hutton Dixon and the Tyson — give a guarantee of cure, which in the former case would seem to depend on the patient's remaining a total abstainer, and in the latter, among other conditions, on the case having been treated in London under the medical adviser's supervision. Three — the Tacquaru, Hagey, and Tyson — offer to return the fees in any case in which the patient is not satisfied at the end of treatment that the cure is complete.

"It is noteworthy that there would seem to be a rather free criticism of each other's methods among the various proprietors of the cures. Allusions are made in some of the advertisements to methods of treatment practiced by their rivals or confreres, not always in laudatory terms. For instance, the Keeley advertisement warns its readers against the various pretenders to the gold cure, and mentions 'bogus institutes' and 'unfortunate accidents to the lives and health of their patients.' The Tyson advertisement mentions the 'detention in some institution' involved in the 'bichloride of gold cure invented by Mr. Keeley,' and points out the 'number of failures' and the 'serious risks' of the 'method of inoculation' and of the 'direct infusion into the blood of a mineral poison' which it is suggested attend that treatment. The Keeley advertisement also points out that accidents are frequent as a result of hypodermic injections in general medical or ordinary hospital practice, but not in the Keeley method of administration. Mr. Hutton Dixon announces that 'he has cured thousands of the most hopeless cases in all parts of the world, many of whom were relapses from gold-cure institutes.' The

Tacquareu pamphlet calls attention to the fact that strychnine is the principal ingredient in many of the so-called cures for dipsomania, and adds, 'but the danger of such a treatment is too obvious to necessitate any remarks here.' The Leyfield advertisement describes the production of nausea as an early feature of that particular treatment; while the Hagey pamphlet comments on the uselessness of 'mere pick-me-ups and emetics,' 'unless the will coöperates in the effort of cure and is toned up.' Accounts of the action of the drugs, according to those who administer them, have already been alluded to, as also their alleged peculiar property of intense potency, combined with entire harmlessness.

"The public and the medical profession are invited to investigate the results of treatment, but are as a rule neither invited nor permitted to investigate the drugs used. The proprietors of the cures declare them on the one hand to be potent in their effect, and on the other hand entirely harmless. There is, however, no question of any investigation of these statements by qualified judges, and the 'treatments,' several of which require 'skilled administrators,' cannot be taught in medical schools, studied by scientific observers, or handed on as part of the common stock of human knowledge. The 'cures' are in all cases the property of some individual or company, and are generally made known to the public by means of advertisements.

"In introducing the treatments to public notice in this country a particular method was followed by three of the proprietors or companies, the Keeley, Leyfield, and Tyson, and in a somewhat modified manner by the Hutton Dixon. Prominent persons interested in good works generally, or in temperance questions in particular, were in each case asked to form a committee for the impartial investigation of results. Test cases were selected by the committee, who watched the treatment and reported on the 'cures.' These reports were then referred to in, or published with, other advertisements.

The names of the members of the committees were thus caused to give support to the several enterprises, while their reports testified to the efficacy of the various drugs used. In addition to this method of advertisement five of the cures publish series of letters or testimonials regarding the results of the various treatments, namely, the Hutton Dixon, Leyfield, Tacquaru, Tyson, and Keeley.

“Perusal of the above documents suggests the following criticisms:

“The committees referred to above may very well comprise persons of unimpeachable repute and standing, who do the work they set themselves to do with all possible care, yet their knowledge of the kind of evidence necessary to satisfy a medical inquiry may be limited. Whatever may have been true in times past, happily not all men nowadays are familiar with the varied phenomena of drunkenness; still less are they familiar with the physical and mental symptoms of the chronic alcoholic patient either by personal or any other kind of knowledge. Therefore the diagnosis of a lay committee must tend to lack accuracy, and its testimony is to be excused if it only reaches a certain low level of scientific usefulness. The inquiries which were made by these committees, one at least of which reckoned two medical men among its members, may in reality have been full and searching, but the facts they have thought it necessary to state in their reports afford absolutely no proof of this. On the contrary, the reports contain little or nothing in the way of evidence which will bear impartial scrutiny, but merely indefinite statements dealing chiefly with the patient's appearance, feelings, and so on.

“The following extract from a ‘signed and detailed report’ by a committee who investigated the Tyson test cases, one of ten quoted by the company, affords a good example of the methods followed:

“‘Case of Mrs. L., female, aged 43. Been drinking twenty years. Very nervous. When treatment commenced was drinking spirits and rum in large quantities.

“After 1 day's treatment: Drank 6 halves whisky to-day. Feels a little sick in consequence.

“After 2 days' treatment: Feels better. Less nervous. Sleeps better.

“After 3 days' treatment: Nervousness disappearing. Crave for drink gone.

“After 6 days' treatment: No desire for drink. Feels better. Is very hopeful of ultimate cure.

“After 10 days' treatment: Going on well. Eats and sleeps better.

“After 21 days' treatment: Offered whisky and rum and positively declined. Very satisfactory case.’

“However satisfactory the case may have been, there would not appear to be anything in the least degree convincing to the medical mind in such evidence as this.

“The following are examples of the Keeley committee's report:

“The patients all affirm positively that, in periods varying from three to seven days, they lost the crave for alcohol, and ceased to take it without any restraint in that respect being imposed upon them.’

“A gentleman was treated in 1894. For some years drank heavily. Drink had injured his sight, and at one time he went nearly mad from its effects. Now he never had any crave or desire for it.’

“The letters published by the various companies are written in a very similar strain. In many of the letters there is a graphic description of the patient's previous miserable condition, which must probably have been very well known already to those who had undertaken the treatment. The description is sometimes given by the patient, oftener by friends, much more seldom by relations. The similarity of the letters in each series is rather remarkable unless they were written in response to categorical inquiries. For instance, the Tacquaru writers dwell largely, as does the Tacquaru pamphlet, on the

great improvement to the general health, 'in excellent health and spirits,' and so on; while persons who have undergone the Hutton Dixon 'cure' state, 'I am cured, quite cured.' A large proportion of writers refer to the cessation of their 'crave' or 'desire' for alcohol (the former, by the way, a word not often heard on the lips of inebriates themselves). A very small proportion make the definite statement that they have not tasted any alcohol whatever since their treatment. This proportion is further reduced if the quarter of the whole number who were actually under treatment when they made it be subtracted. A considerable number of the letters state that the patient is very well, but make no mention of the question of abstinence from or desire for alcohol. The Keeley and Leyfield produce testimony of a certain number of patients who have remained cured for periods varying from one to seven years, but the greater number of all the testimonials refer to cases in which days, weeks, or months only have intervened since treatment; and it is noteworthy in regard to the Hutton Dixon treatment that, although it has been in existence some years, no case of more than 'over a year' is alluded to, and this in only one out of twenty patients.

"A serious defect in the printed evidence of the various cures lies in the fact that the test of time is very often disregarded by those who make these 'cures.' Cases of from one to several years' duration are quoted by several of the proprietors of the cures. Information regarding the proportion they bear to the whole number treated is, however, lacking. As regards the shorter cases, even those in which treatment and care may have been effective, the 'pulling up' or temporary check cannot be regarded as evidence of cure by those acquainted with the usual course of the disease, for in many cases of alcoholism it is quite possible to secure so much as this by other means. Time is always necessary, if only to prove whether the periodic drinker is within his accustomed interval or not. The proprietors of the cures do not as a

rule appear to distinguish between chronic alcoholics and dipsomaniacs, maintaining that their several cures are equally prompt and permanent in all cases. They therefore take no account of the fact that relapses after a few weeks or months are extremely common in patients who may have been, by whatever means or circumstances, temporarily 'pulled up.' So that according to a very usual experience in medical practice a man may be said by his friends or by himself to be cured, and yet during the very few months that have elapsed since his so-called cure he may be slowly and secretly drinking himself toward another outbreak. Or, though he may actually have remained sober for his normal interval, he may again be approaching the time for his periodic attack of dipsomania. The time test is one which no scientific observer can consent to dispense with, and not only time, but a long time, should always elapse before anything definite can be said with reference to the prospects of ultimate cure.

