

THE JOURNAL OF NEBRIETY

ESTABLISHED 1876

THE FIRST AND ONLY JOURNAL IN THE WORLD
DEVOTED TO SPIRIT AND DRUG NEUROSES

EDITED BY T. D. CROTHERS, M.D.



SUMMER, 1908

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RICHARD G. BADGER, PUBLISHER, 194 BOYLSTON STREET, BOSTON
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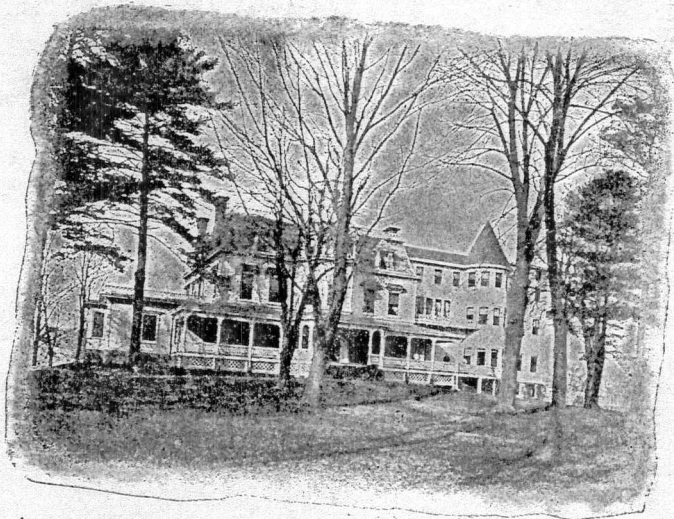
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A Note on the So-Called

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Treatment of Inebriety

By JOHN D. QUACKER

**The Great Temperance
Work for the Last**

By HENRY O. MARC

Inebriety in its Relation

By G. FRANK LYDSTON

**Accuracy in Clinical Study
of Alcohol**

By JOSEPH M. AIKE

Alcohol and Moral Degradation

By D. H. KRESS, M.D.

Editorial

The Work of Our Society
Statistics relating to the Mortality
of Alcohol on the Blood Cells

RICHARD G. BADGER

Entered as second-class in

The American Medical Society for the Study of Alcohol and Narcotics

THE OBJECTS OF THE SOCIETY ARE

1. To promote the scientific study of alcohol and other narcotics, particularly the etiological, physiological, therapeutical, and medico-legal relations, and also the sociological and clinical aspects of this subject.
2. To gather and formulate all the facts of the disease of inebriety and other forms of narcotics, and point out the means of cure and prevention by legal and institutional methods and other remedial and prophylactic forms of treatment.
3. To compile and make available the studies and experiences of physicians in all parts of the country who have given attention to the diseases associated with and following from alcohol and other forms of drug taking.
4. The spirit and purpose of this society is to study alcohol and narcotics in all their relations to the human economy from a medical point of view, independent of all previous theories and conclusions.
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X

The Journal of Abnormal Psychology

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XI

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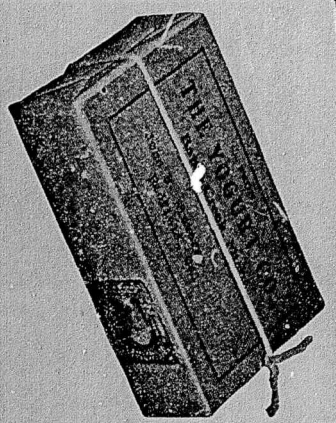
By
R. W. Shufeldt, M.D.
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THE RIGHT AND THE WRONG SIDE OF THE NEGRO QUESTION HAS BEEN DISCUSSED TO A USELESS POINT. BUT THE **INSIDE**, WHICH DR. SHUFELDT SHOWS US, MUST NOW BE TAKEN INTO CONSIDERATION WHEN DISCUSSING THIS MOST SERIOUS QUESTION.—**DR. WILLIAM LEE HOWARD.**

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THE JOURNAL OF INEBRIETY

SUMMER, 1908

THE RELATION OF ALCOHOL TO PHYSICAL
DETERIORATION AND NATIONAL
EFFICIENCY*

BY W. MCADAM ECCLES, M.S. LOND. F.R.C.S. ENG.
*Surgeon and Demonstrator of Operative Surgery at St. Bartholomew's Hospital,
London, etc., etc.*

IN the course of his lecture, Dr. McAdam Eccles said:—
A small mass of protoplasm appeared upon this earth, we know not when nor where. It was living matter endowed with unknown potentialities. It lived, it moved, it had its being. Around it was its environment. Above it was the atmosphere, containing oxygen, a necessity for its very existence. Beneath it was water, capable of bearing it upon its surface, or sheltering it in its depths. Endowed with powers, mysterious even to-day, this speck of protoplasm was capable of absorbing and assimilating food; capable also of rejecting noxious material, and thus avoiding danger, if any such existed. Moreover, it reproduced its kind, and so the earth was peopled.

Earliest Life on Earth

In its early days, this particle of living matter would seem to have had every portion of its surroundings in harmony with itself. All around ministered to its wants; none was a foe, all were friends. Soon, however, we know not why, antagonistic forces began to act upon it. The water in which it floated chanced to contain that which acted harmfully upon its substance. Thus commenced

* Eighth Lees and Rapet Memorial Lecture delivered at Cambridge, Eng., Feb. 4th 1907. Contributed by the author with the permission of the publishers, and as printed.

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This preparation can be procured at all chemists and druggists, everywhere.

a struggle—the struggle for existence. The opposing forces were—the living matter and the poison. It is significant that every human individual begins existence as a single and simple cell, and this cell has to fight for its existence even from its earliest days.

Every adult human being has, circulating in the blood, a large number of cells, similar to the original single cells. These carry on a warfare against enemies that may gain access to the blood of the individual, a warfare alike full of interest and danger; the warfare between the phagocyte and the bacterium. Practically every particle of the human body, the brain, the liver, bone, or muscle is made up of specially constructed cells, which in their turn have been derived from the original cell. The warfare of the animal cell against external poisons is one of the unending activities of life. That this conflict may in a sense be healthful up to a certain degree is undoubtedly true, and this fact should be more widely admitted and recognized. Such combat may strengthen the individual cell in the same way that muscular activity will increase the size and add to the power of the biceps. But directly the poison is sufficiently strong, it may seriously affect the actual living element of the cell, and deterioration or even death must inevitably occur. If the effect of any given poison is constantly repeated, the structural changes in the cell will be the more marked, and will tend to become permanent. The number of substances which can thus deleteriously act upon the animal cell is very great.

Among them is alcohol. This term is used for a series of chemical bodies having a similar composition and similar properties. The origin and application of the word is a matter of some little interest. At first it was used to designate any particularly fine powder which could be employed to stain the eyelids, then to designate any fine impalpable powder obtained by trituration or grinding, or a like powder obtained by sublimation. Afterwards by extension it was applied to fluids obtained by distillation, and later to that class of compounds which has just been indicated. Alcohol is very widely distributed in nature, and is in fact actually produced in the animal

economy, but only in such quantities as may be deemed negligible. It is largely obtained artificially by man for a variety of purposes, but chiefly to form one of the constituents of the many beverages habitually partaken of by him. Hence it comes about that alcohol in a more or less dilute condition gains contact with all the cells of the bodies of the greater number of adult individuals in the nation. Hence it also follows that if it acts as a poison, it may cause serious and often irremediable deterioration.

By deterioration is meant the process of growing or making worse. My proposition, therefore, is that alcohol acts on the human living cell as a poison, using the word in its true physiological sense, and tends to produce a deterioration of that cell, and consequently of the individual as a whole, and by extension, deterioration of the race. I shall endeavour to prove this proposition by scientific demonstration, and then point out some of the means which may be adopted to counteract the deterioration which appears to be increasing in our midst, and sapping the efficiency of the nation. Everyone is agreed, even the consumer of them, that large doses of alcohol play havoc with the moral, mental, and physical constitution of both men and women, and even of children, and I need therefore say nothing from this point of view. But it is only in quite recent years that the fact is being forced upon the scientific mind that even small quantities of alcohol habitually taken may do serious harm.

And, further, it is even as yet hardly recognized that the very germ or sperm from which we have our being, may be harmfully affected by alcohol, and even from comparatively small doses. Alcohol taken into the stomach can be demonstrated in the testicle or ovary within a few minutes, and like any other poison may injure the sperm of the germ element therein contained. As a result of this intoxication of the primary elements, children may be conceived and born who become idiots, epileptics, or feeble-minded. Therefore it comes about that even before conception a fault may be present. Although this fact may not as yet, from want of sufficient investigation, rest upon thoroughly attested evidence, yet there is absolutely no

doubt that the growing and developing embryo is liable to much injury from contact with alcohol before birth. Experiments almost numberless have been conducted on these lines, and the results have been so very markedly uniform, that they can hardly be doubted to be other than facts.

Take the example of the action of alcohol upon frogs' spawn, an experiment that everyone can repeat, if they care to, this coming spring. It should be noted, that in actual composition and construction, the eggs of the frog differ but little, even when observed by the microscope, from those of the human race. Every experiment in this line of investigation must be checked by a control experiment, a condition which is too often lost sight of by investigators. The experiment and the control are carried out as follows:—A portion of frogs' spawn is placed in water in a watch glass—the water being ordinary tap-water, and another portion of spawn from the same batch is placed in tap-water containing 2 per cent of alcohol in a similar watch glass (2 per cent of alcohol is about ten drops of absolute alcohol to one ounce of water). Both are placed under otherwise favorable conditions for development, but the result in the two watch glasses is very different. It is normal in that one in which tap water alone was used. But where diluted alcohol is in contact with the spawn, many eggs fail altogether to develop, and the tadpoles which are hatched are undersized and feeble. Subsequently they fail to grow as large as they should, do not so quickly develop gill-slits, and exhibit only feeble movements. A precisely similar want of development is seen in the higher grades of animal life. It has been repeatedly shown that the action of alcohol vapour upon the eggs of a hen during incubation is to cause abnormal development of the chick, both from the point of view of size and of structure. Experiments upon young rabbits and puppies have given similar results. If some of the litter are allowed to have food which has been treated with small quantities of alcohol, these will be found to develop but feebly; alcohol has had a deleterious effect on the development of their weight and length of body.

And the young of the human animal are no exception to the rule; for let alcohol, even in small quantities, come in contact with the growing cells of the human infant, and there is a chance, nay, a probability, that irreparable harm will be done.

It is a momentous fact that the cells of the individual may be damaged even before the child is born. Poisons—toxins—circulating in the mother's blood, can pass, and often do pass, into the organism of the child. Alcohol is one of the poisons which may so invade the developing infant. We know but little as yet of the laws of heredity, but we do know that disease may be impressed upon the child before birth, and that a child may carry such an impress in a latent manner for long after birth, the resulting handicap to its welfare in the world only becoming apparent in many instances when some strain is thrown upon it. Then it is that the inherent defect shows its existence and the individual evinces that crave for alcohol which the normal brain might have been able to withstand. It is thus that a vicious circle of the most serious import may be brought into existence. A father or a mother or both parents are given to excessive indulgence in alcoholic beverages. Their offspring are affected; it may be quite insidiously, and they in their turn produce degenerates one degree worse than themselves.

But a child of alcoholic parents may escape contamination before birth, only to be caught by the foe very soon after it enters the world. A nursing mother who gives way to drink generally feeds her child with milk which is poor in quality and deficient in quantity. The amount of milk is not increased by alcoholic beverages, and there is no such thing as "nourishing stout of the greatest value to nursing mothers." Frequently the milk contains a very appreciable amount of the drug which the mother has been imbibing; for alcohol can be readily traced in the mother's milk within twenty minutes of its ingestion into her stomach and it may be detected in it for as long as eight hours after a large dose. Dilute alcohol thus passed into the system of the child invades every part of its being, and has a par-

regularly harmful effect upon the growing cells of its developing brain. It is in this manner possible to pave the way for many degenerative lesions which are manifest in later years. Numerous cases have been reported in which infants at the breast have been the subjects of both acute and chronic alcoholic poisoning, the results of which have remained as permanent defects in the individual. It is on account of these well-known facts that many hospitals in their hints which they issue to mothers on the rearing of infants, lay stress on the recommendation that alcohol should be avoided, a recommendation which is very different from the ordinarily accepted idea in the public mind. It is not only, however, that the infant may receive alcohol mixed with the natural food derived from its mother, but it is by no means unusual for alcohol to be administered to it apart from maternal milk. It is not an uncommon sight to see quite young children carried into the public-house and there treated to beer or even spirits. The child makes a wry face over its dose, evidence that alcohol is not a fluid appreciated by the un-natured palate, a fact which ought to indicate to any but the most ignorant that its proper use is that of a drug rather than a beverage. This administration of alcohol is made, I verily believe, as the result of maternal ignorance in most instances, an ignorance which does not redound to the credit of the educationists of our land. When a mother was recently remonstrated with for thus exposing her infant to danger, she was furious with indignation, and her caustic remark was, "Who are you talking to, young man, to me as buried six?"

Women who are public-house frequenters are not only bad nurses, but they are also bad mothers. How is it possible for a woman to be a mother in the truest sense when she is wretchedly fed because so large a proportion of the weekly earnings go in drink, when she is thinly clothed because the pawnshop swallows up any decent garment which may have been dearly purchased, and when she is so utterly careless of all her ways because

her intellect and finer feelings are blunted by alcohol? And yet this is the condition of thousands of so-called mothers in our large cities and towns. Statistics carefully compiled show that the average spent on drink per week by each working-class family in the land is no less than six shillings. If this amount goes on what, to say the least, is not necessary, how can there be enough left to provide adequate food, housing, and clothing for the parents and the children? It is an established fact that many thousands of families in London have not an income large enough to obtain for each member even that amount of food provided for the ordinary pauper-inmate of the workhouse, and how then can it be justifiable for the family to spend nearly one shilling a day on alcoholic beverages? I am perfectly willing to admit that poverty, bad housing, and all the accompaniments of a wretched environment lend their share in the production of the deterioration which exists, but I am convinced by my own observations, and by those of many another student of social economics, that at least fifty per cent of the instances of child deterioration is due directly or indirectly to habitual intemperance in one or both parents. The statistics recently published concerning the height and weight of school children both in Glasgow and Edinburgh go far to prove the fact that life in one room means want of growth; and a single living-room often means rent-money spent on drink.

