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OFFICIAL ORGAN OF THE AMERICAN MEDICAL ASSOCIATION FOR
 THE STUDY OF INEBRIETY AND NARCOTICS

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THE JOURNAL OF INEBRIETY

SUMMER, 1910

THE SCIENTIFIC STUDY OF ALCOHOL AND ALCOHOLISM*

BY DR. T. N. KELYNACK, HON. SECRETARY OF THE SOCIETY
FOR THE STUDY OF ALCOHOL.

HE said he had been asked to present to the medical and other guests a short resume of some of the more important facts and general principles which have resulted from the deliberations of the scientific section of the International Congress on Alcoholism held last week in London. To this Conference held under Royal patronage, recognized by our home and foreign Governments, and having the support of leaders of thought and action in every realm of life's activities, there have come delegates from the ends of the earth, representative not only of Britian beyond the seas, but of the two Americas and almost every civilized country. There had been manifest a desire to hear the best that could be said in favor of alcohol as well as to know the worst respecting its nature, action, and the manifestations of its most subtle and dangerous influence.

The scientific spirit must prevail, and workers of every school be guided through the pathless tracts of social problems by the sure light of science. That new attitude would be everywhere welcomed by true lovers. The "Lancet," in its issue last Saturday, well expressed the feeling of members of the healing art—"The medical profession rejoices at the onward march of the temperance movement. How should it be otherwise when the evils to which over-indulgence in alcoholic drinks can give us are so terribly well known to all its members? And in particular we welcome the spirit of scientific investigation which now bids fair to replace the old tactics of the temperance advocates." Much attention had been devoted to the influence of alcohol on

*Address at the Medical Temperance Breakfast at Belfast, Ireland, Aug., 1909.

the blood and tissues in so far as it altered their resistance to infectious disease and predisposed the body to contagious and other disorders. Professor Lailmen's Norman Kerr lecture, embodying the results of several years' laborious researches, had opened up a new and most promising field for research. By his investigations on the actions of alcohol on the complex means by which the living organisms resist bacterial invasion he arrived at the general conclusion that "alcohol, even in comparatively small doses, exercises a prejudicial effect on the protective mechanism of the human body."

In the case of certain diseases alcoholism and its associated conditions, especially such as non-hygienic habits of life, domestic neglect, and poverty, with its manifold consequences, induces a special proclivity or predisposition to disease. This is particularly the case in regard to such a socio-medical malady as tuberculosis, the great white plague, which you here in Ireland, under the lead of her Excellency the Countess of Aberdeen, are fighting so bravely and wisely. (Applause.) In the discussion on the relation of alcoholism to tuberculosis it was shown that, instead of alcoholism being antagonistic to this disease, as was formerly believed, alcohol acted as a fertilizer of the human soil for the upspringing of the death dealing tuberculous seed.

The opinion of Knopf was quoted that "it is not only well-known that alcoholism predisposes to tuberculosis, but it has been statistically demonstrated that the children of alcoholic parents contract tuberculosis more readily than children of temperate parents." In the crusade against tuberculosis in this Emerald Isle you must unite forces with those who are engaged in the combat with alcoholism if you would conquer the captain of the men of death. (Applause.)

Much has been said and written in recent years regarding the action of alcohol as a racial poison. "Mr. John Burns' Bluebook," as the recently-issued official report on "Public Health and Social conditions" had been not inaply termed, is a worthy record of advancement during the last fifty years. In such important official documents as the "Inter-departmental Committee's Report on Physical Deterioration,"

the epoch-making "Report of the Royal Commission on the Poor-laws and the Relief of Distress," "The Report of the Royal Commission on the Care and Control of the Feeble-minded," and "The Report of the Departmental Committee appointed to inquire into the operation of the laws relating to inebriates and to their detention in reformatories and retreats," incontrovertible evidence has been presented, proving that much of the physical, mental and moral deterioration which we deplore and which weighs down the nation with so heavy a burden of human derelicts and dangerous degenerates is directly or indirectly dependent on alcoholism. (Hear, hear.) At the recent congress valuable scientific communications were presented which supported this indisputable contention. Students of industrial conditions will do well to note that alcohol tends to increase the risks incident to various occupations. Thus the toxic action of such a poison as lead is increased by alcohol. Professor Lailmen, who for years has been studying the effects of small doses of alcohol on the offspring of animals, had extended his observation to the progeny of human beings. He had shown that "alcohol, although consumed in small quantities, had an injurious influence upon human offsprings."

Dr. F. W. Molt had shown that "to the feeble-minded, the epileptic, the potentially insane, and all those who, from inherent or acquired causes, lack highest control, alcohol acts as a poison, even in moderate quantities." Dr. Clouston, in a suggestive paper on "The Resistive Power of the Human Brain Against Alcohol and its Limitations," showed that alcohol was especially dangerous to the developing brain of the child and adolescent and to the nervous system of women. The teaching, and indeed the unanimous opinion of the medical profession, endorsed the instruction so emphatically expressed in the English Board of Education's recently-issued admirable "Syllabus of Lessons on 'Temperance' for Scholars Attending Public Elementary Schools:"—"Children and young people ought never to take alcoholic beverages in any circumstances unless by a doctor's express order." (Applause.) The making and marring of the inebriate still goes on unchecked. We are

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slow to realize what a menace the inebriate is to the State. The opinion of Dr. R. Welsh Braithwaite, H. M., inspector under the Inebriates Acts, expressed in his thoughtful paper on "Legislation for Inebriates," deserves to be pondered by physicians and all patriots.

"The inebriate is either a potential criminal, a burden upon public funds, a danger to himself and others, or a cause of distress, terror, scandal, or nuisance to his family and those with whom he associates. Every inebriate, moreover, by precept, example, neglect of children, and possibly by direct procreation of his species, is contributing to the supply, reproducing his like to the detriment of national welfare in years to come. Interference with the liberty of the inebriates so that the persons and liberty of others may be safeguarded, is therefore justified, and to carry this out legislation, amply protected against misapplication, is needed. Any law for inebriates must be elastic enough to permit the application of the mildest possible measures, and at the same time of stronger powers when the milder have proved ineffectual."

Evidence presented to the Congress by Dr. Holitscher showed that in other countries as well as our own the use of alcohol as a medicinal agent is being considerably restricted. You here in Ireland lay great store by your whisky, and I understand do not wholly despise the spirit which comes across the water from Scotland. (Laughter.) Physicians in all lands are accustomed to include in the national pharmacopoeias drugs likely to be helpful in the prevention and arrest of disease, but, strange to say, as Dr. Hunt pointed out at the recent Congress, whisky has a place in only two of the pharmacopoeias of the world—that of Greece and the United States. The reason of this I must leave for you to decide. My time is gone but I have only been able to touch on some of the most salient points raised during the scientific discussions of the Congress. Many facts and suggestions of great value were presented, and will bear fruit in many widely separated lands.