"Again, the kind of evidence usually offered by the patient's friends is not satisfactory evidence. No evidence is so good as that of a man's own household, yet the testimonials advanced by the patient's own relations are not very numerous.

"On the other hand, the evidence of missionaries, doctors, clergymen, and others ought to state in a very detailed manner how the patient has spent his time, as well as his own and other people's money, and should give many other definite personal particulars, if such evidence is by itself to be held to be reasonably valid.

"Still less satisfactory as evidence is the patient's own version of his own cure, especially if, as in the majority of the testimonials, it is not only indefinite in itself, but unaccompanied by any confirmatory evidence. Those who are familiar with the mental reservations and twists, ingenious defenses, and general unwillingness or incapacity to make a definite or accurate statement which characterize alcoholic patients can only maintain that as a rule their unsupported statements are



not worth the paper they are written on. It is indeed worthy of note that a number of the letters written by the patients themselves do not even refer to the question of the writer's alcoholism or its cure, but are confined to generalities on appetite, health, sleep, etc., while quite a small number of all the patients or their friends state definitely what inquirers must above all things wish to know, namely, that they have remained total abstainers ever since their treatment. A few of the letters as they stand carry conviction; the rest are mainly interesting as showing the states of mind of the various persons who indited them, but as proofs of anything else are entirely worthless.

"A very large number of the testimonials report that the patient has not felt any desire or experienced any 'craving' for alcoholic liquors. Both the patients and their friends would seem to regard this information as of cardinal importance, for it is alluded to much more frequently than is the fact of total abstinence. It is, of course, possible that in the minds of some of the writers the fact of total abstinence is included in the statement about the craving or desire. It must, however, be borne in mind that there are a large number of people who, though they experience what is called the 'craving' for drink, resist it, and do not drink. There are also a large number who drink to excess and yet deny that they drink in response to any 'craving.' Therefore testimony about the existence or nonexistence of the 'crave' is not necessarily evidence of a man's drunkenness or sobriety at all. It is in fact only an account by the patient of his own sensations, or a repetition by his friends of this account. Whatever value a man's own account of his own sensations may have for anyone who is rightly able to estimate the man himself, his feelings are in the nature of things an unknown quantity, inaccessible to and incapable of proof by any other person. The question therefore whether the 'craving' persists or not is not a completely conclusive test of the value of any treatment of alcoholism.

“As a matter of fact, proofs to be satisfactory must be cumulative. The time test must be applied for as long as is necessary. The patient's own definite word as regards not his feelings, but his deeds, the evidence of his relations or of those with whom he lives as to his work, the evidence of his account book, and all the subsidiary testimonies of his changed character, appearance, and habits in respects in which they had been at fault — all these things taken together undoubtedly give satisfactory witness to a man's cure. But taken singly they cannot be accepted by the medical profession as satisfactory proofs, while they are likely to confuse in no small degree the minds of the less well educated part of the lay public.

“The claims made by the various cures would seem to be unworthy of support from the medical profession, because, speaking generally, inferring from the following conclusions:

“1. The treatment is secret, so that no opinion can be founded on general scientific grounds as to the reasonableness of the claims made for the drugs in the treatment of the diseased condition — alcoholism — asserted to be benefited.

“2. No proper statistics of results are published.

“3. Testimony of cure is offered which is obviously insufficient.

“4. Definite claims to infallibility are made which cannot be made in any department of medical treatment.

“5. Cure is generally promised in a definite time — that is, after a definite number of doses have been administered, which is absurd.”

Then follows the following editorial comment on this report in a later number of the journal:

“We concluded last week the publication of an article giving some account of the claims put forward by the proprietors of certain so-called ‘cures’ for alcoholism on behalf of the treatments which they all vaunt with equal confidence as infallible. The claims are in some respects mutually destructive, for the several proprietors do not hesitate to speak

of the methods of their rivals in trade in strong terms of condemnation. The published documents and private statements made by some of these persons reveal a mingling of ignorance and confidence which would be amusing if we did not remember the tragic circumstances of those who not infrequently build false hopes on such asseverations. The ruined husband, the despairing wife, the heart-broken mother, scrape together their last pence to make up the large fee which, it is promised, shall bring the magic bottles, or secure the administration of the wonder-working hypodermic injections which shall transform the drunken wife, husband, or son in two or three weeks into a sober, respectable citizen. The proprietors of some of these 'cures' have denounced others as frauds and impostors. We are not disposed to quarrel with the terms. There is a musty old proverb as to the occasion when honest men come to their rights. It may apply here. At any rate, it is clear from the statements put forward by the proprietors of these 'cures' themselves that their claims of certainty and infallibility are not supported by proper statistics or trustworthy testimony, and that, judging from the fees charged, the stuff sold might indeed be composed of liquid gold.

"At the same time, we must guard ourselves against pessimism. If little or nothing is to be hoped from these 'cures' shrouded in secrecy, and run for commercial ends by trading companies or private proprietors, that is no reason why we should appear tacitly to allow that therapeutics can do nothing to check the alcoholic and to cure the pathological conditions which are in part the cause and in part the consequence of his addiction. It may fairly be asked whether all is done that might be done in this direction in the inebriate homes. Their best friends must admit that they have not achieved all that was hoped of them. Complete failure is not rare, relapse soon after the patient has returned to his home is too frequent. Is this in any way due to a too abso-

lute reliance on mere seclusion and abstention? Is a systematic attempt always made to study the individual patient; not only his moral and intellectual defects, but his physical condition? We hear much of the need for dealing with his perverted will. That such need exists there can be no doubt. But no corresponding attention is given to his bodily ailments, to his deficient nervous system."

The following comments and letter appeared in the Journal:

"The Windsor Magazine recently published an article bearing the title 'Is There a Cure for Drunkenness? An Interview with Canon Fleming.' Canon Fleming's connection with the Keeley secret treatment of inebriety is well known, and in the article in question he expresses his opinion about the treatment in terms of unqualified approval. Not long ago we endeavored to indicate the kinds of evidence which the medical profession will require from those who attempt to testify to the value of certain kinds of treatment, but we are obliged to own that Canon Fleming is of no help to us in the matter. On the contrary, he seems to us to make the confusion worse confounded. Here is a sample of Canon Fleming's evidence in support of his case for the Keeley remedy:

"“I have seen men start perfect wrecks, and go out at the end with their bleared eyes bright, their will power restored, their manhood bought back.’

"There is no doubt that this kind of evidence, which may perhaps justly be called picturesque rather than accurate, makes an appeal to many unthinking people, and that in proportion as it does so it may be said to harm their chances of forming a well-balanced opinion on the question based on definite facts. If it were not for this there seems to be no reason why the advocates of secret remedies should not be as graphic in their descriptions as they please; and it is only in view of the extreme seriousness of the method they employ

to many persons whose ignorance places them practically in their hands that we are justified in asking advocates like Canon Fleming to weigh their words. Now, the phrase 'perfect wrecks' does not seem to us a particularly accurate or helpful description of any group of patients, especially when used wholesale in the plural. And it is not a term that applies to the generality of curable alcoholic patients at all. 'Bleared eyes' are not difficult to brighten by means of rest, food, and suitable medicines. They are not in any case a symptom peculiar to alcoholism, and many things besides the Keeley remedies may cure them. Another case described by Canon Fleming had 'bloodshot eyes and an angry and resentful air,' but we have seen confirmed teetotalers before now with similar symptoms.

"If this is the best kind of evidence that can be brought as to the value of the Keeley remedy, we can only say that we do not think that anyone is justified in accepting results based on such facts.

"As regards the permanency of the cure, Canon Fleming is quoted as follows:

"Does the cure last? I have carefully kept track of it for nine years and have seen the cases from the beginning permanently remain steady."

"This is a sample of another form of loose and inaccurate statement, calculated to confuse the mind of the casual reader.