So impressed were the members of the Inter-Departmental Committee on Physical Deterioration with the evidence laid before them concerning the relationship of alcohol to deterioration that they place the consumption of drink next to urbanisation as a causative factor. Their emphatic words—"The Committee are convinced that the abuse of alcoholic stimulants is a most potent and deadly agent of physical deterioration"—should be pondered over by all who have the welfare of the nation at heart. And this abuse of stimulants commences to act even before the birth of the child; continues its effects in infancy, and is often perpetuated in youth and adult life. How, therefore, can it be otherwise than debility in the earliest

days, stunted growth before maturity, and deterioration and mental inefficiency at the time when the nation demands the finest and most productive output from those who should be its grandest asset?

So far as the effect of alcohol indirectly and directly upon growing tissues has been discussed, all the facts adduced point to its being a strong factor in the production of physical deterioration. It is necessary now to review the action of alcohol upon the tissues of the adult. Here again it is only needful to make a passing allusion to the effects of large doses of the drug upon the physical and mental constitution of the individual. The inebriate as a rule carries his infirmity written upon his face, or dictates the same by his words and actions. He is unstable in thought and precision, and his muscular as well as his mental powers soon become inefficient. It is wise to reiterate some facts which are not often given their due significance.

Alcohol is a *selective* poison, and acts very differently on different individuals and upon different tissues in the same individual. There are many poisons which act in a similar manner, some of them being well-known drugs, and others less-known products of the activity of bacteria, or micro-organisms. Strychnine is an example of the former, and this drug has a peculiarly selective action towards the central nervous system and the spinal cord in particular. The toxin produced by the "drum-stick" bacillus of tetanus, or lock-jaw, illustrates the second, for again the spinal cord is the tissue chiefly affected. Alcohol, on the other hand is a poison which has a distinctive action upon the cells of the blood and upon the cells of the vessels through which the blood circulates. Every part of the body is dependent upon the blood for its nourishment, and any factor which interferes with the proper composition or circulation of this fluid is a factor in the production of imperfect nutrition and consequent deterioration. There are two ways in which alcohol plays havoc with the tissues of the adult. The blood itself by carrying the poison is rendered abnormal; its constituent cells cannot do their proper work—in fact, they are intoxicated. The

amoeba, that beautiful unicellular animal, is profoundly affected by even small doses of alcohol, actually by one drop of alcohol in one thousand drops of normal saline solution; the fluid in which it is best at home. By alcohol it is irritated, "stimulated" if you like, just at first, but quickly numbed, then paralyzed, and finally killed. The white blood-cell is practically an amoeba. Alcohol taken into the stomach is rapidly absorbed through the mucous membrane into the blood vessels. There it comes into contact with the white corpuscles of the blood, and they likewise are irritated, numbed, paralyzed, and even killed. Thus these cells, which should be alert, discriminating, and efficient, like any well-trained constable, become lazy, inert, and altogether inefficient, when any undesirable in the shape of bacteria cause "riot in the veins."

But, in addition to the constituents of the circulating fluid being thus interfered with, the walls of the tubes through which it passes are liable to be damaged. A condition which is known as arterio-sclerosis is brought about. This term indicates a hardening and thickening of the walls of an artery. In the healthy state, an artery is an elastic tube which by its very elasticity forces the blood, pumped into it by the heart, to the remotest parts of the body. Even if the heart "beats" normally, blood would not as a rule reach the toes without the further propelling power of the elastic arterial walls. Given, then, arteries which have lost their natural elasticity, and many parts of the body will in consequence suffer from malnutrition.

Alcohol produces this hardening effect upon the arteries. In fact, some authorities believe that alcohol shares with one other toxin the evil repute of being the most potent cause of arterio-sclerosis. It does not, moreover, require large quantities of alcohol to produce this effect; even so-called "moderate" doses, if sufficiently long-continued, will cause the arterial wall to become so changed that the vessel will be a rigid, and often actually a brittle tube. Added to this, there is a serious resultant effect upon the heart itself. This organ, because of the loss of the help normally given to it by the elasticity of the blood-vessels, has now an increased amount of work to do in

endeavoring to urge the life-preserving fluid to every part of the system. Sooner or later the heart will be unable to stand this extra strain, and it will give way under it with dire results. "A man is as old as his arteries" is a witty saying, but none the less is it a true one. If the arteries in childhood are elastic, supple and soft, those of an old man are liable to be hard, firm and rigid. They have deteriorated, they have begun to wear out, or to become "furred" like a water-pipe. If a young man takes alcohol, and it has this deteriorating effect upon his arteries, an effect which is often very insidious and almost unrecognizable in its earlier stages, he will become prematurely old; he will deteriorate before his time, and the nation will lose his efficient service before he has given his proper quota to the nation's work. He will become, in fact, as old as his "aged" arteries are, and he has thereby to all intents defrauded society.

While, then, alcohol may act directly upon the elastic tissue of the arterial wall, this is not all, for it may also act indirectly. Alcohol retards the excretion of toxins and other poisons from the blood. It is a fact worthy of notice that muscular activity causes the formation of a peculiar waste product termed hypoxanthin. This has to be eliminated as quickly as possible if the individual wishes to keep fit. It is absorbed by the lymphatics and passed into the blood, by it carried to the kidneys, and by them excreted. It is a definite poison, and like alcohol, tends to produce arterio-sclerosis.

Alcohol markedly diminishes the excretory power of the organs which cleanse the blood of its impurities. Alcohol thus prevents the rapid elimination of hypoxanthin, with the result that the blood becomes surcharged with the poison. In this fact lies the chief reason why all in strict training advisedly eschew the use of alcoholic beverages.

Hence it can be clearly seen that the two deteriorating substances may be acting together, the one being, as it were, the complement of the other, with the consequence that the alteration in the arterial wall is doubled in its severity. Over-eating of animal food introduces into the blood an excess of a similar product to that known as

hypoxanthin, and where this over-indulgence in meat diet is associated with an habitual use of alcohol, the double force will again be at work. If, therefore, anyone wishes to keep young and fit, let him above all things be moderate in his diet, and avoid all forms of alcohol. Many other toxins present in certain diseases are much more potent when alcohol is also present, or when alcohol has already diminished the resisting power of the organism. This is particularly manifest when the toxin of influenza is circulating in the blood.

The wearing-out of the arterial system, through even the moderate use of alcohol, is one of the greatest risks to the life insurance office, and the medical examiner has ever to be on his guard against its existence. An extremely interesting demonstration has been made by those insurance offices which possess two carefully separated sections, the one for abstainers and the other for non-abstainers from alcohol. I happen to be the chief medical officer to one such company, and here are the facts of the case:

The office was founded in 1864, over forty years ago, and from the first it had these two sections. The "lives" in the non-abstaining section have always been "good"; in other words, even the non-abstainers are derived from a class which does not hurry itself to its grave by unnatural habits of life.

The founders of this office were from motives of sound business, anxious to make the general or non-abstainers' section thoroughly high-class. They gave strict injunctions to their agents and medical examiners that only the best of proposals should be sought for and accepted. So strict has been the investigation before approval that only eighty out of every one hundred deaths that were expected by a rigid standard have been realized. This is even better than the directors hoped for, and is a matter of sincere congratulation, not only to the longer-lived, but also to the Society. The founders were even wiser than the result of the non-abstaining section would show. Their establishment of a section for those who were total abstainers from alcohol, and were at the same time living under similar conditions as those in the non-abstaining

section, has proved still more satisfactory. In this section there were only fifty-four deaths out of every hundred expected, and the significance of this fact is so great that it cannot be overlooked.

Having endeavored to conclusively prove that there is a marked relationship between the alcohol drunk in ordinary alcoholic beverages, and deterioration of the tissues of the body, there yet remains for me to show how the deleterious effect of alcohol on the physical welfare of the nation may be minimized or abolished. It is proverbial that "Prevention is better than cure." When once deterioration has made a marked impression on the individual, there is but little hope that the result can be eradicated. It is impossible to introduce new arteries, to regenerate nervous tissue, to restore mental balance, and to regain complete efficiency.

There is much said at the present day concerning the necessity of a living wage, and the inadequacy of the amount paid to the unskilled worker to provide him and his family with the bare needs of life. The fact is, however, not so much that higher wages should be paid to the unskilled worker, but that there should be no such person as one who must rank as unskilled or inefficient. Even the navy ought to be skilled in his own particular line of occupation, and ought to be efficient in it. If he cannot properly use his spade, whether from want of knowledge as to how to manipulate it or from lack of muscular power to drive it home, ought he to receive the same rate of wages as his skilled mate? His ignorance is the fault, in most instances, of the State in not seeing that he is provided with that training which makes for efficiency. His lack of muscular power is all too often the result of poisoning by the drinking of alcoholic beverages. Many, doubtless, are inefficient because of congenital defect. They are born of parents who were themselves degenerate, are nurtured in surroundings which produce further deterioration, and continue to poison themselves with a drug which makes for greater changes in the tissues, and greater inefficiency.

Therefore prophylaxis, or prevention is all important,

the only true and scientific manner by which the real remedy for the state of things is to be found. Start with the children, go on with the children, finish with the children, and in the course of even one generation a decided public opinion will be formed. Then, and to my mind only then, will Acts of Parliament have the far-reaching effect for which they are framed.

Here are seven suggestions, not new by any means, but suggestions which have a very practical bearing on the question of prevention:—

Educate the mothers and fathers.

Prohibit the entrance of children into public-houses.

Feed the children.

Teach the children.

Limit the opportunities for adults to obtain liquor.

Provide sound recreation.

Promote research, and publish results.

I can only very briefly touch upon these propositions in the time at my disposal. Some may perhaps affirm that they are idealistic and practically unworkable, but to these objectors I would humbly say—try them in the right manner and see the results.

I have purposely put this first. What is so much needed is a sound, practical education of the parents of the children, particularly of the young men and young women who are on the threshold of life. How is this education to be accomplished? That of the women comes first. A good mother produces and trains efficient sons. The young women must be taught the elements of child rearing, of good cooking, and of household management on a small income. There is no grander national work than this for the ladies of the land—provided always that they know the elements themselves. The numerous borough and parochial health societies which are being established are all in the right direction and cannot fail to do good. With regard to the men, it should be the aim of every young men's guild and debating society to introduce the question of alcohol in relation to the welfare of the nation at least once in every year, and let the matter be frankly and fairly debated and voted upon.

Then, for both men and women, a vast amount of instruction can be given on the subject by the placarding of boardings with posters officially issued by the Health Committees of the municipal authorities. Since the appearance of the Inter-Departmental Committee's report this method of education has been extensively used; but it should be repeated year by year, and more widely extended. It would be politic if those interested in the question, whether themselves abstainers or not, would see that the city and borough councils were provided with a special sum for this purpose, so that no one might say that public money was being illegally used. I believe in the municipal authorities themselves doing the work officially, for it comes with so much more force than if from private enterprise. Surely it is the proper work of the municipality for the health of the people is at least as important as the lighting of the streets. If the authorities issue notices with regard to the spread and prevention of consumption, they have as much right and responsibility to issue others on the relation of alcohol to physical deterioration and disease. Even the proprietor of the public-house has no hesitation in exhibiting notices concerning consumption, and possibly ere long he may become public-spirited enough to do so concerning the deleterious effects of alcoholic beverages.

The recent disclosure of the truly awful effects of the presence of children in public-houses calls for immediate legislation in the direction of at least this amount of Prohibition. It would do much to keep the children free from actually imbibing alcohol, and much to maintain the sobriety of the mothers. It is useless to prevent the child from drinking alcohol, if at the same time he does not receive sufficient food for the proper growth of the body. I believe implicitly that the hungry child must be fed, and fed from its earliest days. If during school years it is found to be underted by its parents, it should be permissible for official inquirers to be made by responsible officials. When by these investigations it is found that the fathers are earning wages, and squander even a portion of them upon drink, a means should be found whereby

a corresponding part of this weekly wage should be annexed for the feeding of the child under the supervision of the educational authority, and not at the expense of the charitable or the ratepayer.

If the fathers are workless, the municipal authorities should, as they are, do all in their power to provide or discover work, with a scheme whereby part of the money earned is, where necessary, diverted for the feeding of the children.

The children must be fed, and until a sounder state of affairs comes about, the educational committees will be forced to feed them; for to attempt to teach hungry and ill-nourished children is sheer folly.

Herein, I am sure, lies the secret of future betterment. Teachers are wanted—skilled teachers, with an aptitude for teaching. Teachers are wanted who themselves have been taught the principles of hygiene and Temperance, and who can impart their knowledge simply and graphically. How is the future mother of the child to be taught the manner in which she should rear that child? Why, surely, by teaching her from her youngest days the right methods, with an example before her in the doll and the doll's house. Cleanliness, tidiness, and the value of fresh air, sensible cooking and rational food and drink can be inculcated in a pleasant and instructive manner to even the very young. If the child is taught how to keep its doll clean, it will unconsciously imitate the same good manner in its own being and clothing. So also if the young mind is early made to learn that milk should be the chief component of its diet, and that other beverages are not desirable for children, it will at least, when it reaches the years of discretion, not have had its mind so biased that it cannot choose the good from the bad. Teach the children throughout the land the elements of hygiene and Temperance. I am more than thankful that the teachers in the elementary schools of our country are so fully alive to the value and importance of such instruction, and are giving it in a manner which does them infinite credit. They are doing a magnificent national work, and one which is not sufficiently recognized by the

public. If this teaching is thoroughly and practically given there is no reason why, in a succeeding generation, a public opinion shall not have been created which will carry with it all needed legislative reform in the matter of liquor control.