The great gathering of representatives of from out every civilized land has at last shown to us slow-moving insular Britishers that the progressive nations of the earth are awaking to the importance of eliminating alcoholism and all like agencies which handicap a people in the ever-

increasing strenuous struggle for existence. We have recently been taking stock of our national powers. We have been thinking and speaking in terms of Dreadnoughts, but the scientist warns us that after all 'tis the human unit that counts most—the man behind the gun, the woman in the home, the child at the back of the nation. "Let knowledge grow from more to more" may well be the motto of every scientist and social reformer engaged in the investigation of alcoholism and the elimination of the drink curse. Every form of honest attempt to solve the perplexities of the drink problem is to be welcomed. By the work of the recent Congress and such gatherings as this real advancement is made in our perception of the causes and conditions of alcoholism, which shall finally enable us to arrest a malady which at present is threatening the very existence of the nation.

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THE POTENTIALITY OF HABIT.*

C. D. MILLS, M. D., MARYSVILLE.

MY object in writing this paper is to elaborate and emphasize what I presented to this Association at its 1904 meeting under the title "Habit." The high estimate I then placed upon the subject has progressively increased with added thought and inquiry. Now my interest has become so intense that I am unable to appreciate how any one can be indifferent to its theoretical and practical importance. For our purpose the subject may be treated under two heads—"Habit in its comprehensive sense; then, as applied to the various addictions, closing with practical applications based upon the ideas suggested by our subject."

Habit is from *habitus*, and it from *habeo*, meaning to have or to possess; hence, the definition dress; but psychologically habit is not a chattel that can be bartered for or exchanged or put on like an ordinary possession, but it is an incorporate part of ourselves, an innate or acquired characteristic not only of our bodies as a whole, as summated in the cerebral cortex, but also of each integral part of which our bodies are composed.

As the nervous system as an entirety is the relating and unifying agent of our body politic, and the cerebrum its chief executive, any discussion of habit necessarily implies a consideration of the nervous system. The law of habit is based upon the plasticity of the nervous system, whereby it is readily adapted to new conditions, and another closely allied vital principle that an organism tends to repeat what it has already done. Baldwin says that habit expresses the tendency of an organism to secure and to retain its vital stimulations. As a natural inference he continues: Habit begins before the movement which illustrates it actually takes place. According to James, the laws of nature are nothing but the immutable habits which the different elementary sorts of matter follow in their action and re-

*Read before the Ohio State Medical Association.

action upon each other.

The fixed law which combines H and O in such proportions as to form water is a habit of these elements before the union of these elements takes place. The habits of the simpler material forms are definite and unchangeable. The chemist predicts with unerring exactness the results of his combinations. Moving a step upward in the vegetable kingdom, we have much less definite habit phenomena. While we can foretell with accuracy the kind of rose and lily, we cannot approximately predetermine the multitudinous varieties in form. Then, when we advance to the dignity of the animal kingdom, the possibilities of habit phenomena are infinite. The complexity multiplies when we arrive at the human organism where habits are innumerable in possibilities. Then, when we consider the self and not-self relationships, our minds become dizzy, even with consideration.

We are born with many ready-made nervous mechanisms that provide invariable motor phenomena; for example, those which have to do with our somatic lives. Under normal stimulations the gastric mucous membrane always furnishes its peculiar juice, the liver always secretes bile, the kidneys invariably excrete urine. As a further illustration, the babe is born with a ready-made adapted movement necessary in taking its food. This is probably one of the recapitulations of our phyllogeny that has no exception in our ontogeny and is in harmony with the idea that habit expresses the tendency of the organism to exercise and retain its vital stimulations. These activities, being presided over by the cord and lower brain levels, is in perfect accord with the statement that the child's brain is a blank page, upon which are to be inscribed the impressions and transactions of a life. Every sense impression is received and recorded without discriminating judgment.

That an idea tends at once to realize itself in action has beautiful exemplification in the child. The middle factor in the sense, thought, will, act, is not well developed or is not developed at all. The afferent impulse is followed directly by a corresponding motor response. The child accepts unreservedly suggestions from those near it. Every ingoing sense impression is accepted as a reality and results

in a corresponding motor activity. It has a suggestible consciousness, not because the ordinary criteria of belief are in abeyance, but because it has no criteria of belief that enables it to compare present sense impressions with those previously received and fixed in the nervous system in the form of memory. "Consciousness at this period finds all presentations of equal value in the terms of uncritical reality." (Baldwin.)

As we have already intimated, a child's endowments are largely possibilities. It has many tendencies for which its nervous system possesses no ready-made arrangements. Heredity determines these tendencies, and environment what these new tendencies shall be. Some of these tendencies are ready-made mechanisms in our remote progenitors; for example, the ability to walk which characterizes many of the lower animals at birth. While the human infant cannot walk at birth, there is an inborn potentiality that manifests itself at periods varying from the eighth to the fifteenth month. Baldwin, in observation upon his own children, found that by suspending them by supporting them under the arms, so their feet would just touch the floor, that they would move their legs rhythmically before they began to walk.

The child must learn everything in the school of experience. The mother's face and lullaby, the nurse and nursery, are first recorded on the page of memory. It soon acquires the simpler facts of experience. Attracted by the light and color of the candle flame, it reaches out its hand and grasps it and suffers through the want of knowledge. At the second sight of the candle flame, the same impression is conveyed to the brain, but its previous experience causes it to withdraw its hand. Thus, on and on through life, the mental processes become more and more complex, until are made possible the most profound judgments and highest capabilities for good and evil.

Except hypnotism, no state demonstrates the motor force of an idea as does childhood. During this period it is eminently true that the nervous system forms itself in accordance with the mode in which it is habitually exercised; hence, now is the period for habit formation. Now it is of vital importance that the child's training should

be most thoughtfully and conscientiously directed. Home laws should be as habitual and unchangeable as the laws of nature. It is not so important that the child be taught the *laws* of habit as that home and school government should be faithfully executed in harmony with those of laws. Maturity should not be burdened with the simpler ethical problems that childhood should already have made habitual. What a calamity to themselves and society that children are sent out into the world with no definite habits but those of indecision, like a rudderless craft on a wild sea, unstable, unresisting, helpless, all because their early training has not built their nervous systems into bulwarks of defense. (James.) At this point I want to emphasize what I said to you before concerning one of my observations in habit cases. In securing their histories, we not only inquire into the family history with special reference to the question of nervous stability, degree of education, religion, duration of habit and complicating diseases, but also this: "What was your early home life in regard to discipline?" And I have not been surprised to learn that a large number of these unfortunates have never known the practical meaning of the word "law." Either there had been no discipline at all, or infractions of law were met with no condemnation today and with unreasonable and unjust arraignment tomorrow. It is unfortunate that the home that furnishes such a conflicting, unstable and vacillating authority should transmit nervous systems peculiarly susceptible to the acquirement of just such habits. Viewed superficially we naturally conclude that the rigid enforcement of law interferes with the development of a strong individuality for each act of obedience is in all probability in violation of the desires of the habitual self, but it is to be remembered that growth comes by resisting. We must learn to do the things we do not want to do. Strong, vigorous manhood does not come by the way of least resistance. Further, we are assuming a home and school where the administrations are in strict conformity with the parental and pedagogic exemplifications. The child soon learns by observation and imitation that the greatest pleasure comes from following the line of action that has daily idealization in

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its presence, and, again, the enforced acquirement of to-day is the habitual self of tomorrow.