"It should be stated to what cases allusion is here made. It cannot be to the ninety per cent. claimed as cured as soon as their few weeks' treatment is accomplished, some of whom break down later; and if it be to those who are known to Canon Fleming to have 'remained steady' for the whole nine years, it seems to us that some of or so many of the whole number, if less encouraging, would at any rate have been nearer to the truth. And every inquirer has a right to know, and ought to be told the exact facts.

"Canon Fleming describes how on one occasion the late Sir Andrew Clark remonstrated with him for encouraging a secret remedy. His reply to Sir Andrew Clark was:

"'From your point of view your objection may be very well. I can quite understand that doctors should be bound by the rules of their profession, which compel them to discountenance secret remedies, but I am a free lance, and the rules of your medical profession do not bind me. I want to find out, first of all, if this treatment is really the good thing it professes to be, and I shall be quite ready to discuss its secret nature afterwards. Besides, supposing it is a secret now, no good thing can be secret forever. I am not sure that your medical rule for preventing men benefiting by their discoveries is not against the laws of patents. Had it been in force in the Middle Ages we should have lost many of the great discoveries that have come down to us today, for men would have no incentive to investigation.'

"These views, together with the reduction of scientific investigations to the level of mere paying investments, are not altogether the ordinary views even of the man in the street. But they are, perhaps, the logical outcome of the 'free lance' system in medicine, but not good enough for the treatment even of the lower animals; and a very short study of the rivalries, counter-accusations, and trade jealousies of the venders of secret remedies would surely tend to clear the minds of the most prejudiced advocates of the system as applied to men and women. For when the rules of the medical profession are considered in detail, it is evident that they are made entirely in the interests of the people whom the profession exists to serve, and are only founded on that 'sanctified common sense' which is the leaven of all civilized human intercourse."

The following letter from Dr. Didama of Syracuse, N. Y., appears in the Journal:

"One of the earliest visitors to Keeley Institute from

Syracuse was a prominent and brilliant lawyer. On his return from Dwight he went about the city proclaiming, what very few of his acquaintances suspected, that he had been a drunkard for years, and that he had been entirely and permanently cured by Keeley. By his earnest and eloquent advocacy of the successful treatment he induced several habitual drinkers of alcoholic beverages, who had graduated from the stage of so-called moderation, to make a trial of the double chloride of gold. After the return of these drinkers a Keeley association was organized and held enthusiastic meetings, glorifying the inventor of the cure. It was noticed, however, that the number attending these meetings became less and less, and that at the end of a month or so the club room was abandoned.

"The lawyer frankly gave the details of his experience to all inquirers, and to many who did not inquire. When he first arrived at the institute, Keeley asked him if he had in his satchel any whiskey or brandy. The answer was: 'I have both.' 'Give them to me,' responded the doctor. 'I wish you to keep on drinking as usual, but I will empty your bottles and fill them with a pure article.' The bottles were filled and refilled by Keeley as fast as emptied.

"The craving for drink disappeared in a short time, but the orders of the doctor to keep on drinking were strictly followed, notwithstanding that the nausea which attended every swallow became so severe that the very thought of the accustomed intoxicant excited it. The patients who, after a longer or shorter period, were dismissed from the institute were exhorted to continue taking a certain liquid tonic which Keeley furnished, to avoid visiting saloons, and to abstain entirely from even tasting an intoxicating beverage. Keeley forewarned them that a return to their drinking habits within a week would be fatal, and that if the resumption did not take place till after a month's abstinence their condition would be worse than before the treatment commenced. Not a few

heeded the admonition, and their reformation has continued with scarcely a lapse up to the present time.

“Public opinion here was not unanimous regarding the efficacy of the treatment. Like the Athenians on Mars Hill, some cautious people doubted and decided to watch and wait. One prominent clergyman proclaimed from his pulpit that these gold cures were hardly less miraculous than those performed by the Great Physician nineteen hundred years ago. And he did not warmly commend those physicians who had some lack of confidence in Keeley, quoting for their consideration the grateful statement of the restored blind man: ‘Whether he be a sinner I know not, but this thing I know, that whereas I was born blind, now I see.’

“But the eminent attorney himself, after a few short months, fell from grace and returned to the institute for treatment. Recovery took place again and again, but at last the ruin was irremediable.

“That a double chloride of gold — if there be such an aurous salt — was the sole or chief drug employed by Keeley or his disciples to produce certain conditions is open to very grave suspicions. Why did he demand that the lawyer should surrender the whisky and brandy in his possession and drink a pure article which he claimed to possess? The attorney might have told him, but curiously enough he did not, that his own whisky and brandy were the best which money could buy in any market. But the shrewd Keeley knew that neither these nor their combination with the gold chloride would remove the crave nor produce the desirable nausea — ‘a sensation,’ as Hayden calls it, ‘akin to sea sickness’ — He must add to the pure substitute increasing quantities of apomorphine or some other nauseant which would cause an abhorrence delightfully overwhelming. That the frequent hypodermic use of strychnine with some other tonic — auriferous or not — kept up the strength of the patients during their three weeks’ treatment at the institute is highly probable.



That the disgust at the very thought of whisky was not permanent is evident from the fact that when one of the reformed alcoholics ventured into a saloon and tasted an intoxicating liquor not the slightest nausea ensued, and the lost crave soon returned.

“The teaching of a prominent chemist and peripatetic lecturer in this country, that the daily use of intoxicating beverages in moderation is harmless and beneficial, appears to be unwise and unsafe, to say the least. Every one of the hundreds of thousands who has become an inebriate and has suffered or is now suffering from alcoholism was once a moderate drinker.

“Unquestionably the only certain preventive of this terrible disease is early and persistent total abstinence.”

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Among the numerous symptoms and effects from the use of alcohol in excess may be enumerated defective memory, especially a loss of the sense of time and space; a tendency to illusions, hallucinations, and delusions of a changing character; a loss of esthetic and moral appreciation; depressed emotional states, irritability of temper, slowness of perception, a lack of judgment; suspicious and jealous; often delusions of persecution and marital infidelity, which ideas may become dangerous to life; inclination to suicide and homicide, and a host of physical ailments too numerous to mention. In other words, there is not an organ nor a tissue or cell in the body that may not seriously be affected by this toxic substance when taken in large quantities. Reason may be dethroned and volition shattered, nothing left but dementia and untimely death. — *Dr. Beebe in Lancet-Clinic.*

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There is an English total abstinence society among railroad employees which now numbers 20,000 and has been in existence eighteen years.

## ALCOHOL A CAUSE OF DEGENERACY.\*

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BY T. A. MACNICHOLL, M.D., NEW YORK CITY.

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We are often met with the declaration that intemperance and immorality with their accompanying evils are the outgrowth of degeneracy, but a preponderating mass of evidence points to degeneracy as the outgrowth of alcoholism.

1. Alcohol is the most constant factor in the history of those physical and social disorders which demand state and municipal control.

In the etiology of crime, insanity, and poverty, the records of our courts and charitable institutions rank alcohol foremost.

2. Alcohol retards and impairs the normal organic functions of the body.

The results of the experimental researches of Abbott, Kraepelin, Laitinen, and Kellogg, made under the most favorable circumstances and with the aid of the very best modern appliances, are overwhelmingly conclusive against alcohol as a reducer of muscular strength, disintegrator of nerve tissue, and abetter of disease.

3. Alcohol is a cause of surgical shock.

In a record of cases presented to this association June 14, 1900, we reported that alcohol enhanced the dangers attending grave surgical operations, moderate drinkers showing fifty-nine per cent. and heavy drinkers eighty-four per cent. greater liability to shock than did the total abstainers.

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\*Read before the American Medical Temperance Association June 11, 1902, Saratoga, N. Y.

4. Alcohol hastens constitutional poisoning and increases the death rate in septic conditions.

Of those suffering from profound systemic toxæmia at the time of operation we found six and one-quarter per cent. of the abstainers, thirty-one and one-quarter per cent. of the moderate drinkers, and one hundred per cent. of the heavy drinkers. The mortality among the drinkers was forty-five per cent. greater than that among the abstainers.