England is not ready for total Prohibition. It is essential that the majority of the nation should be carried with every advance in stemming the tide of alcoholic poisoning. The majority of the nation still consider that a moderate amount of alcohol is a good thing, but all who think admit that much is bad. It is the facility with which alcoholic beverages can be obtained that in many instances causes the downfall of so many. Other poisons, not so commonly used, are much more severely restrained in their sale, and no one considers that the liberty of the subject is thereby threatened. If morphine were on sale as readily as its fellow-poison, alcohol, I do not think that politicians would take long to put it under even more stringent safeguards than it is at the present. I am not going to suggest that every one who desires to imbibe spirits or any drink containing alcohol should be forced to sign a paper before they could obtain them; nevertheless I will say that I do not think we are acting in the truest interests of the nation or the individual when we allow a public-house in many of our cities and towns to be so close to the dwelling-house that it allures the working man to enter it rather than return to his own dwelling; and certainly facilities should be given to the local inhabitants to object effectively to such houses remaining in their midst. Nor do I think that the grocer's license has been such as has tended to the sobriety of the women of our land. The subject of the limitation of supply is confessedly a difficult one, and will only be solved, in my opinion, by improved habits and by the people themselves being empowered to indicate by vote that they are not desirous of retaining such over-abundant facilities.

If the public-house is the only means whereby the artisan can obtain that social interchange and recreation which is his right, then if it is to lose its hold or to be abolished, something must take its place. This is felt by

all, and every student of social economies must give the matter most earnest consideration. If money is not spent in useless drink, it will be ready for other outgoings. Extra rent can be afforded, and thus a taste for better things will arise. More money will be available for reasonable recreation. But above all let the women of the land make the home cheerful and happy for the husband and the brother, and let not that grand heritage of old England — home and hearth — disappear.

There can be little doubt that the wider the diffusion of sound knowledge, the more rapid will be the trend of public opinion in the right way. It is a happy augury that at the present day some of our Temperance societies are promoting research along sound and carefully thought-out lines; but it would be far more forcible if the Universities themselves were able to promote these particular investigations under their own auspices. Surely a matter of such national importance and widespread interest should find a response from the seats of learning in a more definite and practical form than it has hitherto done. We are in the days of rapid advance, and while I for one should be sorry to see our Universities, the older ones at least, giving up subjects of learning for which they have been for centuries rightly famous, yet they must be abreast of the times, and the consideration in greater detail of problems of national and international importance should have a serious place in their programme. The subject of alcohol has so many sides to it, social, economical, political, medical, and religious, that it is well worthy of a close study by all those who in after-life will have the affairs of the nation on their shoulders. The University should not only promote research, but it should also publish, with its weighty authority, the results of such study and investigation. By doing so, it will add greatly to our knowledge, and will hasten the day when our nation will no longer suffer the mental, moral, and physical deterioration of its individuals, as the outcome of poisoning by alcohol, but will secure the universal development of that national efficiency which has always been our boast.

PSYCHIC TREATMENT OF INEBRIATES

BY T. D. CROTHERS, M.D.

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ALIEN spirit and drug takers exhibit degenerations both of the physical and psychical. One of the first questions is, which of these two conditions is most prominent. If he is a muscle worker, alterations in the physical may be prominent and the psychic remains about the same. If he is a brain worker the changes observed in his mental and emotional control may be very prominent. The treatment of the physical requires the removal of the toxins and the improvement of nutrition. This is essential in every case. Then the question of the derangement and the direction of the character of the psychic treatment comes up. The most prominent symptom. If the psychic disturbances appear in an exalted egoism, with delusions of persecution, efforts should be made to correct this. Two methods are to be considered, one the sudden, overwhelming obstruction of a new range of thought, antagonizing the present conception, or a slow training away from his present range of thought, or a slow training away from his present range of thought. If the patient is a trained man mentally and accustomed to think and act for himself with confidence and faith in his strength to carry out the plans devised, a gradual training process is more likely to succeed. If he is without much mental training and impulsive and credulous a sudden shock and revolution is necessary to break up his present condition. If the mind lacks concentration and is inclined to take different points of view suddenly with or without special reasoning the psychic needs powerful revolutions to overcome its present condition. An example is the following: A merchant forty-four years of age had acquired large property by wise adjustment and quick impulsive thought. He was untrained to reason except along his particular line of work. The derangement of the psychic was pronounced in his confidence that alcohol was a good remedy and could be used in moderation without danger. This egoism had attained a sufficient degree of prominence that suggested paresis

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in the future. After the usual preliminary treatment, sharp decisive measures to overcome the psychic were used. He was examined with great minuteness and every possible deviation from the normal was brought out in its strongest light. He was advised to write a will and prepare for sudden death. The most elaborate treatment was planned and carried out, involving drugs, baths, electricity and continuing for at least twelve or thirteen hours out of every day. At first he objected, later he consented and his egoism grew rapidly less and finally disappeared. After three months' treatment he left with a new conception of what he must do to keep well and avoid the possibility of relapse. There was in this a psychic change and revolution that resulted in final recovery. In a second case a patient came under treatment asserting that he would never stop the use of spirits and expressing his belief that it would lengthen his life and change his whole career. He was given spirits mixed with apomorphia and told with great emphasis that his system would repel it and that it was a poison to him. Repeated efforts ending in vomiting and depression served to fix the idea so profoundly that it was broken up. His physical examinations showing the injury he had received changed the whole course of his life. An instance of the same influence was tried with great success on a man of very pronounced convictions, and who from the continuous use of spirits was supposed to be in the first stages of general paresis. While on his yacht a rope was attached to his body and arrangements were made by which he would fall over board. The shock and fear of dying, and the great apparent efforts to save him at the last moments, changed the whole current of his psychic. This was followed by drugged spirits which produced intense nausea and still further deepened the impression. His physician continued the psychic measures always associated with physical means to restore and build up the tissues. Starting psychic effects are often produced by electric currents, applied in various ways to produce physical and mental depressions which completely change the thought and purposes of life. On one occasion the death of a favorite

child was made to appear as the direct result of the wine drinking of the parents. This idea was promoted in such a way as to practically change their whole mentality and course of life. The range of practical psychic measures to produce revulsion and permanent break up mental conceptions and egotistical delusions varies with the man and his surroundings. The real question is, should these means be used to produce sudden or gradual effects, and which would be the most powerful and lasting? Both can be used together and naturally so. In another class of cases drugged spirits and starting shocks would have only transitory effects and the patient would be worse by the use of these means. The psychic measures should begin and be carried on by gradual processes, the most practical of which is exhaustive studies of the symptoms and their meanings. Symptoms may be created by the use of drugs and other measures and then the mind turned to their significance and meaning. An example of this gradual training was that of a man who had intense fear of death, and had probably taken spirits with a conviction that it might in some way lengthen his life. The psychic measures used all had reference to this one thought, and by pressing this to its fullest extent he became a total abstainer and was permanently cured. In another instance where cancer had been a family disease and the patient had a morbid dread of its appearance, the physician made use of this fact to change his psychic thought and trained him to use every means that would strengthen and build up the body. In the various gold cures this psychic training is outlined in many of the means used, but usually fails, because of the deception and crude application of other measures. These means are applicable particularly to persons who have acute active working brains with marked delusions and are literally very essential phases of the treatment. Remedies addressed to the physical alone will fail. The psychic must be considered, requiring active measures as urgently as the physical. The second class of cases where the psychic treatment is very valuable is that in which there is confusional excitement and weakness with great emotional changes and efforts to

explain the reasons for the use of spirits. This is commonly seen in periodic drinkers, after the subsidence of the drink paroxysm, and in the depressed period of remorse. The mind turns with intense interest to find reasons and explanations. This usually concentrates into delusions of persecution and strong conviction of the responsibility of others for his condition. At this time the mind is particularly alert and sensitive to impressions particularly to abstain. The most positive assertions will be made that he will never touch spirits or drugs again and these are often accepted by the friends as evidence of cure. The treatment of the mind should be directed to the physical, and encouraged to depend on the use of some positive measures that appeal strongly to the functional activities. Thus in one case an elaborate system of physical culture and baths at regular times of the day and proper hours of sleeping with a special diet was effectual. A periodic drinker with free intervals of two months was placed on a most elaborate treatment of moderate exercise and duties with baths and drinking mineral water. At the approach of the attack every available moment was occupied with sharp eliminative drugs; the result was recovery. An example of this is the following: A very active lawyer was observed to have periods of great mental activity and energy before the attacks. He was examined at this time by his physician and sent off on a walking tour over the Catskills. An attendant went with him and gave him a thorough rubbing every day. He returned greatly improved and the approach of the next attack was treated in much the same way at a sanatorium where physical culture and eliminate diet were prominent features. Another case always used spirits to great excess. At the beginning of the summer vacation he was treated for this by an ocean voyage under the care of a physician, who carefully arranged a detailed treatment. In other cases diminished diet and change of surroundings or change of occupation are the psychical means of value. The effort to have the mind diverted and changed to some new work overwhelms the morbid impulses and thus overcomes their power. Diverging nerve energies into

new channels or depressing the consciousness by stimulating the subliminal is another form of explanation. If the patient has an active brain or some culture or training he can be impressed to join in these efforts. But if the brain is depressed and weakened the meaning of the psychic remedies cannot be understood. Such a person whose spirit taking had reached a chronic stage was ordered to take a Roman bath every day preceding the return of the drink paroxysm and to walk three miles away to a mineral spring, drink so much of the water and return within a certain time. When the period for the attack had passed the baths were discontinued and a certain amount of physical exercise was taken daily. Recovery followed. It will be evident to the reader that psychic treatment for this class will include almost every means and possible measures of diversion and change of mentality. Of course this depends on the removal of all physical sources of irritation and measures addressed to the physical as well as the psychic. The correction of the faults of the organism and any conditions of living that increase the exhaustion and desire for spirits give new force to the psychic remedies. Another psychic phase is that of general depression and melancholy. A condition bordering on despair and indifference concerning the present and future. Many of this class are seen in the station house and among the tramps. Higher up globe trotters whose life is aimless, restless movement, and who are always looking for some new experience. They are all toxicemic and sclerotic physically and each year becoming more of a burden on their friends. They need profound psychic impressions sustained by physical remedies. In one instance a patient after the excessive use of spirits tried to drown himself and was rescued with great difficulty. He was placed in a sanatorium and given the most elaborate course of treatment occupying every waking hour of the day. He was impressed with the necessity of following out every direction. This grew as his health improved. He was finally sent to the country and required to work so many hours in the garden. The result was very gratifying. He became an enthusiastic horticulturist and

fruit grower and was a very useful man for the rest of his life. A physician picked up a tramp on the street and made him the subject of profound psychic treatment. First he kept him in bed for several weeks then gradually brought him up and gave him exact duties and responsibilities, placing him in a position that would rouse the psychic and the higher consciousness of right and wrong. He obtained strong personal control over him and in this way directed all his work and duties. He finally placed him in business and the man became very successful and was highly respected. The death of his physician resulted in the downfall of the patient. He lost all of his property and went back again to his old tramp life. The influence of the physician kept him up and his death destroyed all purpose and motive in life. Examples similar to this are common in which one person influences another in some very pronounced way either for good or bad and the removal of this influence is followed by the development of a new character. (An incurable who has been an inmate of all the institutions and failed appealed to a country physician for help. The physician put him to work in his barn taking care of his horses and wagons giving him very exact duties and pressing upon him daily the need of certain changes of thought and conduct. His restoration was very pronounced. New ambitions, new purposes in life followed, and he studied and became a physician and was a man with much force of character. It was the psychic treatment assisted by the physical that was active in final restoration. In the use of psychic measures it often happens that some dominant impulse is discovered, which from circumstances has been covered up and is uncultivated. Bringing this to light and stimulating it have been a psychic force to change the whole current of life. Thus a man who in early life had been interested in botany, but never had an opportunity to develop this interest, came to an institution in middle life an incurable. His latent taste was discovered and he was sent out in the garden, and encouraged to take up horticulture. By pressing this study and work he recovered, and after treatment went out to the country following the bent of his latent

impulse and was a temperate useful man. Other examples quite common are noted of reformed inebriates, who become exhorters and temperance revivalists. Some latent quality or impulse to become teachers and leaders has been covered up by years of other activities, finally it has been uncovered by a revelation of their real conditions and the possibilities of helping others. The psychic side of temperance reformers is a very interesting study often revealing only the motive and pleasure of the person to influence and control others with little regard to the higher ethical meaning of the influence. The contagiousness of such men is often abnormal and while the purpose is to benefit others it attracts no attention. The same psychic contagion to encourage the use of spirits and stimulate the activity of the lower impulses is recognized as abnormal. The man who has been the paragon of wickedness and who becomes a saint in his conduct and work has simply changed the direction of the psychic. Many of the reformed men who take keen pleasure in describing the wretchedness and depravity which they have passed through, are not far removed from the conditions which they glow over. The possibilities of developing the psychic side is very great. The awakening of some dominant impulses may restore him to normal life again. Climate, surroundings, occupation and the pressure of a dominant impulse are all great powers and agents in the treatment. Some persons may be taught to depend on certain conditions of life, either in the care of themselves or surroundings or certain personalities or drugs. Others can be taught to build up within themselves forces that will control and reasoning that will dominate all lower impulse. The religious impulse is a powerful factor, particularly when based on reasoning and the recognition of facts. When built up on fear it is less stable. In the psychic treatment appeals to the higher ethical sense as expressed in faith, love and desire to live hereafter is one of the most powerful means that can be used. But it must be supported by physical aids and sense impressions. The exhaustion and poison conditions of the body must be removed before these psychic impressions can receive a permanent

growth. Conversion in its broad sense must include physical conversion, and change of thought and motive. The question often asked is, how far can suggestion and psychic influences repair structural lesions? One answer is authoritative that it can alter metabolism and in many ways lessen depression. The change of nerve impulse either concentrating or diminishing it will change the capillary circulation and this will either cause shock or less pronounced alteration. The effect of a powerful impression either suddenly or slowly is registered of very markedly in the functional and organic activities of the body. Beyond this we must judge from manifestation and symptoms. Some very remarkable cases have been noted of psychic treatment, where the physician has insisted that the patient write down daily a record of his thoughts and feelings and receive from the physician minute directions concerning each act and event which he faithfully carried out. Many persons after treatment in an institution are greatly benefited by continuous counsel and frequent visits to the physician. It is always a hopeful sign to have patients depend upon the physician for advice and counsel. There is a suggestive power in questions and answers, what to do and how to do it. It is much safer to encourage the patient to depend upon the physician than it is upon drugs, and it should be the object of all psychic treatment to teach one, to give unusual care and attention to the functions of the body. If this is a dominant factor in the patient's life, the psychic side is more easily controlled. What is needed now is exhaustive studies along these lines to make use of the unknown forces which are appearing in all directions and which constitute the power of the quack, only used along crude ignorant lines. When they are understood and applied scientifically the psychic treatment of inebriety will be of equal value to that of drugs and any other measures.