So it is not as paradoxical as it seems that genuine growth and a healthy morality depends upon the "habit of violating habits." "We must acquire the habit of acting, not the habit of action." (Baldwin.) That is, new conditions must be met with volitional acts and not with habitual or passive action. "An organism accommodates itself or learns new adjustments simply by exercising the movements it already has—that is, its habits in a heightened or excessive way." (Baldwin.) The freshet not only enlarges the original channel, but it also establishes new channels, which are branches of the original stream. These new water courses are then original channels, in which other new streams have their head. With an unusual rainfall a new water course may even supplant the old channel. So in the nervous system, by reason of heightened or excessive stimulation, a new thought stream is established by an overflow of the old channel that may closely resemble the original thought stream. Sudden emotion or unexpected excessive afferent impulses of any kind may start entirely new currents of molecular activities, leaving the old channels as lines of least resistance, that may be readily reoccupied when conditions are re-established that stood in casual relation to their original formation.

We must admit that habit implies a fixedness of ideas that under certain conditions does interfere with progress. The narrowness of view and fixedness of ideas which a circumscribed environment and a corresponding limitation of opportunities induces is a fact familiar to all. The positive convictions of the familiar country store loafer who stands in the attitude of would-be oracle to all his neighborhood, the habitual liar who tells the same story so often he believes it himself, the tenacity with which those who assume a broader knowledge, cling to their own church and their own political party are examples of the limitations with which habit surrounds us.

The miser deserves our sympathy rather than our censure who has amassed a fortune by dint of industry and rigid economy. Holding on to his money has become habitual.

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The insistent cry of wretchedness and poverty and well presented idealistic sentiments may stir within him a considerable amount of feeling, but never so intense as to lead him to surrender the dollar upon which his undivided, uninterrupted attention has been centered for years and years. One continual round of pleasure is not in fact pleasurable. The daily observation of a delightful landscape is not a continuous thing of beauty, simply because the psychic centers are not so intensely stimulated after repeated sensory impulses. The housewife, hidden away in a secluded country district, whose work is confined to a line of activities that by monotonous repetition have become habitual and that are not necessarily associated with thought, feeling or consciousness, furnishes an excellent prospect as a recruit for a state hospital for the insane.

Our modern industrial system, with its division of labor, is a guarantee of wealth to the capitalists, but is ruinous to the happiness and mental growth of the laborer. Idea motor reflexes cannot be safely confined to one line of activity. Not only should all the sensory avenues of approach to the great central ganglia be in the best possible condition, but sight and hearing and smell and taste and touch should bring us in association with the very best of life. "Intelligence is the associative valuation of disparate memory pictures," says Kraft Ebing. Therefore, the degree of intelligence depends upon the character, number and association of memory pictures. These memory pictures stand for our habitual selves. We do many things simply because we have done that same thing before. We walk and talk and eat and drink and think in a certain way to-day simply because we have been doing these same things in the same way in days of the past. We unconsciously do many of the simpler acts of life each succeeding day in the same way, even to the matter of drawing on our coat and putting on our shoes; in fact, every act of dressing is practically an exact reproduction of the days of the past. A pain that is experienced once on account of some exciting cause has a tendency to continue after the cause of excitation has been removed. That an organism has a tendency to repeat what it has already done has illustration in habit epilepsy, of which Spratting says: "It is a type

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of the disease due at first to a focal irritation, central or peripheral, which, being removed, creates a distinct pathologic basis for existence, simply through the effects of the convulsions often repeated. So it is that simple convulsions may in time pass into genuine epilepsy."

Educationally, habit is advantageous because it removes from the field of consciousness attention the acquirements of the past. Things we know best place no burden upon consciousness. Our alphabet and multiplication table form no part of the mental effort necessary in the solution of a problem in language or science. The musician cannot rightfully assume the name "artist" nor exhibit that feeling of repose that affords the listener such exquisite pleasure who has not made technic an habitual part of himself. "Our environment is an unappropriated part of ourselves." A knowledge of our self and not-self relationships gives not only an intelligent basis for unselfishness, but also intensifies the importance of proper environment.

I can only interpret myself in terms of yourself, and I can only interpret yourself, in terms of myself. Therefore, all of myself and yourself is not incorporate within our own selves. We are both consciously and unconsciously taking on the characteristics of what surrounds us. Our social, political and religious atmosphere is ready made for us and is absolutely destined to become parts of ourself. Environment is a necessity, not a matter of choice. We are insufficient within ourselves. The unappropriated parts of ourselves must be appropriated or our existence would very soon terminate. The perpetuation of our lives depends upon regular systematic cycles of waste and supply. Whenever we violate these laws of our being, death results. As long as we continue to grow, act, think, speak, work or play or perform any bodily function requiring expenditure of energy, there is a constant simultaneous and proportional drain upon our surroundings.

When that Utopian day arrives when all parents and teachers know the fundamental principles of life in such a way as to give them practical application, the doctor's business will be greatly curtailed and the world's sum total of happiness greatly augmented. We owe it to our children to surround them as far as it is within our

power with the conditions that will furnish them with the best chance possible. The child's susceptibility to its environment is manifested very early. The babe must be rocked or patted or be held in a certain position or hear the mother's voice or lullaby before it will go to sleep, simply because these various methods have been previously employed. The child acts, walks and takes on the various mannerisms of its parents, not through the influence of heredity alone, but through the power of imitation.

College and university training will not pass at par value in the social and business marts of the world on account of bad grammar and careless and incorrect pronunciations that are the unfortunate heritage of early childhood environment. It is almost impossible for anyone to rise above the social conditions of which they are a part. Even if a rare genius does attain to greater heights; notwithstanding, he will take on the coloring of the community in which he lives. It has been well said that no impression, whether good or bad, is in the strictest literalness ever wiped out. Today is inseparably and vitally connected with every other day of our lives. Not what is to be will be, but what is is the result of what has been. This adds importance and dignity to each day. No one can be completely divorced from the past. Every violation of a physical or moral law brings with it a *locus minoris resistentia* that will be the source of our undoing when a too great element of stress overtakes us.

The wild oats idea is fallacious and unscientific, and any physician who gives it credence is guilty of ignorance or viciousness. My thought is the furthest removed from that of a boy growing up a goody-goody nonentity; in fact, I believe every reasonable form of athletics or legitimate industry should be encouraged. Muscle development means mind development, and I know of no better drill in honesty, self-control, alertness, meeting emergencies, in cultivating the value of the individual, than arrives from contests on the athletic field. A boy will be busy in some way, and if his time is occupied by work or healthful sport and nagging at him with don't-don't-don't to the point of being driven to desperation is refrained from

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his prospects for usefulness will be greatly increased. Stanley Hall says that character is a complex of motor habits; hence to have a stable and a dependable character, adapted to a courageous and successful meeting of all conditions, the centers for these afferent impulses must be widely distributed.