5. Alcohol injures the germ protoplasm, altering and weakening the current of life at its source.

We found in a study of 463 children of drinkers that seventy-six per cent. suffered from some neurosis or organic disease, while of 231 children of abstainers but eighteen per cent. were thus afflicted. In our mortality tables following septic and suppurative peritonitis we find twenty-seven per cent. more deaths among children of drinking parents than we do among the children of total abstainers.

How varied the manifestations, how subtle the influence, and how far-reaching the action of alcohol.

In the adult it lays the foundations for a posterity of physical bankrupts. In the youth it arrests development and degeneration is well begun. The incipient tendencies here unfolded present the prophetic outlines of all subsequent moral fulfillment. There may be a physical evolution from childhood to youth and manhood, but the moral nature shows a retrogression, an involution from innocence to impurity, with many additional steps of irritability, falsehood, revenge, and cruelty, to the moral baseness of a savage. "Whatsoever a man soweth that shall he also reap" is a law as truly in the physical as it is in the moral realm. If he sows that which destroys nerve tissue or that which reduces physical resistance to disease, he constitutes himself the possible progenitor and author of a race that will produce a harvest of victims for hospital, almshouse, insane asylum, and jail. Once mental or physical deformities come within the grasp of this ubiquitous

law they transmit themselves to posterity with unerring facility.

It is not surprising that alcohol bears so close a relationship to degeneracy, in view of its action as a protoplasmic poison, which action is in perfect harmony with the physiological principles enunciated by Prof. Winfield S. Hall of the Northwestern University, Chicago. "Not only will the toxic excretion of any living organism poison the organism which produces it, but it will have a toxic action upon any organism of a higher rank. . . . The toxic excretion of the yeast (alcoholic) is toxic not only to the yeast but also to all animals." Here, then, we have a reason why, under the maliferous touch of alcohol, every species of life, plant, and animal degenerates and dies.

Illustrative of alcohol as a cause of degeneracy I present the following family history:

A well-to-do and respected merchant, of worthy English parentage, married the daughter of a very religious, temperate, and prosperous French Huguenot.

The social customs and the liberties incident to a gay city life in the new world were freely adopted. Wine, at first an occasional luxury, became a daily beverage. Both lived to middle life.

Two daughters were ushered into this social atmosphere and each early in life acquired a fondness for wines and stronger spirits.

In her early twenties, one became the mistress of aristocratic libertines and indulged in the wildest excesses. At forty this unrestrained voluptuary, who had been repeatedly the victim of the most loathsome diseases, ended her career a raving maniac; the other married a successful banker, a moderate drinker of wines and beers, who had amassed very large property in one of our leading cities. This younger daughter, at first domestic and retiring, shortly found home dull and monotonous. Lured by the blandishments of

numerous lovers, she indulged in varied immoralities, which led to a mental collapse, followed by insanity at thirty-five and death ten years later. Two sons and six daughters were the fruit of this marriage. The sons are respectively fifty and sixty years of age. Drunkenness and financial reverses have marked their career. Five daughters died of tuberculosis between the ages of twenty and thirty-five. The remaining daughter married a wealthy gentleman of respected family and good social standing, but a moderate drinker. A fashionable life with few restraints lay before them, and the high-strung wife soon became a leading figure in her social set. Years of luxury and moral carelessness have left their mark. Wealth squandered and husband dead, the sum of her life finds her at sixty-five years of age a neurasthenic, suffering from pulmonary tuberculosis, a drunkard, an opium fiend, and the mistress of a daughter's husband. Of the seventeen children born to this woman, ten had tuberculosis and died under five years of age. Those surviving puberty show the following histories:

B. — Male, unmarried, aged forty-five, a moderate drinker, is tuberculous, left home at the age of twelve, engaged in the insurance business and is prosperous.

C. — Male, aged thirty-eight, a moderate drinker, has suicidal mania. Engaged in the insurance business, is prosperous. Married a woman of good and respectable family. Two daughters were the issue; one had tuberculosis and died at five years of age; the other is twelve years of age and is precocious.

D. — Male, unmarried, strong suicidal mania from age of puberty. On several occasions he endeavored to end his life by cutting his throat, hanging himself, and jumping down a dumb waiter shaft. Had homicidal mania, morphine habit; was an habitual drunkard, repeatedly the victim of delirium tremens, and finally ended his life at thirty-five, while drunk, by an overdose of morphine.

E. — Male, married, many extraordinary weaknesses of mind and morals marked his existence. His life work is contained in a few words. At twelve, industrious and studious; at sixteen, a moderate drinker; at twenty-one, lazy and indolent; at twenty-three, a drunkard; at twenty-four, separated from wife and two children; at twenty-eight, a suicide from carbolic acid.

F. — Male, aged twenty-one, unmarried, a high school graduate, will not work, is a moral pervert, and has suicidal mania.

G. — Female, aged forty-nine, eldest child, brought up in luxury, educated in the best private schools and under the supervision of skilled governesses and a social environment suitable to her wealth and station. As a young child she gave evidence of subtle depravity. At fourteen she showed great moral perversion; at nineteen became a concert hall singer, a confirmed drunkard, a regular prostitute, and the mother of an illegitimate child by her own brother; at twenty-three a government marine was forced to marry her at the muzzle of a revolver. For years she posed as a prize fighter in the various low dives of our larger cities. Five years prior to his death she was the acknowledged mistress of her own father. The illegitimate child, a female, lived with her great grandmother until six years of age, was then taken by her own mother to live in a colored house of prostitution. For nine years this child was the victim of the most barbarous and revolting lechery, the mother profiting thereby. The Society for the Prevention of Cruelty to Children, learning the facts in the case, were about to take the fifteen-year-old girl in charge when, by the connivance of her maternal grandfather, she was smuggled out of the state in the guise of a boy; was taken suddenly and mysteriously ill and died in Chicago. She who was called mother, who began life with all the opportunities wealth could purchase, is now spending the closing months of her existence in a miserable basement, a victim of

chronic diseases of blood, heart, and lungs, sharing with a day laborer the necessities that a weekly income of eight dollars will secure.

H. — Female, aged twenty-six, a moderate drinker, with suicidal mania. At sixteen married a drunken circus attaché. The issue of this marriage was a boy, now nine years old and tuberculous. Coming under religious influence two years ago this daughter joined the Women's Christian Temperance Union, since which time she has led a sober, respectable, and upright life.

Here we have a picture of a young couple with the best inheritance, physical and financial, and a religious environment, beginning married life with free indulgence in alcoholic beverages, yet maintaining a high degree of respectability throughout life. Often did they point to themselves as illustrations of the harmlessness of alcohol, of its valuable food properties and its power to make one wise. The seed-sowing has brought its harvest; of thirty-three descendants we find two suicides, three with suicidal mania, three drunkards, four prostitutes, and eighteen with tuberculosis.

How shall we as citizens and physicians prevent the steadily increasing mass of such human wreckage? This is the question of paramount import.

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#### TO HELP WOMEN INEBRIATES.

The local council of women at Ottawa have adopted a resolution asking that the government establish cottage homes for inebriate women. They state that in their city of Ottawa intemperance among women and girl prisoners has increased to the alarming extent of seventy-five per cent., and that women in many cases under or about the age of twenty have been incarcerated for drunkenness or for crimes committed while under the influence of drink. Imprisonment to check this evil has proven an utter failure, as there are women in a brief life of forty years who have spent twenty years in jail.

## Abstracts and Reviews.

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### “ON THE CAUSES OF THE STRUGGLE NOW GOING ON AGAINST CRIME.”