COFFEE AND TEA POISONING*

BY DR. A. GOUGET

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KNOWING the composition of coffee and tea and the action of their principal constituents, we can study the manifestations of coffee and tea poisoning.

Acute Coffee Poisoning.—A cup or two of strong coffee, when taken by a person who is not accustomed to it, will produce, usually, in about ten or fifteen minutes, a certain amount of general stimulation: motor, respiratory, circulatory, urinary, intestinal, and even genital stimulation, but particularly cerebral excitement, whence the name, "The Intellectual Drink;" which has been applied to coffee. Coffee has been used of old in strangulated hernia for its intestinal action and as an emmenagogue, which was employed by the Egyptians from time immemorial, according to Prosper Alpin.

If the dose is too strong (for example, in cases in which very strong coffee is taken as an abortive measure) or if the person is particularly intolerant to coffee, in small doses (a single cup may suffice), then the physiological phenomena which we have just mentioned become clearly pathological: there is an exhilarated respiration, a sensation of anxiety and thoracic constriction, palpitation, a rapid and at first tense pulse, then a smaller irregular pulse, pallor, with shining eyes and dilated pupils, abundant perspiration. Then there may be vomiting, diarrhoea, strangury, sometimes with retention of urine, headache, vertigo, noises in the ears, excitement and trembling and convulsive or cramp-like motion, and finally hallucinations and delirium, a condition known as coffee drunkenness, in analogy to alcoholic drunkenness.

Usually these symptoms do not fail to improve, but for several days there is some excitement, some tremor, palpitation and anorexia. Death, sometimes sudden death, is quite exceptional, even after the ingestion in a single

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dose of considerable amount, as, for example, 80 grammes of coffee infused in 250 grammes of water (Cohn). In this case the patient was a strong man, and vomited part of the poison. In another case, reported by Gurschmann, the patient was a young woman who, in order to bring on her menses, had infused 250 grammes of coffee, freshly roasted, in 500 grammes of water, had expressed the residue, and swallowed the whole amount at once. She recovered, in spite of the fact that she did not vomit and had only some diarrhoea.

Chronic Coffee Poisoning.—There seems to be a certain amount of tolerance for coffee, which develops after a person gets used to taking it, just as in the case of alcohol. We know, for example, that insomnia which coffee produces will gradually disappear under its habitual use. The abuse of coffee, however, produces, like the abuse of alcohol, a set of more or less serious symptoms. When this abuse begins, and at what amount, it is impossible to say, for the dose varies according to individual predisposition.

A long time ago, when those who systematically attacked coffee and accused it of a number of imaginary effects, the more careful observers, such as Lemery, in 1702, had recognized the principal disturbances for which it really can be held responsible. Yet the scientific history of chronic coffee poisoning is of modern origin. The fundamental research on this subject is Guellier's Memoire, which was read in 1885 before the Medical Society of Rheims, in which the principal manifestations of coffee poisoning are clearly described, from seventeen personal observations. Four years later Mendel studied coffee poisoning in the working women of Essen, in Westphalia. In 1893 Norman Bridge, in the United States, reported six cases of chronic coffee poisoning. In 1895 Gilles de la Tourette and Gasne reported two cases to the Medical Society of the Paris Hospital. To these must be added a series of isolated cases reported especially in France and in the United States. The theses of Boucard (1899) and Bonby (1905) represent good synthetics of this question. Recently a German physician, Roetger, undertook an

investigation upon the abuse of black coffee among his confrères, and confirmed the results of the preceding authors.

As in chronic alcoholism, the chief disturbances in chronic coffee poisoning are digestive and nervous in character. In fact, many of these symptoms resemble those of alcoholism, which is not astonishing when we reflect that there is an analogy of action between the two substances. It is possible, however, that in certain cases observers have attributed to coffee poisoning what was really due to alcoholism. By simply stopping the coffee others were able to show the origin of the disturbances which we are about to discuss.

The subject of chronic coffee poisoning is pale and usually thin, with drawn and aged features, dilated pupils and brilliant eye, a shifting expression and anxious physiognomy. He complains of headaches of a variable type, recurring in attacks, sometimes at night; of neuralgias, especially facial, and also intercostal and gastric, etc. He complains also of aching pains, tickling and a sensation of ants, especially in the back and shoulders. He often has vertigo, which sometimes is severe and leads to a fall. When he goes to bed he has cramps in the ankles or the soles of the feet, his sleep is troubled with dreams which partake of the nature of nightmare, and he sometimes awakens with a start. In the morning he is always tired before he gets up. One of the most constant symptoms is a slight and rapid tremor, usually limited to the fingers, but sometimes involving the tongue, the lips, the muscles of the face, giving rise to a certain amount of disturbance in speech. This tremor is increased by emotions and by depriving the patient of coffee, so that he is sometimes unable to work without breakfast in the morning. Sometimes he also has sudden muscular contractions. Very frequently there is a cutaneous hyperesthesia, but the reflexes usually remain normal or but slightly exaggerated. The intelligence is slow, the patient's character, sad, bitter or depressed, hesitating, cowardly, so long as the stimulus of the coffee is lacking. The patient's disposition is especially shifting, and he is extremely impressionable. In brief, it is the condition of irritable

weakness of neurasthenia. In those who are predisposed there is not infrequently hysteria, and, according to Vincent, there is an extraordinary amount of hysteria on the Island of Groix, where there is a great deal of coffee drunk.

On the part of the circulatory apparatus, there are palpitations, with or without disturbances of rhythm or intermitteuces, attacks of precordial anxiety, dyspnea on exertion, and vasomotor disturbances, such as excesses of heat, sweats, swelling of the veins, or a sensation of cold in the limbs. The pulse is sometimes slow, but usually accelerated. There seems to be no doubt that the chronic abuse of coffee favors the development of arteriosclerosis (Rombert, Rosenbach), although the attempts of experimental reproduction with caffeine by Lissauer failed.

The patient has a bad taste in the mouth in the morning; his appetite is poor, especially for meat; he complains of a sensation of weight or cramps in his stomach and of gaseous eructations. According to Vincent, the latter symptom is very characteristic of the flatulent dyspepsia of chronic coffee poisoning. Sometimes there is also nausea, vomiting, constipation or diarrhoea, at times alternating and hemorrhoids. On examination his tongue is found white and coated, the stomach atonic, splashing easily. There is also pain in the right hypochondrium, with radiations into the shoulder. An ulcer of the stomach has been observed by Fernet in a woman who chewed coffee beans all day long.

Chronic coffee poisoning produces a distinct polyuria, but it is said also, because of the richness of coffee in purin bodies, to favor the formation of gravel. Coffee also has an emmenagogue action, and it is said in some cases to produce leucorrhœa. In the long run it might cause amenorrhœa. Yet, according to Guelliot, it cannot be considered as a cause of sterility, for the eleven women suffering from coffee poisoning whom he had observed were mothers of twenty-six children.

In man, coffee is well known to have an anaphrodisiac action. This has been known for a long time by the Orientals, and was confirmed by Louis XIV by observations upon himself. The Princess Palatine wrote that

coffee makes people chaste and was the drink, above all, indicated for Catholic priests. The frigidity of Frederick II and Fontenelle was attributed to their abuse of coffee. Linne called the infusion of coffee "potus caponum," and Troussseau declared that there is no more potent aphrodisiac known. Boussingault held the same opinion. Boucard cites the case of a young man of twenty years of age who for three or four years had been drinking coffee in large amounts and had atrophied testicles and was impotent. Guelliot reported several analogous cases. Certain cases of prostatitis were also attributed to the abuse of coffee.

Coffee affects the skin. It produces pruritus, especially of the anus and vulva. In other cases it gives rise to pruritus of the forearms, the thighs and the legs, or the chest. Coffee renders certain skin diseases itching when they are not ordinarily so, or, when they are itching from the start, it increases the pruritus. Sometimes it leads to a change in the form of the eruption, and produces acute exacerbations in chronic skin diseases. Perferri reports in his thesis the following history: The woman of one of the wards of the Broca Hospital clubbed together for the purpose of presenting a bouquet to the chief of the service, M. Brocq, in honor of his birthday. In return the latter offered them their choice of champagne or coffee. They voted for coffee, which was then given them, of very good quality. On the following day, of the twenty women with inflammatory diseases of the skin, five developed acute exacerbation.

A cachexia due to coffee characterized by physical and mental weakness, dyspepsia, emaciation, a pale complexion, with a yellowish tinge resembling that of cancer, has been described. It is possible that this is going too far in the analogy between coffee and alcohol. It has been said also that the children of coffee drinkers were weak and thin and abnormally irritable. This is possible, but requires confirmation.

Most of the symptoms of coffee poisoning are, therefore, analogous to those of alcoholism, and when both coffee and alcohol are used in excess, it is difficult to say

which symptoms are due to coffee. Unfortunately, the abuse of coffee and alcohol is frequently associated in the same person, and the abuse of coffee is more willingly admitted than that of alcohol. The abuse of tobacco is also associated sometimes, and it may be asked whether the coffee amblyopia of some authors is not due to nicotine and alcohol. The question may be reserved, however, in view of the case of tea blindness which we shall report below. According to Guelliot, emaciation, together with a particularly brilliant look in the eyes, distinguish caffeineism from alcoholism. This distinction, however, is less accurate in the case of the drinker of whiskey than it is in the case of wine drinkers.

Acute Tea Poisoning.—In small or moderate doses tea produces a slight amount of cerebral excitement; the face becomes animated and the mind becomes alert. But sometimes, in novices, or in persons particularly sensitive, or after taking too much tea or tea too strong, the phenomena become truly pathological. Epidemics of tea drunkenness had been described in certain large industrial cities in England, in spite of the old saying that tea cheers but does not inebriate. The symptoms may even go further and become menacing.

In a case reported by Spillmann the patient was a woman of sixty-five years of age who was thought to have cancer of the stomach and to whom a test breakfast was to be given. By mistake 300 c.c. of boiled water were poured upon 300 grammes of black tea, and after half an hour's infusion she was told to drink this almost black and bitter brew. She was soon seized with tremors and little convulsive movements of the limbs, with a sensation of extreme faintness and pallor, then with an uncontrollable vomiting, intense headache, with sensation of cold in all the limbs, small pulse, which was at first rapid, then irregular, uneven, slow, and a fall of temperature to 36°, with very scanty urine. All these phenomena had disappeared at the end of twenty-four hours.

In younger women, during the age of sexual activity, acute tea poisoning may give rise to uterine disturbances, as in the case reported by Lortet-Jacob and Sabareanu.

An orderly in the Laennec hospital, who had come from Tokio, invited three nurses to tea. He made an infusion with young leaves gathered at the first crop in May, that is, leaves particularly rich in theine. Each woman drank one glassful, and each was seized with various nervous symptoms, such as excitement, tremors, cramps, dyspnoea, painful palpitations, vertigo, but, in addition, each was taken with uterine cramps, which they compared to labor pains. One of them stated that her menses, which had ended twenty-four hours previously, had reappeared and had continued to flow abundantly for half an hour. Another woman, who was five months pregnant, had a miscarriage, which began even before she had drunk the entire glass of tea.

This observation is in confirmation with the statement of Berthoz that caffeine in toxic doses produces a marked ingestion of the pelvic organs.

Chronic Tea Poisoning.—The symptoms, resulting from the prolonged abuse of tea have been described, particularly in America, by Morton (1879), in tea tasters, and later by Bullard, in habitual tea drinkers. In France, Eloy devoted an article to this subject in 1886, in which he was inspired by the work of the two authors just named. Since then, Wood, King and Lander Brunton have added to the study of this question.

The prolonged abuse of tea gives rise to nervous symptoms that are closely identical to those of coffee poisoning. They consist of phenomena of cerebral excitement and later, of depression (headache, excitement, hallucinations, vertigo, insomnia or disturbed sleep, neuralgias, cramps, tremors, then neurasthenia, etc., and even motor and sensory disturbance which, no doubt, are of hysterical origin). Lander Brunton reports the case of an officer who had been suffering from a severe neuralgia, which did not improve when tobacco and alcohol were removed, but which disappeared when tea was no longer taken. On the other hand, Slavier, reported a case of perverted taste in a servant girl, who had become accustomed to eat a half a pound of coffee daily and who exhibited symptoms similar to those of delirium tremens. The reports

of the insane asylums of Ireland attribute an important rôle among the causes of mental disease in that country to the abuse of tea. The frequency of arterio-sclerosis of the brain in tea drinking has also been noted.

The cutaneous and general manifestations of coffee poisoning are less marked in tea poisoning. On the other hand, the latter seems to affect more markedly the digestive and cardiovascular apparatus. Tea produces a dryness of the throat, loss of appetite, dyspepsia, with flatulence, with or without pain in the stomach, probably in virtue of its tannin. It has even been stated that ulcer of the stomach is frequently met with in poor and ill-nourished tea drinkers. Tea also produces constipation, sometimes even intestinal obstruction (Wood). In tea tasters, enlargement of the liver and sometimes atrophic cirrhosis has been noted. Finally, a tendency to diabetes, and a special condition of the teeth have been observed in tea drinkers.

Stokes, Morton, Porain, Huchard have found that the abuse of tea produces attacks of palpitation, with or without disturbances of rhythm, and also dyspnoea and angina pectoris.