The limits of this paper restricts us to only a cursory review of the various addictions, and it is rather from a psychological point of view that we are now to study them. Primarily, then, I am in perfect accord with Paton when he says, "The addiction to alcohol is a symptom of a functionally unstable nervous system." The typical dipsomaniac is to all intents and purposes a maniac before he takes a drink. It is a very common thing for such persons to tell you that their first drink brought to them a feeling of sedation that they never realized before. What the relation of the internal secretions or the great problem of auto-intoxication has to do with the bringing about of subsequent impulses to indulgence it is not now our province to discuss, but from our point of view it is the memory of the transient period of quiescence that leads them to take chances on the subsequent mental and physical anguish for the sake of temporary period of psychic anesthesia.

The courts are coming to appreciate more and more that these individuals are insane and not legally or morally responsible. This is a question that must be handled with extreme caution, as the designing criminal might become intoxicated for the purpose of protecting himself from the penalty of the law. There is all the difference in the world between the class of drinkers to which we now refer, who drink because they are abnormal, and are more abnormal because they drink, and those who are abnormal because they drink. The latter class begins drinking in a social and very moderate way, until they pass from the period in which they are making a habit to the place where the habit makes them. No one who takes his first drink thinks he is to be a drunkard. What percentage of persons have the power to keep the habit in perfect subjection I cannot answer. To all intents and purposes it is dangerous for anyone to take the chances.

Apart from the personal hazard in view of what we have learned of the self and not-self relationships and their practical unity, the personal liberty idea is a delusion and a snare. I think it requires no argument, further than the import of what we are now presenting, to enforce the opinion that no physician, and particularly the medical press, has a right to stand for measures that are in open violation of their scientific knowledge. My experience with physicians who are either alcoholics or morphine users, or both, is that they prescribe both with reckless indiscrimination. One only needs to have a professional relationship with the alcohol and drug habitues to know that these habits are imperious masters. It is only this intimacy that can furnish any adequate conception of the mental and moral degeneracy that is a certain sequel of drink and drugs.

The potentiality of the habit depends more upon the duration and continuousness than upon the quantity of the intoxicant. While many of these habit cases are cured, it is physiologically and psychologically impossible that these patients can ever be what they would have been had it not been for their dissipation. One hundred and twenty-five consecutive autopsies of alcoholics made at Bellevue Hospital showed not one normal heart. This is only a slight indication of the disastrous pathology of alcohol, and even if no appreciable damage has been done to the physical organism, no kind of treatment, however well advised and long continued, can successfully blot out the page of memory. It is greatly to be desired that we get away from the short time treatment of these unfortunates.

The idea that a habit that has been the acquirement of years and that has become a part of the very self can be removed in four or six or ten weeks is a deplorable mistake that has taken hold upon the medical profession through the influence of the semi-professional cures that occupied so prominent a place in the public mind a few years ago. So universally has this idea pervaded the mind of the average laymen that they look upon the institution as in it for graft that insists upon a long time treatment; and, as for the patient, his judgment is not worthy of consideration. There is an exaggerated ego that is a prominent characteristic

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of practically every alcoholic, and just as soon as they are relieved from the acute symptoms of their last debauch they have a supreme confidence in their ability to forever afterwards refrain from drinking, which they express with assurance and elation that would make the saints in heaven seem like pygmies in comparison. This confidence amounts to a genuine delusion. This state of mind, together with a moral degeneracy which is in a greater or lesser degree always a concomitant, are among the symptoms of this class of cases that taxes the ingenuity and the patience of the physician and the tactful resourcefulness of both physician and nurse.

I am thoroughly convinced that the State of Ohio should enact a law similar to that which is now on the statute books of some of the Eastern states, empowering the proper authorities to commit such alcoholics and drug habitues as are judged to be irresponsible by the evidence of friends and at least two physicians to either a state inebriate hospital or to a private institution for those who prefer it, such private institutions to be responsible to the state for their faithfulness and honesty. These unfortunates need protection against their own impulses, and the public needs protection against them. There is a gradual evolution of sympathy and compassion for the alcoholic, but the masses still look upon them as vicious violators of the state and moral law. With the efficiently organized medical profession of to-day I believe the time will soon come when this subject will receive the attention from our legislators which its merits demand.

THE PRACTICAL STUDY AND TREATMENT OF INEBRIETY.

BY GEORGE E. PETTEY, M. D., MEMPHIS, TENN.

THE question is frequently asked: "What can be done by treatment for those who are enslaved by alcoholic liquors—can they be cured?" To this question both an affirmative and a negative answer can be made, and each would be correct when referring to a certain class of cases. Chronic alcoholism is not only a disease itself, but in many instances it springs from other diseases. These diseases may be either physical or mental. To cure any disease the cause must be removed. In some cases of alcoholism this can be done by treatment, while in others it cannot; then the question naturally arises, what class is curable and what is not? In endeavoring to answer this question it is necessary to consider the type of the addiction as well as the influence which led to its formation. In doing this it is well to first divide the drinkers into two classes, the regular drinkers and the periodical drinkers, then to study very carefully the influences and causes that led to the formation of the addiction. It will be found in many instances that these differ materially in the case of the regular drinker from those of the periodical drinker.

Probably 80 per cent. of all persons who drink whisky regularly, day by day and week by week, got into the habit inadvertently, unintentionally. They were persons of sound bodies and minds, good habits and high aims, who began to use liquors in a social way, or probably with the idea that their effects would protect them from malaria or other prevalent disease. They continued this course without mature thought as to its consequences and certainly without any purpose to go to excess or dissipate in any way. The use of a stimulant gradually grew more frequent, finally leading to the daily consumption of considerable quantities of some alcoholic beverage. For a time the effects of this beverage seemed to improve the health, to impart greater mental and physical vigor, and to generally promote the

well being of the subject, but these benefits were more apparent than real, and all this time there was being created in the system a demand for the effects of alcohol, and this progressed until the user felt more comfortable when under the influence of the stimulant than when not. Thus, gradually, and almost imperceptibly, the demand for the stimulant grew, and the victim became more and more dependent upon it, until larger and larger quantities were required to meet this demand. The daily consumption of these considerable quantities of liquor necessarily brought on such changes in the system as to create an imperative demand for the continuation of their effects. After reaching this stage the victim felt that he could not begin his day's work without his morning drink; there was a degree of lassitude and lack of vigor that he was totally unable to throw off except by the aid of a stimulant. As these disorders progressed, one drink was not sufficient to give him the necessary support, and two, three, or more were taken in close succession, and this bracing process was continued throughout the day and from day to day and from week to week. The effects of this prolonged and free use of alcohol wrought serious impairment of the digestive organs; the appetite became variable or absent altogether unless freshly stimulated by an extra drink, and if, at this or any subsequent stage the victim made an effort to discontinue drinking, such a state of nervousness would result as to drive him to resume the stimulant. The entire system had by this time become so thoroughly saturated with toxic matter, of such an extremely irritating kind, that a condition of intolerable nervousness would arise whenever the system was allowed to get out from under the *now sedative* influence of liquor, and no matter how acutely conscious the victim may become to his slavery or how heroically he struggles to throw off the yoke he finds himself unable to do so by his own efforts. The prolonged free use of alcoholic stimulants brings about such disorders of the system as to lead even the best of men, when in its grasp, to continue to seek relief from the suffering incident to these disorders by increasing the quantity of alcohol consumed. Whether that course is imperatively necessary

or not, it appeals to them as being the one readily available and efficient remedy, the panacea for every ill, and it is so used.