This is the title of the new work by Professor Lombroso, and contains some very significant chapters and statistics that will rouse up inquiries along new lines. The main theme of the book is to show that there are human beings of a distinct type, who are bound down to criminality by the chains of original sin (this term used in a physical sense), and to atavism. Such persons have received a legacy of degenerate tendencies from their ancestors which are increased by environments, nutrition, and faults of living, so that they become irresistibly impelled toward crime and insanity. Among these tendencies, alcoholism is termed the most common and terrible of all atavistic fatalities. In a chapter on statistics in support of this conclusion, he declares that a man of twenty with a normal constitution who drinks spirits has only a natural expectancy of sixteen years of life. If he has inherited from his parents alcoholic tendencies, the expectancy is reduced to eight years. The beer drinker of twenty without heredity may expect to live twenty or more years, but if suffering from hereditary tendencies the expectation is reduced to twelve years. In contrast with this, the total abstainer without heredity may expect to live sixty-four years. In both the alcoholic and beer drinker criminal tendencies and crime will develop in ninety-five per cent., and many of them will spend most of their time in confinement. In a study of ninety-seven children of alcoholics, the author found only fourteen who appeared to be normal and well. Statistics of



crime and drinking are given, showing that fifty per cent. of all criminality in France are due to drunkenness, and forty-one per cent. of crime in Germany are traceable to beer drinking. He concludes that alcohol and beer are the most potent factors in the production of crime and pauperism. He urges that criminality can never be cured or prevented until the sale of spirits is absolutely prohibited as a beverage.

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OPHTHALMIC MYOLOGY: A SYSTEMATIC TREATISE ON THE OCULAR MUSCLES. By G. C. Savage, M.D., Professor of Ophthalmology in the Medical Department of Vanderbilt University, author of "New Truths in Ophthalmology," ex-president of the Nashville Academy of Medicine, ex-president of the Tennessee State Medical Society. Sixty-one illustrative cuts and six plates. Published by the author, 139 North Spruce Street, Nashville, Tenn. Printed by Gospel Advocate Publishing Company, Nashville, Tenn., 1902.

Dr. Savage's new book of nearly 600 pages is the best contribution on this subject which has appeared in a long time. The most interesting chapters are those on chorea, epilepsy, catalepsy, and neurasthenia. The author is convinced that eye strains have a very large influence in the causation of these diseases. He has evidently studied the subject thoroughly, and has given all the evidence bearing on it most impartial consideration. The volume is well illustrated, printed in large, clear type, and will be a monument to perpetuate the memory of the author, who has already become famous by his original and scientific researches in this field. The general practitioner will be greatly interested in this work, and the specialist will find much that is very valuable, and not easily obtained elsewhere. We congratulate the author on this contribution to the literature of the subject.

A PRACTICAL MANUAL OF INSANITY. For the Student and General Practitioner. By Daniel R. Brower, A.M., M.D., LL.D., Professor of Nervous and Mental Diseases in Rush Medical College, in affiliation with the University of Chicago, and in the Post-Graduate Medical School, Chicago; and Henry M. Bannister, A.M., M.D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Handsome octavo of 426 pages, with a large number of full-page inserts. Philadelphia and London: W. B. Saunders & Company, 1902. Cloth, \$3 net.

The title of this book is most happily sustained in the examination of its contents. The division of the subject into short chapters with distinct and sharply drawn descriptions of the topics presented is in striking contrast with other books on this subject. In twenty-four chapters the author has gone over the general field of insanity from the standpoint of the clinician, making prominent the bed-side features and the general principles of treatment. The chapter on classifications is very suggestive, and will help to clear away some of the mysteries which surround insanity. Under the head of toxic insanities, the author has given a very good summary of alcoholism, morphinism, cocainism, and other drug insanities. The insanities of the neuroses is another topic very suggestive to the reader. Three other chapters describe degenerate insanities. Chapter twenty-first discusses "borderland and episodic states." The two last chapters, one "on examination of persons supposed to be insane," and the other "on the ethics of insanity," will attract much attention. Some of the cases mentioned by the authors are new to most readers, and display keen discernment in the final analysis and classification. The clinical tone which pervades the book, and the sharp personality of the authors, show them to be clinicians and teachers of the highest type. They succeed in making prominent the most essential facts, and suggest lines of study and

treatment that are not only practical, but thoroughly sound and reasonable. This book presents the subject from a new and difficult point of view, the object of which is to simplify and condense the facts so they can be comprehended by the student and general practitioner. We congratulate the authors on their success in condensing so clearly the general principles of the new science of psychiatry in a single volume, which will practically be indispensable to the library of every student of medicine.

We shall hope to make some selections from the author's description of cases in the next issue of our journal. The publishers, as usual, have presented a very attractive volume in type and style.

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SAUNDERS' MEDICAL HAND-ATLASES. ATLAS AND EPITOME OF THE NERVOUS SYSTEM, AND ITS DISEASES. By Professor Dr. Chr. Jakob of Erlangen. From the Second Revised German Edition. Edited by Edward D. Fisher, M.D., Professor of Diseases of the Nervous System, University and Bellevue Medical College, New York. With 83 plates, and copious text. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.50 net.

In this work of about two hundred pages the author has condensed a full and very clear description of the anatomy and physiology of the brain and nervous system. The plates are excellent, and give the reader a comprehensive and practical review of the physiology and pathology of many of the diseases of the brain and nervous system. Parts fourth and fifth, describing the pathology and treatment of the nervous system, are practically a text-book of itself, and gives the reader an excellent idea of the facts prominent in these diseases. The diseases of the brain, the spinal cord, and the peripheral nerves are clear, condensed descriptions of most

difficult subjects. This is one of the most valuable and useful handbooks published, and has already reached the second edition, which in itself is evidence of its popularity to the general as well as special practitioner.

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*Pope's Medical Directory* of the United States and Canada is one of the best encyclopedias of the medical profession ever published. It is practically a history of doctors and their success in all lines of regular or irregular practice. The laws governing the practice of medicine in every state of the region are given, and, next to the dictionary, this is the most valuable office reference book that is published.

The *Popular Science Monthly* has a number of very excellent articles this month. Some of them are quite revolutionary, to which the editor expresses his dissent; others are graphic descriptions of scientific matter. No other journal brings a greater variety of interesting matter for the physician, and no journal is more thoroughly read which comes to the libraries of thinking men.

The *Homiletic Review* for July is exceptionally rich in striking papers of more than usual interest. The Statesmanship of Moses is a paper that will attract a great deal of attention. The editorial section is strong, and there are few journals that present such a variety of popular theological reading. Funk & Wagnalls Company are the publishers, of New York city.

The *Review of Reviews* is the news magazine and a general review of all the great events of the month past. It gives the reader a very clear idea of the passing history of events, and enables him to keep in close touch with all the great movements of the day. No other monthly gives such a clear review of current events.

The *Southern California Practitioner* for June presents a symposium of ten papers on tuberculosis, read at the meeting of the Southern Medical Society. This grouping of studies is a contribution of great practical value to tuberculosis, and will be very highly appreciated by all students of this subject.

The *Scientific American* is a welcome visitor to every thoughtful student. Some of the illustrations of the late volcanic disaster are very satisfactory pictures. The notes on progress of electricity are very interesting.

Macmillan & Co. of New York have issued a fine translation of *Kræpelin's Clinical Psychiatry*, edited and arranged by Dr. Defendorf. This work has some new borderland studies which will be very interesting to all teachers and students.

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#### REASONS FOR EMPLOYING HOT AIR.

1. Dry heat is a valuable pain reliever without any of the depressant effects common to drugs. 2. In connection with constitutional and medicinal treatment, we have in it a positive curative agent. 3. It is a stimulant to rapid repair and absorption. 4. It is one of the most valuable eliminative agents we possess. 5. Where indicated, it possesses a sedative action on the nervous system obtained by no other means.

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The Salvation Army in England has opened an asylum for inebriates, a few miles out from London, in the country. It is called the Victoria House and is an old mansion, standing in the center of sixteen acres of ground, with accommodation for thirty or more patients. It is managed by a medical man and each patient is required to give the institution thirty hours' work every week, and remain under treatment at least twelve months. The minimum price is one pound a week for care and treatment. We welcome this institution and believe it a most practical and useful charity.

**Editorial.**

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## LECTURES ON INEBRIETY IN MEDICAL COLLEGES.