Like tobacco and alcohol poisoning, tea poisoning can produce a toxic amblyopia. Morton records visual disturbances in tea tasters. Campbell cites the case of a man aged forty-six years, who for several months had been complaining of a gradual entelebment of vision, which had resisted the withdrawal of tobacco, but which had disappeared rapidly when tea was suppressed. This man had been taking, on the average, twelve large cups of tea daily. The abuse of tea has also been said to produce deafness (?) and loss of taste and smell (?).

Wood, on the basis of twenty-five cases summed up the relative frequency of these various symptoms. In nine-tenths of the cases, neuralgias (especially facial) are noted; in four-fifths of the cases there is headache; in three-quarters there are palpitations; in two-thirds, there are tremors, and in one-half of the cases there are gastro-intestinal troubles.

There has also been described a cachexia due to

tea poisoning, with premature senility, which is analogous to the cachexia of coffee poisoning. In addition to its direct action, tea poisoning may also indirectly influence the course of certain diseases. Thus, syphilis is said to occur in the most severe forms in tea tasters.

You have seen, therefore, that while we cannot agree with Love that the abuse of coffee or of tea is more dangerous than that of alcohol and that their abuse is less apparent and less repulsive, and while we may consider coffee and tea poisoning as relatively less to be feared than alcoholism, these two forms of poisoning should be regarded very seriously. Certain crusades directed toward the substitution of coffee or tea in the place of alcohol in drunkards should, therefore, be regarded with some reserve. In Norway, for example, the abuse of coffee has been carried to such an extent that anti-coffee societies have been founded in that country (Lewin). One of the prominent members of the Norwegian temperance society was a woman affected with catemania.

I will repeat again what I have already told you several times concerning alcoholic drinks. There is no such thing as a healthy beverage containing alcohol. The dose alone determines the question of healthfulness. Everything is a question of amount and the same moral and social causes which make a drunkard will make a coffee or a tea fiend, if we try to replace alcohol by coffee or tea.

With regard to the dose to be allowed, it varies according to a series of factors: the richness of the tea or coffee in active principles; the quantity employed for the infusion and the duration of the latter process; the more or less nervous temperament of the subject; a more or less active life and a more or less sufficient supply of food. While there are some examples, such as that of Fontenelle, who, though a great coffee drinker, died almost a centenarian (which made him say: "If coffee is a poison, it is a very slow poison"), there are other persons in whom a daily dose of one or two cups of coffee will suffice to produce more less marked symptoms.

It is necessary to know these symptoms in order to recognize their cause, and it is also important to bear in

mind more than is done usually the frequency of coffee and tea poisoning. Often the symptoms are attributed to alcoholism or to tobacco poisoning, or else the vague diagnosis of neurasthenia or arteriosclerosis is made. We must also know that the clinical picture of coffee and tea poisoning, which we have drawn above, never presents itself in its complete form, but that very frequently only a single symptom appears. Thus, in one patient it is headache or a rebellious neuralgia; in another, it is a pruritus; in a third, vertigo and palpitation; in a fourth, gastric troubles.

With regard to the treatment of coffee and tea poisoning, it will naturally consist in the removal of the cause. In some cases it takes several weeks before the good effects of this removal are felt. The tremor and the constipation are generally the most rebellious symptoms.

Certain unpleasant results, due to the sudden withdrawal of tea or coffee in habitual drinkers of these beverages, have been described, which remind us of those occurring under similar circumstances in alcoholics and morphomaniacs. There is an extreme excitement, insomnia, a torturing headache, sadness, terrifying thoughts, hebetude, languor and sometimes hysterical disturbances (Wallian). But these symptoms are not in the least dangerous and last only a few days. The sudden withdrawal of tea and coffee is really the method of choice in the treatment of these forms of poisoning. The symptoms may, however, be combated by appropriate medicines, such as arsenic, laxatives, etc. Trousseau regarded valerian as the antagonist of coffee.

Some authors attribute the unpleasant symptoms of coffee to the extractives and suggested injections of caffeine, to be used in place of the usual stimulants, in order that the patient may not be suddenly deprived of this stimulus. I would not recommend this method, which seems to me based upon a wrong principle. Regarding the substitute for coffee, such as the coffee of malt, of acorn coffee, etc., they are not satisfying to those who are accustomed to real coffee, and some of them are not favorable as regards digestion. It is important to

employ mental therapeutics upon the patients, in order to avoid relapses into the habit.

To sum up, as has been shown very justly by M. Fernet, the abuse of coffee and of tea, like that of alcohol, constitutes a part of the abuse of stimulants which is gradually getting more and more common in all classes of society. Fernet regards this abuse as one of the causes of the nervousness of our age and of the excited existence which we lead. Yet, could one not also claim with Hahnemann that this need for feverish activity required by modern life, makes us look more and more for all sorts of stimulants? It is logical that we should seek artificial means to enable us to lead a life that is getting to be less and less natural.

Dr. Claud Taylor of London has recently been giving some very startling evidence concerning alcohol and its dangers. He says that the effect of as small a quantity as two drachms of alcohol can be measured in its narcotic and depressive effects. While alcohol in muscular work might increase the activity for a brief time it would be followed by great depression so that at the end of a brief period the amount of work performed would be very much less. This difference could be expressed in the following figures: A man performing 22.3 units of work in a given time, if he took an ounce of rectified spirits this would be reduced to 15.0 units. Therefore, economically, the man was unable to perform the same amount of work as before. If his employer gave him the spirits it was a serious loss to both. Concerning the relation of consumption to alcohol he referred to the fact that in France tuberculosis steadily increased with the increased consumption of spirits. This in the course of ten years rose from fifty to ninety per ten thousand inhabitants. The same relations were noted between the mortality and the increased consumption of spirits. In this there was no theory, but one of exact facts which admitted of no other interpretation.

DISEASE AND MORTALITY FROM ALCOHOL

D. H. KRESS, M.D.

Superintendent Washington (D. C.) Sanatorium

A FEW years ago a number of German scientists representing the universities of Munich, Zurich, Basel, Leipzig, etc., in discussing the chief cause of the existing physical deterioration in that nation, drew up and published the following statement: "It is an absolute scientific fact that alcoholic drinks, more than any other factor, injure our national life, diminish the physical and intellectual forces of our race, impregnate them with hereditary diseases, and lead to degeneracy."

Dr. Bollinger, of Munich, said that as a result of excessive beer drinking, "it is very rare to find a normal heart and normal kidneys in an adult resident of the city of Munich."

It is estimated that nearly one half of the young men in Germany, between the ages of eighteen and twenty-two, are incapable of bearing arms, the prevalence of heart-disease having increased among them by three hundred per cent within the last twenty years. Beer drinking is considered one of the principal causes of this degeneracy.

A physician in one of our large American cities in relating his own observation, says: "My attention was called to the insidious effects of beer, when I began examining for life insurance. I passed as unusually good risks five Germans,—young business men,—who seemed in the best of health, and to have superb constitutions. I was amazed to see the whole five drop off, one after another, with what ought to have been mild and easily curable diseases. On comparing my experience with that of other physicians, I found that they were all having similar luck with confirmed beer drinkers, and my practice since has heaped confirmation upon confirmation. . . .

"Any physician who cares to take the time, will tell you that the beer drinker seems incapable of recovering

from mild disorders and injuries not usually regarded as of a grave character. Pneumonia, pleurisy, fevers, etc., seem to have a first mortgage on him, which they fore-close remorselessly at an early opportunity. . . . When a beer drinker gets into trouble, it seems almost as if you have to recreate the man before you can do anything for him."

Heart-disease and kidney disease have been rapidly on the increase not only in Germany and among the Germans, but in all civilized nations, during the past twenty years. In America the increase in these diseases has been especially noticeable during the year 1907, the average mortality in American cities from heart-disease having increased about twenty per cent over the preceding year.

There has been almost a corresponding increase in the number of deaths from pneumonia and cerebral hemorrhage, or apoplexy. Tissue deterioration and the increased blood pressure resulting from the use of alcohol are without doubt the two chief causative factors in this high mortality rate from the diseases named.

Alcohol diminishes cell activity, and causes fatty degeneration of the heart and other tissues; in appearance, therefore, the user of alcohol may be a picture of health, but in reality he is a degenerate. He has an abundance of flesh, but it is of an inferior quality. The lowered vitality of his tissues renders him incapable of resisting germ diseases. If he does not die of heart-disease or apoplexy, he is almost certain to succumb should he be stricken down with pneumonia, cholera, or some other germ disease. Cirrhosis of the liver, a condition in which the liver cells are gradually destroyed and replaced by an overgrowth of connective tissue, is frequently due to alcohol. These changes result from the irritation produced by the alcohol.

A few years ago a measure was passed by the Chamber of Deputies of France to rescue the French people from the perils of alcohol. In all parts of the city of Paris, among other official placards and notices, were seen large white posters with clear, black type, headed "ALCOHOLISM—ITS DANGERS." They began: "The artificial stimulus

that alcohol produces quickly gives place to nervous depression and weakness. IN REALITY, ALCOHOL IS USEFUL TO NO ONE. IT IS HARMFUL TO ALL." The evils which the habit of drinking brings in its train were catalogued. They included "loss of affection for one's family; forgetfulness of social duty; distaste for work; misery, crime and all kinds of physical maladies." The concluding words were as follows: "With reference to the health of the individual, the existence of the family, and the future of the country, alcohol is one of the most terrible of scourges."

In France the slight rise in the birthrate during the past two or three years is attributed to the fall in the consumption of alcohol as a result of the efforts on the part of the nation to inform the people of its injurious nature. It is a fact that children begotten by drinking parents are usually weaklings and defective in both body and mind. Mortality among such in infancy is great. If they survive infancy and reach the age of youth they are apt to succumb to tuberculosis. This weakened heredity from drinking parents is one of the chief causes of the prevalence of this disease among our youth.

The degeneration evinced by the declining birth-rate, and which in most of the European countries made necessary the appointment of commissions to investigate its causes, may be attributed chiefly to the free use of alcoholic beverages; for the more temperate Mongolians and Mohammedans, instead of having a diminishing birth-rate as we do in America and European countries, show a constantly increasing birth-rate. Degeneracy among them is not nearly so marked, and the diseases which prevail in America, such as heart disease, pneumonia, cerebral hemorrhages, and heat stroke are very uncommon among them. This is certainly significant.

The war between the Russians and the Japanese affords another striking example of the value of abstinence from alcohol. It shows that in time the degenerate alcohol-consuming races will be overcome and eliminated by the more temperate races. In view of these facts, more should be done to make known the dangers which threaten us

as individuals and as nations if the use of alcohol is continued in the future as it has been in the past. A united educational campaign should be inaugurated, the aim of which should be to make known to old and young, by lectures in halls and churches, by simple talks to children in our public schools, and by the distribution of suitable literature, the injurious effect of alcohol on body and mind.

The infrequency of *delirium* in beer drinkers is explained by Dr. Gudden, on the ground that such drinkers die before reaching the delirium stage, from heart disease, tuberculosis, or nephritis; or else, on account of the setting in of these diseases the subjects are obliged to abandon or greatly reduce their beer allowance. Dr. Gudden reports two cases of frenzied hallucination in alcoholic subjects, one 30, one 42 years of age, both of whom had drunk beer, rarely whiskey, for a number of years. Both of these patients were a long time in recovering, which the editor thinks is characteristic of this class of beer patients, because it takes beer longer than it does whiskey to bring about the same mental disturbance, and the whole organism becomes more damaged by the large amounts of fluid pumped through it.

Compared with the whiskey drinker, the beer drinker, on account of the greater dilution and the smaller amount of fusel oil, is less liable to injury only so long as the amount of alcohol he gets in his beer does not approach that taken by the whiskey consumer.

Rubin, experimenting with alcohol, chloroform and ether, in the laboratory of Rush Medical College, found that each of these agents prevented the leucocytosis following the injection of cultures; and that the animals to whom either of these three drugs were given died, in every case, while the control animal survived. He also found that these drugs lessened the ability of the leucocytes to take up the germs which they met in the blood.

In 577 epileptics received at the Craig Colony Hospital at Sonoma, New York, during the year of 1907, 259 showed a history of inebriety and alcoholism in the parents, 67 cases indicated insanity, and epilepsy in the parents.

GELSEMININE IN THE MORPHINE HABIT

BY WILLIAM F. WAUGH, M.D., CHICAGO, ILLINOIS

THAT there is not and can not be any such thing as a specific remedy for a disease known as the morphine habit, is well shown by the fact that for every individual case described I have presented a new remedy.

The one thread running through the whole series is elimination. In every case there is first and always need for this process. The bowels are always loaded, the liver engorged with toxins retained in its cells, and every cell of every tissue in the body has its share of toxic elements similarly stored. Whenever the morphine inhibition is raised the cells commence to pour out this store into the blood, where it becomes active; and its action is manifested on the weakest portions of the body. Each new case strengthens my belief in this as the correct view of the pathology of the malady, as explaining the nature of the "withdrawal symptoms," and as pointing to the true therapeutic indications.

Here we encounter the first difficulty—the toxins stored in the body appear to be exceedingly diverse in their nature, and only to a limited extent are the evidences of their activity similar. We find indican in the urine as a rule, we see evidences of the action of mercaptan in the profound melancholy, and certain manifestations such as sneezing, aching, crawling and other paresthesias are generally present, and these are reduced or dissipated by elimination through the bowels and skin. In fact all the manifestations subside in a measure when these and the kidneys are brought up to their highest activity and maintained there. Nevertheless, in no case will this elimination suffice to carry off all the morbid elements and prevent all distress. There always remains a residuum which is manifested by some annoying symptoms.

In the series of cases studied by the writer during the past year these conditions have existed: I have taken

a single case, placed the patient in charge of an experienced and amply qualified nurse, with no other patient about, and given my own attention exclusively to the study of this one case. To the pathologic conditions presenting I have sought to apply the results of studies in drug-action made during the past ten years especially. The method is of course too expensive for ordinary persons, but to those willing and able to pay for such special advantages the results amply justify the cost. I may add that the opportunity for the study of drug-action and of toxin effects likewise justifies the expenditure of my own time.