A majority of all habitual users of alcohol in this country belong to this class, and many of them would gladly quit drinking if they could ever get the poison out of their systems, and reach a condition in which they could live in comfort without it, but they seem never to be able to do this. They never get entirely sober, and their systems are never clear from the products of tissue waste. They are always in an extremely toxic condition, and are only comfortable when the paralyzing effects of alcohol blunt their sensibilities to the presence of this poison. In habitués of this class the addiction has a purely physical basis, due to the effects of alcohol alone, a combined chronic autotoxæmia, and drug toxæmia, and as both of these elements are susceptible of being removed by treatment, cases of this class are curable.

In the second division I would place a small per cent. of regular drinkers who were born with, or who from disease in early life acquired a defective physique and an unbalanced nervous system, persons who, because of such defects, have never been normal either in nervous or physical organization. When such persons, in seeking something to overcome their habitual discomfort, experience the effects of alcohol they readily fall a victim to its seductive influences. For a time this stimulant seems to be the one thing lacking in their lives; it overcomes that discordant nervous condition which they so much dread, and they feel that they have found a panacea for all their ills, but this relief is only temporary. The demand for the effects of alcohol grows very rapidly in such cases, and its continuous use brings on the same pathological conditions that it does in others. The system soon becomes extremely toxic, and this irritating matter greatly aggravates their former nervousness, so that the two conditions together now make such an imperative demand for liquor that the victim cannot in any wise resist it, and he keeps himself constantly saturated with alcohol—in fact, after reaching this stage he must do so to enjoy the least degree of comfort. In this class of cases but little can be expected from treatment, unless it is found that the

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original discordant nervous element can also be removed by treatment. When these causative conditions are found to be such as to be amenable to treatment, and the treatment for the addiction embraces not only such treatment as would be necessary to give relief in an ordinary case, but such other well also directed measures as may be required to restore the primarily unbalanced nervous system to a normal condition, much benefit may be derived from treatment even in these unpromising cases, provided a reasonable degree of moral fibre was originally present.

In a third division I would place another, but relatively small, proportion of regular drinkers. To this class belong those who drink as a pure dissipation, persons who are deficient in moral fibre, lacking in purpose, supremely selfish, willing to gratify the present moment at any cost to themselves or others, without a normal sense of responsibility; those who are simply drifting through the world without rudder, compass, or objective point. These defective traits of character may be due either to inherited tendencies or to early environment. Such persons as these drink because they prefer to do so, and would return to the use of liquor even if some one took them up and gave their systems a thorough renovating and removed all physical necessity for the stimulant. In cases of this class more than human agency would be necessary to effect a cure. Not only would it be necessary to renovate their bodies and put them in normal condition, but it would be necessary to effect a most radical change in their moral natures, a complete transformation of their purposes in life. Fortunately only a small proportion of the regular drinkers belong to this class; the great majority are of the class first described in this paper. They are men or boys of good families, of excellent traits of character, of high aims, chivalrous, generous to a fault, truthful, and honest—in fact, men with whom no fault can be found except this one weakness, and that due to the lamentable fact that they have drifted into the clutches of this monster. Victims of this class only continue to drink because their will-power and self-control have been so undermined by the effects of alcohol that they cannot extricate themselves from its clutches; they cannot retrace

their steps. When such men as these are once freed from the domination of alcohol and are put in a normal condition they will maintain themselves and almost invariably remain permanently free from its thralldom.

Failure to permanently benefit such men as are described in the second and third division should not be allowed to discourage us or to make us less enthusiastic in our efforts to rescue the more numerous and really noble army of enslaved ones.

Periodical drinkers should be divided into four classes, and probably some of these classes should be still further subdivided in order to get a clear conception of each class. There are at least four sets of causes that lead to periodical drinking among men who are entirely sober between such sprees. These should be enumerated as: Dipsomania, real and symptomatic; moral cowardice; environment with lack of stability of character; environment with an ever present but resisted appetite.

Dipsomania.—Dipsomania is defined to be “an uncontrollable desire for strong drink,” but this term should be restricted to those cases in which this desire or impulse springs from a real mental disorder, a true mania, and should not be applied to those cases where the desire for drink only becomes uncontrollable when it is excited or intensified by some general physical derangement, or where the desire is continuous. A better definition would be “periodical insanity taking the form of an uncontrollable desire for strong drink.” Real dipsomania is very rare, but that it does exist cannot be denied. Most writers leave the impression that such attacks are due entirely to some obscure structural brain lesion or inherited mental defect. It is doubtless true that there are persons in whom a real mania of this type occurs because of an inherited mental bias, or perverted nervous organization independently of the general physical condition, but, in my judgment, such cases are extremely rare. In a large majority of cases which are thus classified the attack only occurs when excited by an added general systemic derangement, an acute autotoxæmia. The irritating effects of this toxic matter serves as the exciting cause of the outbreak, and in most instances these attacks

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may be warded off or prevented altogether by keeping the system free from toxic matter. Where outbreaks of this kind occur as the result of an inherited or acquired mental defect, entirely independent of the physical condition, treatment cannot be expected to be of permanent benefit, but in cases in which such attacks only occur when an exciting cause, such as autotoxaemia, contributes its influence, then treatment will be of real benefit, provided it embraces such instruction in the manner of living as to enable the victim to avoid the occurrence of such toxic states.

Another and probably the most hopeless class of periodical drinkers are those who drink as an expression of moral cowardice. These are men who have no particular craving or appetite for liquor, and who will say at almost any time that they do not particularly care for the taste or primary effects of alcoholic drinks, but who have learned from experience that the effects of alcohol will bring them surcease of cares and worries which they have not the moral courage to take up and bear, and from time to time they seek forgetfulness in the effects of liquor. A man of this class will quarrel with a friend or his wife and go off and get drunk for spite, or he may have some business experience which to other men would be trivial, but he, not having the moral courage to face it, runs from it and seeks oblivion in the effects of alcohol. Little if any good can come from treatment of patients of this class. Therapeutic measures cannot remove these incumbrances from their lives, or impart to them that degree of moral courage that is needed to fit them to fight the battles of life in the open and to resist the adverse current which drifts them from a safe and sober mooring.

Instability of character with bad environment.—In another class of periodical drinkers the sprees are due to "bad environment coupled with lack of stability of character." These are the social drinkers of the type who lose control of themselves as soon as one drink is taken. Many of these are men of estimable qualities, amiable, chivalrous, good hearted, kind, and in every way lovable men, but they are deficient in self-control, fixed purposes, and positive traits of character. They are good natured fellows who drift

with the current and allow others to dictate their course. These men, when away from the drinking associates and out of temptation, remain entirely sober, and would not think of going alone and deliberately beginning to drink; they have no craving or appetite for liquor that they are not fully able to control, but they are negative characters, and when thrown with drinking associates they do as others do. They are of the type of social drinkers who lose control as soon as they are slightly under the influence of alcohol. When once started, such men continue to drink until some one takes control of them and gets them out of the adverse current. Then a period of entire sobriety follows, only to end in another spree when they get into the current which drifts in that direction.