In 1888 the editor of this journal delivered the first course of medical lectures on inebriety to medical students ever given in this country, and, no doubt, the first in the world. The late Dr. B. W. Richardson gave two lectures on alcohol in 1885 to the students of the University College in London. In 1888 Dr. Norman Kerr gave three lectures on inebriety before the London Medical Society to which medical students were invited. During the seventies and eighties the late Dr. Willard Parker of New York and Dr. N. S. Davis of Chicago, and two or three other eminent professors often referred to alcohol and the dangers from its excessive use in their regular lectures before the classes, but no special lectures were given nor were attempts made to study the subject of inebriety as a disease, or point out any plan of medical treatment. In January, 1888, the editor of this journal gave two lectures before the students of the Albany Medical College on the disease of inebriety and its treatment. Later during the same year a course of four lectures on this topic was delivered before the students of the Vermont Medical College at Burlington, Vermont. This was the first effort to instruct students in this new branch of psychiatry, and attracted little or no attention at the time. In 1901 the New York School of Clinical Medicine, a post-graduate college, recognizing the need of instruction along these new lines of study, established a chair for the special teaching of this subject, and the editor of this journal was elected its first incumbent. This study is made a part of

nervous and mental diseases, but is taken up as a separate branch. Special courses, both clinical and didactic, are given through the fall and winter months in this school. The success of the first year is a very gratifying recognition of the need of instruction in this new and most important branch of nervous diseases. This advance in medical instruction has received a very grateful recognition, and is warmly indorsed in a recent lecture by Professor Koyghisk of the University of Moscow, Russia. He declares the time has come when this new branch of psychiatry must be recognized and taught as a most important part of medical education. He urges that as alcoholism and the psychoses of drug takers are becoming more prominent and increasing in every country of the world, the best hope is for physicians to be taught to treat and prevent its effects, and in this way combat the evils which follow from it. He demands that all universities should have a special chair and teacher to study and point out the effects of spirits and drugs on the organism, and the proper methods of treatment and prevention. Several of the most prominent foreign journals have called attention to the significance of this new movement, and predicted that the time was not far distant when this branch of study must come into prominence in all the colleges and universities of the country.

It is a source of great pleasure to realize that what this journal has urged for years has at last taken a permanent form and shape. We have often pointed out the fact that the first patients which call on the recent medical graduates for treatment are inebriates; also that in after life many of the most difficult cases which come for medical help are the victims of spirit and drug poisons. Physicians have had no instruction in colleges on this subject, and can get little help from books; hence must learn from bitter experience what should have been taught during college life.

It is evident that the disastrous failures of church and state to remedy the great evils which follow from this source are

due in part to the ignorance of physicians. The efforts of quacks with secret remedies and dogmatic pretensions to cure and prevent this disease is also evidence of the failure of the medical profession to understand this subject. If medical men were taught the nature and character of this psychosis, they could direct the means and methods most practical for its treatment and prevention. This new department of medical instruction will open a wide field of practice, and teach physicians in every community to not only cure, but prevent one of the most serious evils of the age.

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The form and character of alcoholic intoxication seem to be materially influenced by hot weather. The excitement from the irritant action of alcohol appears more intense and rapid, and often becomes mania with delirium of short duration, followed by stupor merging into degrees of coma. Small quantities of alcohol have more pronounced toxic effect and increased susceptibility with greater exhaustion and nervousness follow. The sensory centers are more disturbed and the anæsthesia is more pronounced. The delirious stage is shorter, and the stage of stupor more prolonged. Evidently, vaso-motor paralysis is more pronounced in the summer, and the retention of toxins encouraged by sluggish elimination. The chronic inebriate in hot weather is less inclined to move around, but prefers to sit still, talking and sleeping.

The conditions preceding and following heat and sun-stroke appear to sustain these clinical facts. The fact that the use of proper measures will increase the elimination, break up the toxic states, or modify them rapidly, indicate that retained toxins are active causes. Delirium and mania from alcohol in the summer months yield more readily to hydro-pathic treatment than at any other season of the year. The exhaustion which follows these states is often increased by meat broths and highly seasoned foods. Evidently such substances are irritants, and cannot be used with safety. States of delirium in hot weather should be treated almost ex-



clusively by hot and cold showers, mineral acids, and non-stimulating foods. Persons found delirious on the streets should be treated with cold water externally and internally, and kept in the open air. Homicidal states quickly subside by powerful eliminative measures acting on the skin, bowels, and kidneys.

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A new demand for alcohol is becoming prominent in Germany. Last year thirty-one million gallons were used for technical purposes and for fuel. For motor wagons and engines of various kinds alcohol has been found a cheap and excellent fuel. It is largely made from beet roots, and is exempt from duty, and is sold at from twelve to fourteen cents a gallon, competing with all forms of motive energy in engines of less than twenty horse power. For motor wagons and light running machines and small railroads it is cheaper and more practical than coal. Lamps on the plan of the Welsbach with a mantle give out a more brilliant light, and are more economical than petroleum. There is every reason to believe that alcohol will be used as a fuel, and occupy a very prominent place. The evolution of alcohol from a beverage to a fuel is not more startling than other changes seen every day.

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#### ALCOHOL AS A CAUSE OF TUBERCULOSIS.

In the recent discussions of the causes of tuberculosis alcohol has not been considered as either an active or predisposing cause requiring special mention. An exception to this was noted in the London Congress for the Study of Tuberculosis, in which one of the papers read emphasized the importance of alcohol as a cause. In other similar gatherings little or no reference was made to alcohol as an etiologic factor of this disease. Recently Dr. Larsen of Copenhagen has published a pamphlet in which he describes alcohol as one of the most prominent and active causes of tuberculosis.

He shows from results of modern research that alcohol is one of the most dangerous poisons in common use, not only by impairing oxidation of the blood, but favoring and encouraging fibroid, sclerotic, and fatty changes of cell and tissue. Also it diminishes force, nerve energy, and is a special protoplasmic poison.

He asserts that its narcotic and anæsthetic action diminishes metabolism and lowers vitality. In this way, it favors the growth of the bacillus of consumption. He also proves that all persons who use alcohol have feeble powers of resistance with increased susceptibility to the formation of toxic states and the encouragement of bacterial growths. Dr. Little of Paris, in a paper read at a Medical Congress in Vienna, declared that the use of alcohol was very intimately associated, and very frequently preceded tuberculosis. He declared an axiom that all chest diseases were curable when they occurred in total abstainers, but in alcoholics and moderate drinkers they were practically fatal. He asserted that nearly all Parisian workmen were alcoholics before they became tuberculous, and that alcohol always prepares the way, and makes the soil more fertile for the growth of tuberculosis. He showed from statistical studies that deaths from alcoholism, both directly and indirectly, far exceeded that of tuberculosis, and urged that an anti-alcoholic movement was far more practical than an anti-tuberculous crusade. These and other papers less prominent intimate a new field of causation which deserves more active study. In a recent examination of the histories of one hundred fatal cases of tuberculosis, the following significant facts appeared: Forty-four of the one hundred had been moderate or excessive users of alcohol before tuberculosis appeared; thirty-nine of the one hundred were descendants of inebriate ancestors, hence had inherited a strong predisposition to exhaustion with low resistant power; ten of the one hundred had received alcoholic treatment at the onset of the disease, which had increased its activity rather

than diminished it. From observations collected by two Italian authorities it was found that occupation and professional work, in which alcoholism was common, had a very high mortality from tuberculosis. In another study made in Paris of forty-five cases, thirty-two proved to be alcoholics. In this country it appears that the descendants of alcoholic parents show an excessive mortality in which tuberculosis and meningitis is the most common form of disease. These are only hints and intimations of the intimate association of alcohol in the production of tuberculosis. Clinical studies of the previous habits of tuberculous patients, particularly concerning the use of alcohol, and also of the use of spirits among their ancestors, would throw much light on this most interesting study.

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Doctor Brower in his recent excellent work on insanity describes a condition called hypo-mania, which not unfrequently precedes inebriety. This is practically a form of mania, although not so prominent, and is seldom recognized, being considered hysteria, and often called nerve storms or odd spells. It is noted by attacks of excitement with eagerism and temporary disturbances of the reasoning powers. Often these are of very short duration, at other times the continuous excitement may last several weeks, and be followed by exhaustion and fatigue. These attacks are frequently emotional disturbances without any intellectual changes. Sometimes the person will exhibit great muscular and motor activities, working day and night as if driven to it by some necessity, or will manifest a strange ambition to attain some position or accomplish some object not common in his everyday life.