In cases already reported we have found indications for the administration of such diverse agencies as pilocarpine, physostigmine, solanine, hyosine, maté and always emetine, the best universal inotics of the eliminants we have yet tried. In fact we have settled down to a routine use of emetine, saline laxative and colonic flushing during the early part of the treatment in all cases. One presented conditions demanding the specific influence of veratrine, and several were distinctly benefited by caicin.

The last case was one of the sort we like to treat — a man of strong principles, who had fallen into morphinism by endeavoring to hold up against a dysentery and continue his work as a physician in a country district. Finding himself in the toils, he determined to break away, because he "always despised a liar and a coward, and couldn't stand it to know he was doing a thing he could not do openly." He could not look his wife or child in the face without feeling guilty.

The two principal elements of suffering when he had tried to stop the morphine were sweating and dysentery; so he was given agaricin, gr. 1-12 every two hours, with emetine, gr. 1-6, and a small dose of saline laxative at the same intervals. Every morning the large bowel was irrigated with normal saline solution, comfortably warm. His daily dose of morphine was about twelve grains, and he was given half-grain hypodermics every time he asked for them, the reduction being automatic, as his need for it lessened. It was the sixth day before he ceased to need or request any.

In this case a "crisis" did not occur, and the usual discharge of bile was spread over a week or more. There was a large impaction that gradually broke up, and several times an extra enema was required to relieve headache or muscular aching. Neither sweating nor dysentery occurred. Hyosine occasionally was employed to relieve the nervousness, that indescribable restlessness for which patients usually say acute pain would be a relief, but he could not take doses larger than gr. 1-400 without distress and a tendency to delirium. Once a dose of gr. 1-50 quieted this, but again it aggravated the difficulty. Anyhow, this remedy was not indicated by the symptoms. These, during the worst periods, were fulness of the pulse with determination of blood to the head, temporal arteries full, strong and throbbing, eyes bright, pupils slightly contracted, face flushed, motor unrest and a little tendency to delirium.

This state might have been relieved by veratrine, but the irritability of the large bowel and tendency to profuse sweating led me to select as the specific agent gelseminine. We had never employed this before, but believed it to be more directly indicated than any other remedy at our disposal. He received a hypodermic injection of gr. 1-50 at 10 p. m. and went promptly to sleep, awoke at 2 a. m., and had a similar dose; slept till 5 a. m., and had a third, which held him till morning. During the day following his pulse was nearer normal but still a little too full, and no drooping of the lids occurred to denote toxic action of the gelseminine. This remedy was given when needed during the subsequent days, and it never failed to relieve when indicated by symptoms such as above mentioned. As a rare exception, no special benefit in this case followed the use of calomel.

This man was never deprived of nor refused morphine — he just ceased to need it, and the suffering was relieved by other agencies. The prolonged hot bath proved grateful. When the hypodermics had been discontinued he felt weak, subjectively, though his pulse was still full and a shade too strong; rare 75. The weakness seemed to be located in the muscles, and we gave him for this mactotin, gr. 1-6 every hour till the soreness or weak sensation sub-

sided, which required about six doses a day. The wolfish appetite that follows crises did not appear in this case, and small doses of rhubarb, hydrastis, ipecac, soda and sodium sulphocarbonate were given for two days with good effect. Before the end of his second week this man was fully convalescent.

Now this special point I want to make from this case is, not the use of gelesimine or any other remedy, but the impossibility of now or ever finding any specific remedy for this disease—or any combination of remedies. If you treat these cases you've got to be your own doctor, and do your own prescribing, for each and every case, every day.

Dr. Dietendorf gives a very interesting study of the etiology of this disease noted in 172 cases treated at the Conn. Hospital for Insane. In the causes which seem to be predominant alcohol and syphilis stand first. Among occupations 80 per cent of mechanics and 75 per cent of the masons were addicted to alcohol. 80 per cent of all the houselings and all the persons whose vocation was put down as quartermen, bakers, silversmiths, electricians, hotel keepers, ship carpenters and gardeners were addicted to the excessive use of spirits. Among sailors 60 per cent were alcoholics. Excessive alcoholism was present in over 60 per cent of all cases of paresis. Alcohol existed alone as a cause in 20 per cent of all the cases. Alcohol and syphilis existed together in 24 per cent of all the cases. Alcohol associated with injury and other causes was present in 16 per cent. He observes from a statistical standpoint alcohol occupies a place next to syphilis. While excessive alcoholism was present in over 60 per cent of all the paresis, and this is about 26 per cent above the average. From this it is clear that alcohol is as active a cause as syphilis, producing that toxic condition which vitiates the nutritive energy of the nervous tissues, and produces degenerations of the neurons called paresis.

ALCOHOLIC INSANITY

BY MARK F. TONER, M.D., HANFORD

Read before the San Joaquin Medical Society at Fresno, Cal.

ALCOHOLISM is a term used to denote various pathological phenomena and attendant symptoms, the result of the introduction into the system of excessive amounts of alcohol. As the subject of my paper will indicate, it is the attendant symptoms that I propose to discuss, devoting more particular attention to their medico-legal aspect.

We find that all authors agree that large amounts of alcohol taken into the system within a short period of time cause a train of symptoms, differing very greatly from those produced by lesser amounts over a longer period of time, and that these conditions have a certain number of symptoms peculiar to each; yet some authors class all manifestations under one head—delirium tremens,—while others rush off into divisions and sub-divisions, so numerous and complicated, that it is almost impossible for the vast majority of medical men to acquire anything like a clear conception of the subject. Dr. Curnon (*Quains Med. Dictionary*, 8 Ed.) gives the following classification: "The forms of insanity caused by alcoholism are acute mania and melancholia chronic dementia and oinomania. In the first homicidal impulses, and in the second strong suicidal tendencies due to actual delusions and not mere passive terrors are added to other signs of delirium tremens. The third form 'oinomania' is where the victim breaks out into paroxysms of alcoholic excesses attended with violent, strange or even indecent acts due to uncontrollable impulses. This condition lasts a day or so. These cases usually have some hereditary taint." Though not so complex, this classification can be, I think, simplified into acute and chronic alcoholic insanity, or, for those who wish it, mania-a-potu and delirium tremens. In acute alcoholic insanity we find symptoms that, though not altogether pathognomonic, are, when taken with the history of the case, sufficient for

diagnostic purposes. The onset may be sudden from a comparatively quiet condition, the case may without warning develop a violent homicidal mania, selecting for his victim an entire stranger or perhaps one of his own family, for whom he had always shown great love. But on the other hand he may vent his wild rage upon some one who had previously offended or injured him. In the first and second instances it is not such a difficult matter to decide as to whether or not the assailant is responsible for his act. The law regards the motive as a very important factor in the prosecution of a case and its absence would therefore be of very great importance to the defense. In the above cases entire absence of motive could be shown and would and greatly in proving irresponsibility in the defendant, but on the other hand, where it can be shown that a motive existed, then truly the way of the medical expert becomes a thorny path. The law states very clearly that alcoholic intoxication, voluntary or involuntary, is no excuse for crime and is not good grounds on which to base a defense. Such being the case the defense must obtain all facts connected with the defendant during the whole period of his debauch as to quantity of alcohol consumed, amount of food taken, amount of sleep, as to whether or not those associated with him have noticed at any time any mental aberration; then as to previous character and disposition both when sober and intoxicated; then look for a possible hereditary taint. If you are fortunate you will find here and there some point on which to base a plea of unsound mind, and though the law does not recognize simple intoxication as a cause sufficient to acquit, it does recognize the unsoundness of mind resulting from alcohol as such. I have no doubt that a man may be truly insane and yet be able to distinguish between right and wrong. Yet at the same time should he be laboring under a sense of real or fancied injury, he may so exaggerate the extent of the injury or the amount of humiliation he has sustained that he reaches a degree of frenzy, where the impulse to revenge the wrong becomes absolutely irresistible. This is no sooner accomplished than he may relapse into his former quiet condition. He may or may not have a knowledge of what

occurred during his violent mania. A case of this kind was recently tried in our courts and I am glad to say the jury gave due credit to the expert testimony and decided that the defendant was not responsible for his act. This form of alcoholic insanity is of rare occurrence in constant inebriates. We find a full bounding pulse, strong muscular action and other symptoms of a nervous system overwhelmed by toxic quantities of a stimulant. While in the chronic alcoholic insanity, we have those symptoms, which clearly denote a condition of almost complete nerve exhaustion, a furrowed, tremulous tongue, weak pulse, uncertain gait, general tremors with suicidal mania, hallucinations, delusions, etc., every symptom tending to show a worn-out, exhausted condition of the whole economy, mental and physical, presenting a truly abject picture. The condition of these unfortunates is usually so potent as to render unnecessary expert testimony.

The statistics of Massachusetts of suicides for the last thirty years show that the number has increased from sixty-nine to ninety per million of inhabitants. During this period the statistics of Connecticut show suicides have risen from 63 to 103 per million, a much greater number than in Massachusetts. Some inquiries made concerning the conditions of these persons show that a large per cent were inebriated or persons who in despair for outrageous conduct committed while under the influence of spirits, took their own lives. In a study of twenty cases occurring in Philadelphia twelve were evidently inebriated or persons who had used spirits or drugs to great excess. It is difficult to trace the former history of many of these suicides, but it is evident that alcohol is a very large factor in bringing on conditions of despair and suicide. Thus in a case like the following: a man while intoxicated made his wife unconscious from a blow, and realizing that he had probably killed her, drowned himself and his body was not recovered for a year or so after. This would indicate that alcohol is an active and common cause of suicide.

ON CERTAIN ASPECTS OF THE TOBACCO QUESTION

BY MATTHEW WOODS, M.D., PHILADELPHIA

IT is difficult for a man to write about tobacco with perfect freedom, because of fear of impinging upon the susceptibilities of the many, addicted to and unconsciously hurt by its use.

We are free from adverse criticism and charges of eccentricities of thought, when discussing the harm wrought by the habitual use of opium, chloral, cocaine, n^ophtha, alcohol, or other narcotics, because the people given over to these are in the entrenched minority, their deterioration self-evident, visible as it were to the naked eye; but when we talk of the evil effects of tobacco, especially the utter moral and psychic, rather than physical changes frequently resulting from its use, we encounter the opposition of the vast multitude lulled into pseudo-content or elated into artificial states of morbid superiority and indifference by the very medium we condemn.

And yet, as conservators of public health, if we sound the note of warning at all, it must be in this dangerous direction, since the drug has no *beneficial* use in any medical sense, making it necessary or proper for us to recommend it. Indeed, so worse than useless is it now known to be as a therapeutic agent, that after repeated trials and decades of forbearance, it has at last been ignominiously expelled from the pharmacopœia of every civilized land.

It does not aid digestion. It does not "prevent lean people from getting too stout" or "stout people from getting too lean." It has no "power to preserve the teeth from decay" or to "neutralize the poison of contagion." It is not "a disinfectant." It does not "enable the student to pursue his studies with safety" in the dissecting-room because of some "mysterious power" it exhibits over the morbid odors and vapors of the dead-house" as a recent writer has asserted. It is not "a remedy for asthma, or indigestion, or any other pathologic condition." And,

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indeed, it may be safe to say that it does not do any one of the hundred and one harmlessly beneficent things it is popularly supposed to do, while we positively know that it does at times produce outright, serious disturbances of the heart, nervous system, and mucous membranes, while its use on the part of the patient also limits and diminishes possibilities of recovery in many other diseases.

It does, however, according to the Dispensatory, "when moderately taken, quiet restlessness, calm mental and corporeal inquietude, and produces a state of general languor or repose which has great charms for those habituated to the impression."

To employ tobacco, though, as thus suggested, would be like treating the mere *symptoms*—mental and corporeal inquietude—with a narcotic, that is to say, deadening the *result* of the disease while leaving the cause untouched; a procedure, from the medical viewpoint, generally unjustifiable.

How much better it would be to track the remote origin of these monsters of unrest to their lair and destroy them, for a man whose abnormal condition, periodically or constantly, demands for its amelioration the soporific and lethal effects of a narcotic, whether it be tobacco, opium, or any other, is a man rather who needs a physician to cure him of the pathologic state that thus demands constant drugging.

This is one of the reasons why the tobacco habit is such an inconsistency, especially on the part of medical men.

In the other property of the poison, the production of "repose and languor," lies one of its chief dangers, for in this way it is, that, like morphia, chloral, and other elicitors of narcosis, it gives the user tranquil escape from difficulties and responsibilities that ought to be corrected in some other way. It is easy for a man with a pipe in his mouth to shift his responsibilities to his wife.

The same authority says that "it is a powerful sedative poison, which is locally irritant. In large quantities it gives rise to confusion of the head, vertigo, stupor, faintness, nausea, and general depression of the nervous and circulatory functions." And further,

"When employed in excess, it enfeebles digestion, produces emaciation and general debility, and lays the foundation of serious nervous disorders."

"Amaturoses and color-blindness are occasionally produced by it, and even insanity has been ascribed to chronic tobacco-poisoning."

"In many cases of nervous break-down attributed to overwork, the excessive use of tobacco has certainly been an important etiological factor."

So much for its evil physical effects, and the deterioration it works upon the functions that make for health, as recorded in our national therapeutic standard, the United States Dispensatory.

There are other injuries, however, inflicted upon the victim of the tobacco habit, especially during adolescence, that have not been sufficiently emphasized by medical and educational writers; and yet these work greater harm to the race than those that have to do with mere physical well-being. We have reference to the debauched state of mind, alterations of standards of rectitude and chastity, of the effect that the use of tobacco has upon the morals of growing boys and young men, and evidently also upon those engaged in the business as manufacturers; as is indicated by the fact that tobacco is the only traffic that almost universally uses obscenity as a means of furthering the sale of its wares.