Treatment in such cases can only be successful when followed by an entire change of environment. The old associates must not only be given up, but the one seeking to reform his life must be thrown with sober and moral people whose positive influence for good over him will be sufficiently strong to enable him to stand firmly in his new position, notwithstanding his defective traits of character.

Bad environment with an ever present but resisted appetite.— Another type of periodical drinkers are those who have an inherited or acquired thirst or craving for liquor which is ever present with them, but who, from strong convictions, contend against this weakness with a courage that is in many cases really heroic, and, under favorable circumstances, they succeed in controlling themselves, but when thrown with drinking associates or when brought under other strong temptation then they find themselves unable to resist both the ever present thirst and temptation. Under circumstances they begin to drink, and as soon as one drink is taken their resisting power is gone, and they throw themselves into the spree with a vigor and abandon that is not known to the more timid or less resolute. They continue to drink until the stomach rebels and will no longer retain the liquor; then they go through a period of extreme distress and remorse, and finally get back on their feet.

Periodical drinkers of this type are more amenable to treatment than any other form of periodical drinkers,

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because the craving, the thirst against which they contend, can be overcome—in fact, entirely destroyed. In addition to this their attitude toward liquor can be so changed as to render the taste small, and the effects of liquor repulsive to them. When men of this type are given this much aid they find themselves quite able to successfully contend against the influence of drinking associates and to resist other currents of influence which, when associated with their former craving, would have been sufficient to cause them to fall.

Before undertaking to treat any disease we should endeavor to ascertain the nature of the condition to be met; whether such a condition has a real, structural pathology or is only functional derangement, and whether it is a physical or a mental disorder. That the prolonged use of alcoholic stimulants does cause serious structural lesions of the brain, liver, stomach and other organs cannot be denied, but such lesions are not the only or principal reason for the continuation of the habit. In some cases, as we have seen in the preceding, the use of liquors are continued from preference, or because of some mental or moral defect, but in the great majority of cases alcoholic drinks are continued because of a strong demand in the system for their effects. *The habit has a real physical basis.* This demand for the effects of alcohol is due to the extremely toxic condition of the system. Alcohol blunts the sensibilities of the nervous system and retards the excretion of the products of waste. The life of the human organism is a continuous process of waste and repair. When the excretion of this waste is retarded even to a slight degree, day by day, the system finally becomes so saturated with poisonous matter as to cause serious functional derangement of almost every organ in the body. One in this condition finds it necessary to keep the nervous system constantly blunted with the effects of alcohol or other narcotic to enable it to carry on the work necessary to support life and promote a reasonable degree of comfort. While it is true that alcohol has caused these disorders, still its effects relieve the acute distress springing from them more promptly and in a manner more acceptable to the sufferer than anything else with which he is familiar, therefore he continues to seek what comfort he can get by

taking more alcohol and thereby burns the taper at both ends.

In endeavoring to bring about such a change in this condition as to render the further use of alcohol unnecessary, the first and most important step is to thoroughly cleanse the system from the products of waste which the effects of alcohol have forced it to retain. In doing this the bowels, kidneys and skin should all be made to do their full share—in fact, for a time these should be made to do many times their ordinary duty. Just in proportion as the excess of toxic matter is eliminated will the nervous system become quiet and the urgent demand for the effects of alcohol disappear. As a rule, in the course of three or four days the system may be so cleansed of toxic matter as to permit the withdrawal of alcohol without risk or discomfort to the patient. I do not consider it safe or at all advisable to abruptly withdraw alcoholic stimulants from one who has been using them in large quantities without first preparing the system for such a withdrawal. After the system is properly prepared for the withdrawal it may be made with perfect safety and without discomfort, but I cannot agree with the arbitrary rule of cutting off the alcohol as soon as the patient is taken in hand.

Up to this point the treatment of the several classes of alcoholic cases is practically the same, as all of them require elimination of the toxic matter and the withdrawal of alcohol, but from this point on the several classes of cases will require radically different lines of treatment. The particular nature of the treatment required to complete the cure will depend upon the cause, or set of causes, which originally led to the formation of the habit, as well as those which have had an influence in its continuation. If these were purely mental, then treatment calculated to overcome a mental disorder should be given; if they were moral or social, then those influences should be looked into and every effort made to direct the patient's future life so as to protect him from these damaging influences and prevent a return to his old haunts and habits.

If the patient belongs to the more promising class, the regular drinkers, in which the habit was continued because

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of the usual mental bias favorable to the use of alcohol, and because of the deranged physical condition resulting from its effects, then the succeeding step in the treatment should be to neutralize the remnant of alcohol remaining in the blood, to overcome any appetite which may remain for it, and to supplant the mental bias favorable to alcohol with a dislike or complete disgust both for its taste and effect. The means available for these purposes are so numerous and their application so varied that they do not admit of detailed discussion in an article of this kind. In addition to the well known therapeutic agents, static and other forms of electricity, vapor, shower, or neutral or electric baths, suggestion, and in some cases even hypnotic suggestion, discipline and physical training can be used to advantage.

While these corrective measures are being employed active therapeutic measures calculated to overcome the catarrhal condition of the stomach should also be employed. This condition is the remaining disorder which would exert the greatest influence toward a return to the old habit, because of its effect in impairing digestion.

Fortunately catarrh of the stomach yields readily to treatment in these cases after alcohol has been discontinued, but active treatment for this disorder is essential, and it should be continued until all trace of it has disappeared and the patient's digestion is perfect. He should be able to eat and enjoy three good meals a day. Patients of this class need the strength derived from the digestion of a hearty breakfast in order to prevent them from feeling the need of the support they formerly received from alcoholic stimulants. No part of the treatment is of greater importance than this, since, if it is not successfully carried out, the patient will not be as secure from relapse as he should be. Impaired digestion, with its attendant lack of strength, operates as an ever present influence suggesting the need of some stimulant, some outside supportive, and this amounts to an autosuggestion to take a drink. This is a dangerous condition for the patient to be left in.

The conditions to be met in a majority of cases of alcoholism are simple, and the treatment can be easily carried out, while in others they are so complicated that the resources

of the best equipped institution as well as the skill of the most resourceful physician will be taxed to the uttermost; but when the aid afforded by a well equipped institution a competent physician can effect as large a percentage of permanent cures in cases of chronic alcoholism as can be effected in any other serious ailment. The most skilful physician cannot treat them successfully at their homes. The disadvantage due to their home surroundings and to lack of perfect control of his patient will defeat his best efforts. Even a general hospital does not assure the physician such control and protection as this class of patients require.

I do not feel that I should close this paper without a warning against any institution or physician offering to send a home treatment for alcohol or drug cases. Such an undertaking is worse than folly, and when a proposition of that kind does not spring from entire ignorance of the conditions to be met, it is prompted by criminal avarice. Especially fraudulent is the offer to send a remedy that can be administered in coffee, etc., without the patient's knowledge, and thus overcome the desire for liquor and break up the habit.