Associated with these symptoms are often an exaggerated self-consciousness and boundless faith which disappears after a short time in exhaustion and fatigue. The general health of the person may not be impaired. The senses may seem intact, and these strange so-called "spells" be regarded as

oddities. Spirits given as a medicine often produce a most grateful sedative effect, and the flighty, erratic nervousness subsides into normal rational life. At first spirits are used when these attacks come on, later they are continued, and the person becomes a moderate drinker. The attacks disappear, and the former normal condition is resumed. The person may do excellent work, and drink moderately for some years; then suddenly he becomes intoxicated, and forms of dementia come on with great prostration, terminating in acute inflammation and death. Quite a number of chronic inebriates of the exhausted and demented type have a history of hypo-mania before alcohol was used. Apparently the anæsthesia of alcohol controls their hyperæsthetic and unstable states of the brain centers, and enables the persons to control themselves for some time. Many of these persons possessed originally more than usual intellectual ability, and were regarded as brilliant, capable men. Whether the hypo-mania was an acquired condition, starting from exhaustion or due to anemia or toxines, is uncertain. At all events the action of alcohol covers up and neutralizes this condition for a time.

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Peripheral neuritis occasionally accompanies auto-intoxication, as it does the infectious diseases. After describing a number of experiments in which toxic serum was injected into Guinea pigs, Dopter concludes that toxic sera, from uremic, diabetic, or carcinomatous patients, those with asystole or with Addison's disease, when in direct contact with a peripheral nerve, cause alterations in its elementary fibers. These lesions are the same as those produced by bacterial toxins, segmentary periaxillary necrosis, and Wallerian degeneration. While the grade of the neuritis varies, the result seems dependent upon the toxicity of the serum used. By analogy it can be admitted that the peripheral neuritis of general toxic conditions is due to the injurious action of the toxic products in the circulation, which reach the elementary fibers of the nerves. This notion is confirmed by Dopter's experiments.

## Clinical Notes and Comments.

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### A SYSTEMIC ALTERATIVE EFFECT.

The following from *Gaillard's Medical Journal*, by Dr. A. H. Ashley of Boston, Mass., will interest our readers because of the original way in which he expresses his pronounced admiration for something tried, trusted, and not found wanting. The letter was written to our old friend, The Antikamnia Chemical Company, and reads as follows:

Gentlemen: Your various combination tablets as well as antikamnia tablets have been used by me for a number of years, and I can only say that they have uniformly given me the best results. But, my dear sirs, why have you waited so long to give us the very best combination of them all? I, of course, allude to your "laxative antikamnia and quinine tablets."

If there is anything known to the medical profession which will take their place in that class of diseases, where one wishes to relieve pain, control the temperature, and at the same time produce, by laxation, a systemic alterative effect, it has not been my good fortune to find it. In those cases of severe neuralgia, and particularly in ovarian and menstrual pain, where morphine was our only hope (and where, after its administration, we had indigestion, bowels bound up, nausea, habit, etc.); you have in Laxative Antikamnia and Quinine Tablets a remedy which will, my experience has taught me, replace morphine and meet all requirements.

I am slow to be carried away by enthusiasm for any drug or combination of drugs, but I freely and voluntarily confess that in these tablets you have given to the profession a remedy so effective and reliable in its action that it offers good ex-

cuse (or a mitigating circumstance anyhow) for a little effusion from one who, as a general thing, is not given to gushing.

With my best wishes for your future, and many thanks for your elegant preparations, I am sincerely yours,

A. H. ASHLEY, M.D.

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I want to acknowledge the results obtained by me from the use of Celerina. I had among my patients a case upon which to try it; a young man I had been treating for the opium habit. His nervous system was completely shattered, and at times his mind wandered. I put him on Celerina, and the effect has simply been magical. It is wonderful how quickly he began to show signs of improvement. A few doses yet remain in the first bottle, and he regards himself as cured. From my experience I sincerely believe that with a gradual reduction of the morphine, and an extension of the time of administering it, and the use of Celerina, any case of morphine habit can be effectually cured, and in less time, and with better results so far as the condition of the patient is concerned, than with Keely's much lauded double chloride of gold remedy. Keely failed utterly in this case of mine. The young man was under Keely's treatment six weeks with no benefit at all. Keely's remedy, whatever it is, depresses and lowers the vitality of the patient, and many of them come out of his institute physical wrecks. Celerina builds the patient up. I shall always employ it hereafter.

A. M. COLLINS, M.D.

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I have used bromidia in cases of insomnia, restlessness, and threatened convulsions with surprising results, finding that a dose of from drops 15 to one drachm to be sufficient according to age and often to be repeated. I have com-

bined bromidia with papine where I wished to annul pain with excessive nervousness, the combination acting very happily also in bladder troubles. I use bromidia and papine very much in my family.

CHAS. E. QUETIL, M.D.

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It is well to remember that alcoholic wrecks that are strewn along the pathway of human life are such as can never be resurrected, never can be repaired. When a brain cell has once disintegrated it is gone, and gone forever. It can never be replaced. When the chief cells of some other organs, of the stomach in particular, have been eroded they are more or less repaired, or redeveloped. Not so of the psychic brain cells. These cells are called into being and develop only as a consequence of the activity of certain other well-known areas of the brain, called special sense centers. The five special senses, viz., seeing, hearing, smelling, tasting, and touching, are the only channels or means by which we are connected with the outer world. In other words, if from birth we were deprived of the use of these senses we would remain as born idiots. Hence the sensations which come to us from the external world via the special sense mechanisms, when received and registered, become memory pictures, and the photographic plates that will take and keep these pictures well always must be in order. Every central sensitive cell is one of these plates. These memory pictures become ideas, and the associating of these ideas compels the development of the psychic cells, together with their connecting axones and dendrites. There is no more interesting study than the investigation of the origin and development, as well as of the retrograde changes, of brain cells, as seen in health and disease, in the fetus, fully developed child, adult, or the person of old age. — *Dr. Beebe in Lancet-Clinic.*

A few weeks since the writer was engaged in one of these cases as expert witness. The offender was a chronic alcoholic, a saloonist, who for five or six years was accustomed to drink large quantities of whisky daily, from forty to eighty drinks every twenty-four hours, amounting in all to one or two quarts in that time, as was well established by the testimony. After an altercation with a street ticket vendor, who, as was claimed, interfered with the saloon patrons, he, the saloonist, shot and killed the other fellow. In a few days after being confined in jail, and not having been supplied with the proper amount of stimulant, he had the "delirium of collapse," called delirium tremens, and very properly was sent to the hospital for treatment. If there had been no other evidence than the disease of delirium tremens present there should have been no question as to his irresponsibility.

Since that was direct and adequate proof that his brain had been in an abnormal condition for a long time; that his reasoning faculties were of necessity at fault; that his judgment was necessarily defective, and that it was simply an impossibility for him to know right from wrong in the true sense of the meaning, or have the power to control his actions, these being the two essentials that pronounce insanity in every instance. Yet in the face of an excellent charge from the judge the over-zealous prosecutor had little trouble in convincing the jury (usually selected because they do not read and do not have preconceived opinions) that the limit of punishment should be given the poor fellow, of imprisonment for life. He might as easily have been electrocuted or sent to the gallows. — *Dr. Beebe in Lancet-Clinic.*

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How much of the sum total of criminality, pauperism, and degeneracy would disappear with the abolition of alcoholic beverages? The answer to this question cannot be stated in exact terms, but from the evidence at hand, about which there



cannot be the slightest doubt, it would be perfectly safe to assert that at least eighty out of every one hundred degenerates can be traced to alcohol as an active or predisposing cause.

— *Dr. Madden.*

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#### THE ARABS AND ALCOHOLISM.