The suggestive and salacious picture is a part of its stock in trade, almost everywhere and in every land. It seems to be inseparably connected with the business as with no other, for you would hardly expect your grocer or baker to conceal pictures of strumpets in tights and otherwise suggestively attired, in your Saturday groceries or among your morning rolls; and I am sure you would be justly indignant if you found that every time your laundry man returned your linen he inserted a naked Sappho, or Salome, or other specimen of erotic nudity in the bosom of your shirt or up its sleeve; and yet this is what the tobacco merchant does when he sends his wares to your sons and mine even when they are mere boys, and he does it, too, with comparative immunity and without effective

protest. This moral chutzness or indifference is one of the peculiar effects that tobacco seems to have upon people and that is not sufficiently emphasized by medical books and by educators; but, indeed, some educators themselves, in these days, are so vitiated by excessive indulgence in the drug,—so continuously in a condition of tobacco narcosis,—that they have even been known to invite young men to come and put themselves under the influence of nicotine in their own malodorous rooms and under their own professorial auspices. The pity of it!

Is there a faculty presiding over continence in the untarnished brain of youth, and does this particular drug paralyze or impair it? This is the question to which I would like to attract the attention of the profession in this particular paper. I have been appalled by the revelations made to me in this direction, and may enlarge upon this aspect of the question when I have more space. "Tobacco! It changes thought into reverie," says Victor Hugo. "It besots the nations," says that prince of observers, Balzac.

Who does not know of some once pure-minded and carefully guarded boy, now anemic and shattered, the willing slave of tobacco, whose first impure thought came to him in an obscene picture contained in a package of cigarettes, and sent by these traffickers unsolicited? They know the relation the one bears to the other and take advantage of it—and when his will was weakened and his sense of moral discrimination clouded by the poison it contained the rest was easy, for, when once fallen from grace, every additional tobacco purchase induced repeated indulgence. The soporific calm and obscene picture are hand and glove.

In our investigations we have learned of scores of young men, utterly depraved, with collections of these suggestive pictures among their chief treasures.

What physician of experience has not encountered mere lads suffering and ruined by venereal diseases, whose first impulse to unchastity was suggested and encouraged

by the vile vender of the tobacco, pectorially adapted to the susceptibility of boys.

Reverence, respect for authority, or social purity seem to a great extent to be banished from the minds of youth addicted to the tobacco vice, and the world is but slowly awakening to the fact that they are kindred vices, for some physiological reason inseparably united. The subject seems too large and important to be discussed in a single paper.

Les Annales Antialcoholiques, published by Dr. Legrain, contain an instructive study of the influence of alcohol in the development of criminal tendencies. Of the 2,493 alcoholic patients treated in the Ville-Evrard asylum near Paris from May 1897 to July 1906, 33 1/2 per cent have shown no destructive or harmful tendencies, their troubles have been mostly delirium, hallucinations or dementia. But 66 2/3 per cent have committed acts that were socially reprehensible. Many of these last had been convicted of crime before they came to the institution. Closer examination of the character of these acts shows that by far the larger proportion were acts of violence, another large proportion were vagrancy and mendacity, and the next considerable class was composed of those who had attempted suicide and other self-injury. These three classes constituted over 54 per cent of the criminality represented. The remainder were minor and eccentric kinds of crime.

The movement against alcoholism in France is meeting with so much opposition from the powerful interests engaged in manufacturing alcoholic liquors from beet sugar, from the distillers of the north and the wine-growers of the midland, the rectifiers, the adulteraters, the manufacturers of absinthe, and all those who make their living by these industries, that attention is being given to stimulation of the use of alcohol in mechanical industries. In fact, the wine-growers of the midland are reported to have made a proposition to the beet-root industry, promising that if the latter would cease to use their products for the manufacture of artificial wine the former would give their assistance to pushing the use of denatured alcohol in the industries.

MENTAL DEFECTS FOLLOWING THE USE OF ALCOHOL.

BY JAMES T. FISHER, M.D.

Professor of Neurology and Lecturer on Diseases of the Mind, College of Physicians and Surgeons, Los Angeles

WERE it not for the fact that the science of medicine is attended with phenomena unique and sometimes inexplicable, presenting problems which defy rational solution, the practice of the healing art would certainly lose its charm.

The alcoholic, for instance, continues to live, move and have his being, manifesting his morbid capabilities under conditions somewhat bizarre, that even the keenest medical minds are constantly compelled to admit their impotence to unravel the pathological mysteries incident to their mental condition. In the wards for the insane at the County Hospital, during the past year, my attention has been directed toward the study of this subject, and at this meeting I will discuss only in part some of the interesting features of the morbid mental effects of alcoholism, viz: Alcoholic Insanity and Dipsomania. That alcohol is a poison, and the most potent factor next to heredity in the causation of insanity, no one in position to judge will deny.

In the examination of the patients it was found that over 80 per cent had a neuropathic heredity. In many instances this fact could not be elicited from the patient, but from some member of the family or the old hospital record sent me from Patton. A history of alcoholism in his immediate or somewhat remote ancestors was the rule. Some few gave no such history, but showed an inheritance of some vice or disease, particularly tuberculosis. They all exhibited an essentially neurotic temperament. A vaso-motor weakness of a greater or less degree was present in nearly all the cases. The continuous ingestion of alcohol had produced changes in the vessel wall and nearly every organ. The early changes show congestion; later this is followed by degeneration, either fatty or hardening,

otherwise known as sclerosis. The action on the nervous system first, last and always is simply that of a poison. Many men offer a great resistance to its action, but nevertheless succumb to its insidious and constant action on the nerve cells in the brain and cord.

It is, however, not to its influence in general that I now make reference, but to permanent and temporary mental defects that we know are of alcoholic origin. It is, indeed, to be much regretted that such a diminished amount of sympathy is accorded these poorfortunates, who, through an absolute paralysis of the will have become such hopeless degenerates.

Alcohol, like other toxic drugs affects our nervous systems very differently and exercises a selective action on our many nerve centres. One prominent and general characteristic of the action of various toxins on the nervous tissues is that they are highly selective poisons. What we are pleased to term idiosyncrasy is in reality an inherited or acquired weakness of certain neurons leading to a condition of lessened resistance, or of increased vulnerability.

In the average man the motor phenomena largely overshadow the other changes, while in some the sensory predominate, and in others the psychic. The mental disorders arising in the life history of the chronic alcoholic are distinct and somewhat pathognomic. These mental troubles present certain types which under ordinary circumstances are fairly easy to recognize. The melancholic type, for instance, does not differ from the melancholia arising from other causes; and on account of his depressive delusions may commit suicide or do violence to others. The alcoholic somnambulist may steal or kill in his abnormal sleep. When the psychotic assumes the type of acute mania, the patient is entirely bereft of reason and may murder whomsoever he comes in contact with. The alcoholic dement may be totally unfit to care for himself or his property and requires the protection of the law. The most common type of insanity due to alcohol is Chronic Alcoholic Delusional Insanity or Alcoholic Paranoia. Unfortunately, the name is somewhat misleading as the patient

is not insane or violent, except at certain periods. The alcoholism is chronic, but the mental derangement appears rather as an outbreak or episode in a case of alcoholism, the patient not having been previously regarded as insane.

Long before the patient exhibits any distinct stigma of alcoholic insanity there appears a gradual lessening of the psychic powers and to some extent a change of character similar to incipient dementia paralytica. There is a loss of mental grasp and a decided impairment of the will and memory. In a very large majority of the cases examined where I could get any corroborative history from the family, the delusions shown by the patients were somewhat similar and quite pathognomic of this form of disease. The history of chronic alcoholism was associated with the delusion of marital infidelity or trouble arising in the marital relations. Just why the delusions should so insistently circle around the sexual organs is not apparent; except that possibly it may be due to a falling sexual power. This false belief seems to occur with great regularity in the mind of the patient. As Spicka has put it, "the combination of the delusions of mutilation of the sexual organs, with the delusion that the patient's food is poisoned, and that his wife is unfaithful to him may be considered as nearly to demonstrate the existence of alcoholic insanity," as any one group in mental pathology can prove anything. Many individuals suffering from this dangerous psychosis are able to suppress or restrain their delusions by mere mental strength, or by the assistance of others, and are thereby able to cope with their delusions and do no harm to the object of their wrath. These patients showing delusions of persecution are of the most dangerous type, and are the perpetrators of the tragic and heinous crimes that we read of in our daily papers. In the early autumn I was consulted by the family of one of our leading professional men, a man of extraordinary mental attainments and standing, and later examined the gentleman on several occasions. He was perfectly rational on all subjects except a growing conviction that his wife was unfaithful to him, and would resort to all sorts of tricks and expedients, some of which were despicable, to verify his suspicions.

He would tell me with tears in his eyes that he never could find anything to support his belief, but that the horrible suspicion was getting stronger and stronger. Nothing I could say or do modified or changed this dangerous delusion. Though none of his family knew it, this man had for the past year been taking over a pint of whiskey every day.

These individuals, possessing faulty nerve supply and ill balanced nervous systems, plus an alcoholic habit, can hardly be expected to go through life with its many disappointments and hardships and reverses, without some nervous or mental crash. Dipsomania is a psychosis of a peculiar nature. It is an impulsive insanity with an hereditary basis. It is a term often misused, and does not necessarily mean a periodical excess in the use of alcohol, as is popularly believed. Its derivation means thirst madness, and the impulses may take another direction, as theft, arson or sexual perversion. The dipsomania may exhibit itself by recourse to morphine, cocaine, or, in fact, to any other drug instead of alcohol. The dipsomaniac may by virtue of his excesses show all the symptoms of the chronic alcoholic and manifest delusions and hallucinations. These are rather the symptoms of his excesses than proof of his having a well defined dipsomania. The dipsomaniac is a neuropathic individual, who, as the result of inherited insufficiency, physical and mental, may become the victim of a series of obsessions, imperative concepts, with the morbid impulses which are their natural outflow. The forensic importance of dipsomania is obviously great, and its study explains many of the most peculiar and startling crimes of which we read in the daily press. Time will not permit more than a passing reference to this feature of the disease. The dipsomaniac may begin his excesses early or late in life, and may go years without having a succeeding attack. The fact that the alcoholic or drug excesses occur at intervals with longer or shorter periods of abstinence has caused it to be classed among the periodic or cyclic insanities. But periodicity is not an essential feature, as a dipsomaniac may have only one or two attacks in a lifetime. In the cases under the writer's

notice the attacks occurred from three to five times during the year, lasting a week to two weeks. All cases of true dipsomania have many characteristic features as to onset and duration and subsequent course. They generally begin with a certain amount of mental depression and some ill defined physical distress. Malaise often is a prominent symptom. There is an irresistible desire for intoxication. The patient realizes fully that to drink once means oblivion for many days or weeks. There is always a keen struggle with the will, a strong desire to resist, but to no avail unless the patient puts himself under restraint.

As in other diseases we find individuals who do not exactly correspond to this type, as the man whose life seems to oscillate between what might be termed hard drinking and periods of comparative sobriety and again attacks of insane alcoholism associated with dipsomania. The point in my paper which I wish to impress is that chronic alcoholism almost invariably leads to moral obliquity and some form of mental derangement. That no man is exempt from this law. That when we hear our patients talk about family troubles, suspicions of wife or husband, in brief, of marital infidelity, coupled with a history of alcohol, we may consider this casual complaint, one of very great importance and value.

The Hartford Retreat for the Insane reports that 15 per cent of all persons admitted during the year are spirit and drug takers, also that this number did not represent all the cases in which alcohol was a contributory or early exciting cause. In many instances an inherited psychosis from inebriate ancestors developed into insanity in later life. Both of these institutions note the increasing prominence of this as a cause of insanity and both deplore the inability to restrain these people a sufficient time to secure permanent results.

THE JOURNAL OF INEBRIETY IS NOT RESPONSIBLE FOR THE OPINIONS AND CONCLUSIONS OF CONTRIBUTORS.

Revelations of Public Sentiment

In 1870 the Society for the Study of Inebriety and Alcohol came into existence for the distinct purpose of proving that inebriety was a disease and that alcohol was a narcotic. Six years later THE JOURNAL OF INEBRIETY appeared, and from that time to the present the great central fact of the poison of alcohol and the diseases which followed from it have been urged. The contempt, condemnation and bitter sneers which followed this work in an indirect way, gave it new force and vigor and attracted attention, and slowly and surely built up a constituency who believed and adopted the same views. Recently a new phase of the subject has appeared and is growing with intense rapidity. It is in reality a great national consciousness of alarm at the presence of alcohol and wide-spread efforts to enact local option and prohibitory laws. This is not the direct result of personal agitation or efforts of societies or special local conditions, but seems to spring from a wide-spread conviction that the evils which come from the toleration of alcohol as a beverage can be controlled and stamped out. There is a consciousness that our present methods of dealing with a pauper inebriate are wrong and destructive, and the theories that alcohol has some value as a food or tonic is a delusion, and from this there is a reaction and turning to some rational methods for relief. In a measure there is a recognition of the facts we have been urging in our journal, that this great army of inebriates rapidly hurrying on to death can be checked, and its frightful disease and mortality stayed. The delusions which have gathered about the use of alcohol and its traffic are being broken up, not by reformers or crusades of tracts, but by the recognition of facts of the injury from alcohol noted in every community. THE JOURNAL OF INEBRIETY has appealed to the doctors for thirty-two years to study the question in their own neighborhoods and offices and prove the theories that have been urged, and this has taken root and is now bearing fruit. The increasing number of persons who cast their ballots for local option and prohibition is evidence of this growth. The de-

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fenders of alcohol and its traffic by their hysterical opposition intensity and promote the very efforts which they seek to overcome. The subsidence of the press, and the dissemination of erroneous statements and misquotations, as facts, and efforts to purchase public sentiment and turn it into other directions, will inevitably end in defeat. Thus it has ever been in the history of the past, whenever superstitious and wrongs were assailed, then retrahatory efforts have been destructive and suicidal to themselves. The public sentiment that we have been trying to build up all these long years, is rapidly materializing into legal measures, for recognition and control. The saloon as a place for the sale of spirits as a beverage must disappear, and alcohol must be judged above theory and sentiment. The inebriate must be cared for, and his malady recognized and treated from the exact conditions present. It is not a question of opinions, or the views of the victims themselves, it is the recognition of law and the great physical forces which control and shape the destiny of every individual. There is a revolution in the air, in the community and in the thoughtful judgment of men and women that is a welcome promise of a new era for the prevention of one of the greatest evils of modern times. THE JOURNAL OF INEBRIETY which has been on the frontiers of this new land for so many years rejoices to see this popular sentiment crystallizing in so many ways into rational and practical measures. It appeals to every reader to join in this great effort, not for the promotion of any one measure, but for the accumulation of the facts and their significance and practical bearing in every community. We want a new campaign of hygienic educational teaching along lines of practical everyday science, and the medical man in every community is fitted by training and experience to carry on this work. THE JOURNAL OF INEBRIETY is a great text-book for the facts and their dissemination, and the Scientific Federation Bureau at Boston, Mass. is the great clearing house for the accumulation and separation of the facts so essential in this great field.