In undertaking the treatment of alcoholic cases the physician should take a comprehensive view of the patient and his surroundings, and endeavor to correctly estimate every influence which has in any way contributed to his enslavement, and to so manage the treatment of the case, and to so direct the life of the patient thereafter, as to remove every one of the hurtful influences as far as it is possible to do so. The physical man must be completely renovated, and every function of his body restored to normal activity. The mental bias favorable to the use of alcoholic liquors must be eradicated, and in its stead a positive aversion to alcohol be established. The patient is to be given a new chance in life by being put back on his feet with a clear head, in full control of all his faculties, and free from the dominating influence of alcohol. The consummation of such a work is certainly worthy of the best efforts of any man.

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COCAINISM

BY T. D. CROTHERS, M. D., HARTFORD, CONN.

COCAINE has a special action on the sensory centers and nerves, depressing their conductivity and diminishing or cutting off the transmission of impulses. It is a true analgesic. Its exact paralyzing action on the nerve centers and neurons is not clear, so that it must be studied largely from its effects.

There is no drug so fascinating in its perfect relief of discomfort fatigue, mental worryment, and sense of exhaustion, and the impression which follows from its use is that of renewed vigor and unusual capacity, also that some new force has been added, or capacity for reasoning and observing of matters relating to the body and its surroundings.

Usually cocaine is given for states of depression, exhaustion, and many times for pain, both local and general. In states of catarrh, where the pain is accompanied with great discomfort, its action is very prominent and pleasing, and the sense of relief amounts to a positive conviction which leads to the renewal of the drug. This renewal must be continued, and very quickly an addiction follows in which an apparent normal condition is only obtained after the use of the drug. Unlike other drugs, there is a specific psychical action, carrying with it a profound sense of relief and vigor and good feeling. In the early stages this is prolonged, and fills the mind with satisfaction that is very impressive. Later, when the effects are shorter and less pronounced, the withdrawal of the drug is followed by intense gloom and mental bewilderment which craves a return of the effects. This first psychical effect of comfort impresses the organism so vividly that the memory of it is never forgotten. After the drug has been taken a long time, no depression or pain following its withdrawal can efface the memory of its first effects. Hence, perpetual struggle to secure the comforts which came from this first use. Aggravated catarrhs, irritating bronchial troubles, and states of exhaustion from starvation and poisoning are the conditions which cocaine relieves most markedly.

The first after effects following the withdrawal are of short duration, and not especially painful. Later this condition increases. The pain takes on a mental activity, a species of irritative melancholia and profound exhaustion which seeks relief at all times and under any circumstances. Nature seems to protest against the physical and psychical injury done in the most alarming way. This is seen in the facial agony of the cocaine taker when deprived of the drug. His sufferings are internal and not seen in muscular excitement. The profound change that follows its use in the quiet face, serene satisfaction, and perfect relief is evidence of its effects.

There appears to be a more pronounced susceptibility to this drug than to alcohol or opium. Very few cases are found in which the effects are unpleasant. Many persons become alarmed when they discover its tremendous fascinating effects, and make great efforts to escape. Those who are feebler may realize for a time its influence, but become powerless to escape by themselves. In their efforts to accomplish this they turn to morphia, spirits and other drugs. A great many cocaine takers in this country are poisoned by spirits and drugs, and are exhausted before cocaine is taken, and the relief which this brings them is a new experience, increasing the degeneration.

Probably the largest number of cocaine takers among the lower class belong to the ill-fed degenerate and poisoned classes. To them this drug is a revelation, and the rest of their lives is a perpetual struggle to secure it and enjoy its effects.

Its special narcotic action on the higher brain centers, meaning the ethical sense and morale of the man, is very marked. Criminality and lawless conduct are the natural results. The cocaine taker soon develops delusions of persecution, and becomes a criminal in his efforts to avert the danger which he imagines is confronting him from every side. In our experience, covering a quarter of a century and more, drugs and spirit takers who come to the institution with firearms in their possession are always cocaine takers. No form of mental anesthesia or narcotism is followed by such pronounced delusions of death from

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violence and intrigue. This delusion may be concealed and covered up with great shrewdness, or be open and apparent. This constitutes the greatest danger, particularly of the lower classes who use this drug. They not only lose all ethical sense of law and order, but they become centers of intense suspicion of injury by others, and have no regard to any obstacles which prevent them from getting the drug.

Shrewd peddlers and disreputable men cater to this want, by furnishing the drug in the most secretive ways. The cocaine taker often exhibits a degree of criminal sharpness and superiority in his efforts to get the drug. If he is an alcohol or drug taker, the degeneration is so pronounced that any criminal act, regardless of consequences, will be undertaken to secure the drug.

Compared with the alcoholic, he may possess a degree of vigor that is misleading and only show his disease in the insane mania to possess the drug. The alcohol and drug taker may be cowardly and give way to circumstances, and show normal fears, but the cocaine taker has a maniacal boldness and reckless cunning when his interests are perilled and the drug is withdrawn. He will stoop to any crime, or any act that promises relief, regardless of what the results may be. The delusion of persecution is frequently associated with one of revenge, and desire to inflict injury for some real or imaginary insult. Often the presence of this particular phase of character is an unmistakable indication of his cocaine taking. The vindictive criminal in the lower circles who fights the officer seeking his arrest, who suddenly assaults people on the streets or shoots people without any provocation, or sets fire to buildings, commits serious damages, acts wildly and maniacally, is suffering from cocainism.

The alcoholic and the drug taker follow uniform lines of conduct that can be seen and anticipated to some degree. The cocaine addict is erratic, changeable, uncertain, always dangerous and likely to be a criminal at any moment. If his addiction is mixed up with alcohol and spirits, greater uncertainty follows. He is never suicidal, but always homicidal.

Cocainism among the intellectual classes is more concealed and is probably one of the most delusive addictions known. Many persons in professional circles begin with the use of cocaine to give them power and strength for certain particular acts or events. In literary circles many writers use cocaine and show it in their writings. A very interesting field of observation is in the smooth, flowing sentences of periodical and fiction writers, who do the work under the influence of cocaine. Both the brain and nervous system of the cocaine taker is lowered, paralyzed, and starved. He is unable to reason clearly. Hence he is the most dangerous, because he cannot realize his own condition compared with the alcoholic and morphine taker, who in their lucid moments have some sense of their danger and possible defects of reasoning. He is a veritable dement. The exaltation of the ego and the delusions of strength cover up and conceal his real condition. In all probability the cocaine taker is more thoroughly insane than all other drug addicts, although it may not appear. His health may seemingly be about the same, and his anemic appearance and staring, suspicious eye are the only evidence of impaired health. Cocaine addiction is increasing, particularly among nervous, exhausted men and women and the half-starved degenerates of the lower walks of life.