While the English are proverbially a "drunken" nation, comparative studies show that alcoholism is not confined to Northern races. Dr. L. Raynaud, in an interesting article on "Alcool et Alcoolisme au Maroc" (*Annales d'hygiene publique*, March, 1902), clearly demonstrates that the Arabs do not escape, in spite of the influence of Mahomet and the teaching of the Koran, the ensnaring influence of alcohol. We commend the study of alcoholism in its sociological aspects to those of our readers who are desirous of mastering the principles underlying true and lasting reform.

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#### ALCOHOLISM AND HYPNOSIS.

Recently, in Russia, Knery and Sinani made a number of interesting attempts to treat alcoholism by hypnosis, with favorable results, and they believe such treatment superior to medication. Sinani treated sixty-two patients at a dispensary, giving them suggestion every day, resulting in the complete recovery of sixteen, who did not relapse to drink in from one-half to ten years. Bechterew has employed hypnotism in the treatment of chronic alcoholism for ten years, but in spite of the good results he does not consider suggestion alone sufficient for a permanent cure, as alcoholism is not a disease of the will power alone, but often depends upon organic changes. For this reason he combines hypnosis with hydrotherapy, bromides, codeine, heart tonics, strychnine, etc. Abramowitz is enthusiastic over this treatment, having nine complete cures out of the sixteen patients treated. He believes the combination with drugs gives no better results than hypnosis alone.

Wiamesky thinks this treatment the best for alcoholism. He has found that these patients are easily hypnotized, and also that there is a difference between those who wished to be cured and those who were urged by relatives and friends to undergo the treatment. There never was a bad effect from the withdrawal of stimulants, the tremor and general weakness disappearing quickly under suggestion. The observation of the cured cases extends over a period of ten years.

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#### TEMPERANCE WORK 4,000 YEARS AGO.

According to the general idea the warnings in the Old Testament against the drinking of much wine was the very beginning of temperance work altogether. But this idea is quite wrong, for long before the birth of Solomon are to be found repeated warnings against the drinking of strong drink in the laws and writings of China.

In 2285 B.C. a man who invented an alcoholic drink made from rice was banished from the Chinese empire by the emperor's orders. The old Emperor Yü, whose memory is still highly revered in Mid China, gave his subjects a splendid example of abstinence by banishing wine from off his own table. He reigned 2200 B.C. and expressed his opinion of the harmful nature of alcohol in these words: "In later years there will be men who will lose their kingdom through wine." This prophecy was fulfilled in China by the downfall of the dynasty descending from Emperor Yü, about which a prince of that house wrote: "The house of Yü is not strong enough to govern the empire. The noble deeds of our forefathers won great glory and are famous still, but we descendants have degenerated, we have thrown away virtue for drunkenness." This happened although the successor of Emperor Yü had made a law punishing drunkenness with death, and in 1270 B.C. all manufacturers of spirits were expelled from China. Later this sin was thought not so great, for in 206 B.C. this punishment was changed to a fine.

The Jews were the second people who found it necessary to make laws to hinder excessive drinking, and then the Hindus.

The old law in Ceylon, Burmah, and other lands forbid the manufacture, the selling, and the use of brandy. In 606 B.C., four years after Hedschra, Mohammed forbade his soldiers wine in order to strengthen the power of his army. This order was carried out generally, and afterwards became a religious command for all. Even today the wonderful bravery of the Turkish soldiers and their speedy recovery from wounds is ascribed to their abstinence from alcohol. The military powers of today also share their views and are also agreed that alcohol is generally unnecessary and often harmful for the soldiers, and the generals seem to consider tea the best drink for troops on the march.

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In one of the smaller cities of northern New York there is an elderly man who was very prominent many years ago. From overwork he became an invalid, and for the last eight years he has taken from two to six bottles of *Bovinine* weekly. He believes that it has lengthened out his life, and enabled him to complete some work which could not have been done otherwise. This is an indorsement of a remedy based on experience which confirms many of our previous notices in this journal.

Dr. Gardner's preparation of *Hypophosphites of Soda* is an excellent nerve tonic, particularly in the collapsed states of morphinism. It seems to have a special power in restoring the deficient metabolism, increasing the blood corpuscles, and bringing new vigor to the system. Dr. Gardner's preparation both of the salts of soda and lime are very agreeable, and can be given a long time without producing disgust in the patient's mind. We shall refer to them again in our next issue.

We have a few sets of the JOURNAL OF INEBRIETY, dating back to its first issue, 1876, which should be in the prominent libraries of the countries. With the exception of two or three copies, the sets are complete. We should be glad to correspond with any one who cares to possess a set of this unique journal, which comprises about all the literature on the subject which has been published up to date.

*Listerine* is an antiseptic remedy which has been many years on the market. It is non-toxic, antiseptic, and has become both a household and a special remedy in hospitals. A small brochure on the treatment of diseases of the respiratory system will be mailed upon application to the Lambert Pharmacal Company of St. Louis, the manufacturers of *Listerine*.

We have a few copies of the late Dr. Joseph Parish's "Memorial Meeting," which contains a graphic account of the early history of the inebriate asylum movement. This we shall be glad to send to any of our subscribers for the cost of postage.

*Fellows' Hypophosphites* receives special notice in this journal with every issue. This we are pleased to do, believing it is without a rival as a remedy in exhaustion following the removal of alcohol and other narcotic drugs.

The new anti-alcoholic remedy called *Quassone* is one of the safest and most reliable preparations for inebriety and other drug diseases. It is used at Walnut Lodge Hospital continuously, and with increasing satisfaction.

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

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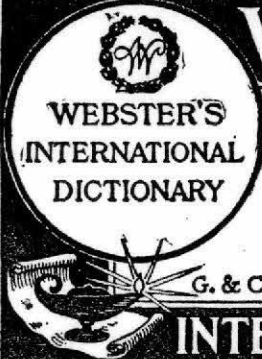
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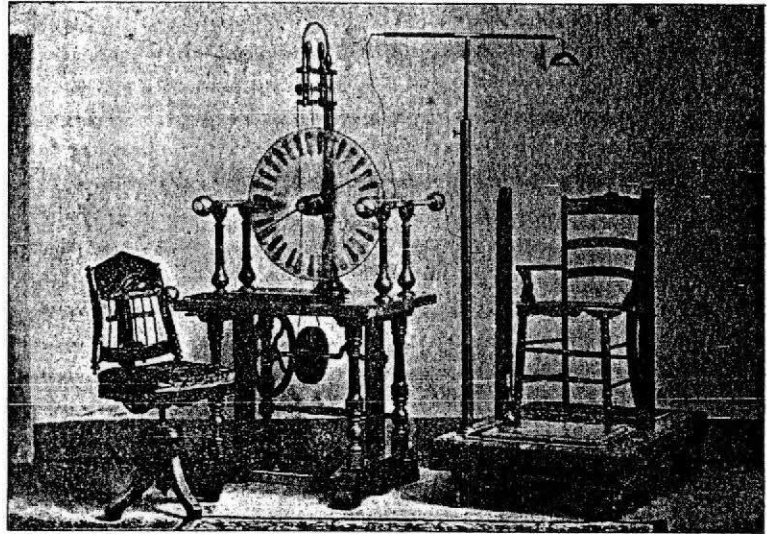


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IV. Physicians not connected with such institutions, and members of boards of direction of such special hospitals, asylums, etc., are eligible as associate or lay members of this association upon payment of the dues of membership.

V. The object of the association is:

First, to promote the scientific study of alcoholic inebriety and kindred drug habits, and to encourage desirable and special legislation with reference to the care and control of alcoholic and other drug inebriates.

Second, to isolate the chronic pauper inebriate from the insane and criminal class, and secure the erection and maintenance by the several states of institutions for the segregation and special treatment of chronic pauper inebriates, and to incorporate farm colonies, or other forms of institutional relief, which shall combine medical care with proper occupation, judicious control, and discipline.

Third, to secure in all states the special supervision and inspection of all institutions for the care and control of inebriates or other drug habitués.

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Fifth, to encourage, as an association, every individual and organized effort to study scientifically and practically all the various means and methods of both cure and prevention which may be used in the care and treatment of alcoholic and other forms of drug addiction.

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