Annual Meeting

The thirty-eighth annual meeting of the Society for the Study of Alcohol and other Narcotics, and the study of

inebriety in general, will be held in the parlors of the Auditorium Hotel at Chicago, Ill., June 2d, 3d, and 4th., 1908, from 9 to 11 A.M.

This old society which was formerly looked down upon as a group of impractical enthusiasts has now been recognized as something more, and has assumed a position in the scientific world in striking contrast to public opinion of the past.

For many years its annual gatherings were confined to a small group of physicians, whose discussions and papers attracted little or no attention in the general profession. Now that alcohol and its effects are becoming great national hygienic topics, the surgeon, the physician and the laboratory men hasten to put themselves on record as advanced students in this field.

For the last ten years among the many papers read before the American Medical Association at its annual meeting, the subject of alcohol has become more and more prominent.

At Boston the section on Hygiene and Sanitary Science gave a whole session to the discussion of the alcoholic subject. At Atlantic City a half dozen papers giving prominence to the danger from alcohol were read. The old time sentiment that anyone who read a paper on alcohol or inebriety was in some way to be classed with the faddists is passing away.

The subject is becoming popular and the number of papers that are offered for our annual meeting at Chicago far exceed that of other years, and indicate a tremendous advance in exact scientific study.

The meeting of the American Medical Association at the same time and place, affords an excellent opportunity to make the profession familiar with the new studies in this field.

The Temperance Lunch organized and carried out last year at Atlantic City was a great success, not only in what the speakers said, but in the crowds of persons who gathered to hear what the leaders of the profession had to say on this subject.

The object of this Lunch is to gather the profession together in an informal way and talk over the subject which we all begin to realize is of equal magnitude to that of tuberculosis. In England, for years every meeting of the British Medical Association is marked by a lunch with general consenses of opinion concerning alcohol and its place as a medicine and beverage.

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This second Lunch meeting will be more prominent than the first, scientifically and socially, and the public are warmly invited to be present. It will be informal and be held in the dining-room of the Auditorium Hotel, Wednesday, June 3d, at 1 P.M.

WORLD'S TEMPERANCE CONGRESS

In the World's Temperance Congress at Saratoga, four separate meetings have been projected in which the scientific aspects of the great alcoholic question will be the central topic of discussion. The first meeting June 18th, will be opened by an address by Dr. Henry O. Marcy of Boston, Mass., ex-president of the American Medical Association, and honorary President of the American Society for the Study of Alcoholism and Inebriety. His topic will be "The Great Pioneer Thinkers in the Medical Profession, and their views Concerning the Alcoholic Question."

Historical Sketches of the Scientific Work and Men for the Last Century will be presented by Drs. Crothers, Mason, Cutter and others.

The second session will be opened by an address by Prof. W. S. Hall of the Northwest University, Chicago, Ill., on The Laboratory Researches and Conclusions concerning Alcohol and the theories of its Food and Stimulating power.

Other papers will be read on this general topic by Drs. MacNicholl, Kress, Patterson and others.

The third session will be opened by an address by Dr. C. H. Hughes, Editor of the *American and Neurologist*, St. Louis, Mo., on the new Doctrines of Brain and Mind Degenerations. Several papers on this general topic will follow this address read by Drs. Parent, Woods, and Marvin.

The fourth session will be addressed by Dr. John Quackenhos, of New York City on the Power of Mental Suggestion in the Treatment of Inebriety. Very interesting papers by practical men along these lines will follow.

The fifth and last section will be addressed by J. H. Kellong of Bartle Creek, Mich. on Nutrition and its Relations to the Alcoholic Problem. A large number of papers have been promised on this special topic. In the interval between these papers memorial exercises at the grave of Dr. Clark will be largely participated in by medical men.

There is every reason to believe that this first great effort to address the Temperance Workers of this country will be a great success. A number of medical men connected with the Army and Civil life have expressed a desire to make the Canteen question a subject of special discussion, and it is expected now that a particular session will be given up to the discussion of this subject.

It is understood that this work is voluntary and is a contribution to the great subject by each speaker, irrespective of any associations and as individual representations of the scientific side of this topic.

The following comparison is most suggestive of an unoccupied field of philanthropic work that will come into great prominence in the great future. In one of the smaller eastern cities there were 42 deaths recorded in the year 1907, from Tuberculosis. A crusade movement began, to prevent the further spread of this disease. Several public meetings were held and unusual attention was directed to isolate poor victims, and break up the favoring conditions. Money was subscribed and a society formed neutralizing every condition that would promote tuberculosis. In this town there are 46 saloons and 640 persons were arrested during the year for drunkenness and petty crimes following. One murder was committed, which cost the county \$1,000 for two trials and conviction. The bills for pauperism and care of the poor were \$22,000 for one year. In the vital statistics 78 cases of pneumonia occurred, 22 of Bright's disease. Two fires took place during the year starting from saloons, with a loss of \$60,000. The W. C. T. U. was the only active temperance body in the town. The churches were indifferent to the subject, and two feeble lodges of Good Templars and Sons of Temperance existed. It was estimated that fully one half of the mortality which was 475 was directly due to the use of spirits, and yet there was no thought of its being prevented, no public alarm and no crusade movement, to break up the sale of spirits, and to educate the public to avoid its use. Tuberculosis was practically insignificant compared with the damage which came from spirit drinking, and yet there was no attention or recognition of its danger.

After Prohibition — What?

Enforcement of the law, but this is not all. The wise man provides for the needs of his family, not only to-day but he has regard for the uncertain tomorrow. The children and homes of to-day may be protected by well enforced prohibition, but what will happen to-morrow? Fifty years ago the open sale of drink was swept out by law from a dozen or more states. The next generation brought a reaction. How can anyone be sure that the present great temperance movement which will place prohibition on the statute books of most of the states in the Union will not react in the years to come. It is a physiological fact that a reform of any kind when crystallized into a law must be sustained by educational work to show its necessity. Therefore every effort should be to train the citizens to a knowledge of alcoholic drinks and their dangerous influence on society. The late Mrs. Hunt recognized this fact in her life-long efforts to have the study of alcohol and the laws of health begun in public schools. On this rests the reasonable hope of permanent abolition of the alcoholic traffic. Education is the most powerful method, a regular course of study, not only in the public schools, but in churches and communities without excitement and without the commotion or strife concerning the nature of alcohol and its influence on individuals will lay the foundation for intelligent efforts to build up a strong temperance community. It is not the study of alcohol alone, but the laws of health and the conditions which develop better manhood and better womanhood. In reality the geography of living and how to obtain greater self control, and live more rational lives is the highest attainment of the race. The foundation is already laid in the laws which make it obligatory to teach temperance truths in the common schools, not the facts concerning alcohol alone, but all the conditions and surroundings which denote better life and clearer knowledge. This is the direction in which the highest development must come. Prohibition is simply a great effort to drive away one source of infection and degeneration of the race. To make this effectual we must have a great crusade movement for practical hygienic science. From the pulpit, from the press from the lecture room, in the home, it must be the study of every man and woman, not only in the

letter, but in the spirit, how to build up and take advantage of the laws, and utilize the forces about us. That is the answer to the question; after prohibition, what? Already seven states have pronounced prohibition laws and twelve more states are undoubtedly on the line to adopt prohibitory statutes during the next two years, and at least 10 more will follow in the very near future. There are 80 large prohibition cities, where laws are enforced more or less, and this is only beginning. Prohibitory laws driving out the saloon are the expressions of an awakened conscience, and a great psychological wave of public opinion towards a better condition of living. This is not a reform movement provoked by agitation; it is something deeper and further back and along with it comes the great necessity for more intelligence, more truth and light, not only concerning alcohol, but the conditions of life which center about it. After prohibition and before prohibition, we must push the crusade of education.

The above stirring appeal appeared in the *School Physiology Journal* from the pen of Miss C. F. Stoddard, the Editor and Secretary of the Scientific Temperance Federation Bureau, of Boston, Mass.

The Connecticut Hospital for the Insane reports that during the last two years nearly one third of all cases admitted gave alcohol as the etiological factor. The Superintendent remarks that it would be an interesting problem to estimate the total loss to the state which the excessive use of alcohol entails and that it would be absurd not to recognize the far reaching and disastrous results which follow from this preventible cause.

Children of inebriates are very queer people. They are often ill-educated, badly disciplined both mentally and physically. Such people not knowing what they want are incapable of getting the best out of life, restless from sheer mental and physical ennui, vacant of thought and purpose, self-indulgent, whining, fretful and pretty much of a nuisance to themselves and everyone about them. They should have had a school master. Often training is more valuable than medical treatment.

REVIEWS

A PSYCHOLOGICAL STUDY OF INSANITY FOR PRACTITIONERS AND STUDENTS. By Dr. E. Mendel. *Authorized Translation, Edited and enlarged by William C. Krauss, \$2.00 net. F. A. Davis Company, Philadelphia.*

Among the number of books on Psychiatry, this outranks all others, particularly in the statements and arrangements of the facts. It is literally a text book and a compend giving the reader outlines and headings, and brief descriptions, leaving to more voluminous works the elaboration and description of the facts. As a book of reference it is of great value. The chapter on intoxication, psychosis, gives an excellent outline of inebriety, morphinism and other drug neurosis. Alcoholic trances are called twilight states, a very figurative term. Many of the ideas that were first published in *The Journal of Inebriety* appear here as the teachings of German authors; altogether it is the most excellent summary of the general facts of this subject. Under the head of organic psychosis are grouped a most suggestive outline of the facts known. The translator has evidently rendered the original clear and diverse of all explanatory and doubtful terms. The supplement contains a guide for the examination of mental and nervous diseases which is very valuable, especially to the general practitioner. Altogether we commend the book as a great addition to the literature of this subject.

THE INTERNAL SECRETIONS AND THE PRINCIPLES OF MEDICINE. By Chas. E. De Sajous, M.D. *Volume Two, Philadelphia: F. A. Davis Company.*

This second volume of Dr. Sajous' work on Internal Secretions carries the subject into the field of exact science. However much one may differ from the conclusions of the author he must recognize that a new field has been opened, and that new problems of tissue respiration and cellular life have been solved. Not only have the functions of the ductless glands been indicated, but the nature of the organic function and the manner in which it is influenced by the

vasso dilator nerves, also the composition of ferments and the physiologic production of sleep, and other obscure problems have been solved in a great part in this book.

He shows that the blood asset of auto-antitoxin is a natural product to antagonize disease, and that the body contains within itself germ killing and poison destroying substances. These can be increased or diminished from a more accurate knowledge of the conditions, and in this way remedies may be made to act in overcoming poison germs.

Instead of medicines being of doubtful value this work is a physiological protest against the skepticism of therapeutists, and proves that drugs rationally administered are of the greatest possible use.

Dr. Sajous and his work promises to take the place among the great advances of the new century and the work so far is a most wonderful contribution to the possibilities of overcoming diseases of all kinds. No review can do justice to it. So many and numerous are the facts which he has brought out.

The author makes it clear that the failure to successfully treat a large number of respiratory, nutritional, and gastro-intestinal diseases, is due to ignorance of the functions of the glands, and the chemo-physiological processes of metabolism. It is very evident that if the facts which he has so clearly outlined in this book, are accepted and put into practical use, that a new revolution in medicine will follow. No book for years has taken up so many new and practical problems as this, and we predict that it will be one of the permanent contributions to literature which will survive the test of time. The publishers have produced a very fine volume with a copious index.

The various Temperance Annuals which are published in Europe and this country have a great value from the statistics which they present, and records of the movements of societies, and the statements of medical men, concerning the alcoholic problem. One of the most interesting is the *Scottish Temperance Annual*, edited by Mr. T. Honeyman. A number of symposiums are presented and careful statements of facts which give the work a statistical value.

The National Temperance Almanac, published in New York City, is another of the most valuable groupings of statistics and facts which give one a very clear idea of the subject in a small compass. Every student of inebriety should keep in touch with the various movements that are now attracting so much attention, and these guide books can be safely relied upon.

MORPHINISM AND NARCOMANIAS FROM OTHER DRUGS, THEIR ETIOLOGY, TREATMENT AND MEDICOLEGAL RELATIONS. By T. D. Crothers, M.D., *Supr. Walnut Lodge Hospital, Inc., Hartford, Conn.*, W. B. Saunders & Co., Publishers, Philadelphia, Pa.

This work has been before the public over five years and has come to be regarded as the most comprehensive and suggestive text-book on this subject which has been published. A new interest has grown up around it from the fact that so many physicians suffer from this disorder, and so many physicians differ concerning the methods of treatment. This work gives general principles rather than special methods of treatment, and hence is very attractive to all readers who wish to know how to lay out a plan of treatment, and adapt it to the circumstances of the case. Its translation into several foreign languages show the esteem which it has held abroad. It is safe to say that no one can treat the morphine cases with a clear comprehension of the conditions unless he has read this book.

K. O. BROWN, M. D.

MILK AND ITS RELATION TO PUBLIC HEALTH. *Bulletin* 41, issued by the *Public Health and Marine Hospital Service, Washington, D. C., Government Printing Office, 1908.*

This volume of over 700 pages is issued from the hygienic laboratory of the Marine Hospital Service and is both exhaustive and scientific as well as an intensely practical study of a subject that concerns every person. Surgeon General Wyman, in charge of the Marine Hospital Service, is entitled to the warmest commendation for developing and publishing such an exhaustive study of the subject. Work like this shows that this department is