Cocaine addiction can be concealed for some time, hence its peculiar danger. Certain general symptoms give indications of the use of cocaine, but its verification may be difficult. There is no more dangerous drug, although it is widely used and praised highly by many physicians. Like the germs of infectious diseases it must be introduced into the community, then it spreads from one to another. Possibly it may die out in its local growth, but not until a percentage of those who suffer from it have been destroyed. It is possible that physicians, by thoughtless prescriptions and telling the patient the character of the drug they give him, may start the use of the drug in the community. It is certain that proprietary drugs for local pains have been found extremely popular and have had a large sale, until the substance composing it was discovered. Then the drug was used alone. Druggists, physicians, and patent

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medicines are responsible for this new scourge of humanity. The remedy is to stop its sale, except for some specific purpose, to be noted on a public book, and, where a doctor uses it freely, there must be some accounting, so as to prevent its danger. In a mill town where catarrh was prevalent, a certain proprietary drug had an enormous sale. The board of health discovered that the drug contained cocaine. As there was no law that would apply in this particular instance, the greatest difficulty followed in suppressing its sale. This happened some years ago, but the result of that one drug, extended over a period of nearly two years, was the permanent ruin of at least a dozen persons, whose drug and spirit addiction followed them until death. Drinks served from the soda fountain, containing cocaine, are attracting increased attention by sudden popularity and enormous sale in certain sections. When the fact is ascertained that their chief value consists in cocaine, in small quantities, efforts to suppress them are both difficult and doubtful. The proprietors, by merely changing the names, can continue the use, and, if the soda fountain dealers refuse to dispense them, they are frequently sold direct to the customers.

A great deal of attention was attracted by an instance which came under my care, in which several eminent physicians failed to make a satisfactory diagnosis. When the patient was brought to the hospital and the surroundings were changed, it was found that he depended on a certain proprietary drug, which contained cocaine, and that his condition was due to cocainism, with mild delirium at night and increasing delusions that were largely concealed. His recovery was rapid when the drug was removed. He remained abstinent for many years, but the fascination for the effects of this drug never died out. When wearied and worn the impulse to secure this drug was very strong with him, and could only be overcome by keeping away from all places where he was likely to get it.

In another case under my care a cocaine addict, realizing the danger from the resumption of the drug, turned to morphia for help, and after several years of the addiction of this later drug, took up cocaine again; breaking away

from this, he became an alcoholic. Realizing his danger, he entered voluntarily into an insane asylum and remained there until his death. In criminal circles cocaine is occasionally used to give courage and serenity for criminal acts. A burglar declared that it was necessary to enable him to carry out his plans without flinching or losing his judgment. It has been noted that criminal suspects who show a remarkable steadiness of nerve and frankness of manner when subjected to adroit questions by detectives, are not infrequently under the influence of cocaine. An instance of this kind came to my attention, and it appeared to me that the suspected person believed what he stated, with the utmost confidence and frankness, although it was evidently false. The impression of innocence was so pronounced that he would have been discharged had not the authorities, at my suggestion, kept him in confinement for another day. Then an examination revealed the real man, and eventually he acknowledged his guilt. The cocaine had been exhausted, and the remarkable paralysis and control of his emotions and reason disappeared.

The ordinary cocaine taker is secretive and suspicious, particularly in the later stages, but all this is concealed and only apparent in his conduct, and in little things. Thus a man who was known to be in ill health manifested great interest in having the locks of his house changed, and burglar alarm wires put around the windows. This he explained in a very rational, reasonable way, but why he should do it at this time when there was no particular occasion, attracted attention. It was found that he was a secret cocaine taker. In another instance a man wrote a number of wills at short intervals and this very unusual act resulted in the discovery of his secret use of cocaine.

In doubtful cases it is always wise to consider the possibility of the use of this drug, for its manifestations are exceedingly variable and misleading. The increasing difficulty of procuring it in many of the States, will, of course, diminish the number of cases.

Medical men can do very much in concealing its use to their patrons and dispensing it personally. The paranoic cases that are so bewildering are very likely to have a cocaine

origin, and the strange unusual acts are all likely to be traced to this source. In all probability, this drug is much more widely used, both legitimately and otherwise, than is supposed. The fact that the sales are increasing is an unmistakable indication of this.

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INTOXICATION IN THE PARENT PRODUCING EPILEPSY IN THE CHILD.

BY MATHEW WOODS, M. D., PHILADELPHIA, PA., CHAIRMAN
OF PRESBYTERIAN CHURCH COMMITTEE.

THE relation of alcoholism to epilepsy alone, is a subject so comprehensive that it might be divided into sections, and each section, after the exhaustive manner of German investigators, divided into subsections, so manifold and complex are the problems possible to be exhibited by each.

First and most important is the universally recognized fact that the chronic inebriate, according to the concensus of epileptological opinion, the world over, is the cause of about forty per cent of all epilepsies in all civilized lands.

This fact is so well known now that we could almost tell the percentage of epilepsy in a community by the amount of alcohol consumed, so that when a state, or nation, grants a license to sell liquor, partially supporting itself thus by money paid for its sanction and protection of wrong, we might without much stretch of the imagination, call such a license a legally protected permit to produce epilepsy and other diseases.

Mandsley asserts that because of the drink habit on the part of parents, epilepsy is as much a manufactured article as are steam engines and calico printing machines.

Moelli, who has made exhaustive investigations in this direction in Germany, says that inherited epilepsy from alcoholism is common in the Fatherland, and that besides the commonly recognized epilepsy, from thirty to forty per cent of all persons suffering with *delirium tremens* are also epileptics.

Hippolyti Martin, who collected a number of interesting facts in regard to parental intemperance as a cause of epilepsy in the child, tells us that in one hundred and fifty cases of insane epileptics at the Sulpatner, he found that eighty-three had intemperate parents. He also found that in over eighty intemperate French families, with 410 chil-

dren, 108 were epileptics. He gives the cause of the death of the parents in a number of these cases to show that no disease other than alcoholism, was the cause of this affliction upon the children.

Echwerria practically admits that a greater number of epilepsies is produced by chronic alcoholism, on the part of progenitors, than by insanity and epilepsy combined! That is to say that a child with an insane or epileptic father or suffering from both conditions, is less likely to be an epileptic than if his father was a drunkard. This is an exceedingly strong statement, but since this careful writer finds it justified by his own personal observation I shall repeat it: that a man suffering both from insanity and epilepsy, that is, an insane epileptic, is less likely to produce epileptic children, judging from the hundreds he investigated, than a man who is merely a common chronic drunkard, without additional morbid frills of any kind to make him more pathologically picturesque. A healthy man, then, according to this observer, who has suffered himself to become a plain unvarnished inebriate, is more of a menace to the community, in relation to epilepsy, than if he were a lunatic and epileptic, mixed.

You must remember too, in this direction, that being a chronic drunkard does not necessarily mean being an abusive and boisterous nuisance. We occasionally meet persons, gentlemen even "in their cups," as mild as mother's milk, and as ostentatiously polite as a Beau Brummel or a Chesterfield, "a gentle-like Dick Dowless," when having their own way in everything, "as any suckling dove," and yet they are never sober, unless perhaps immediately after a ten-hour sleep. Nevertheless, they are as much of a danger to the unborn as are the more offensive drunkards.

A witty but depressed lady, with such a burden as I have described crushing her to the earth, said to me once: "John just breaks my heart when intoxicated, which is nearly always. He is such a gentleman, so excessively affable and polite, and yet knowing the cause, a compliment from him is like a lick from a sick spaniel."

"In a series of five hundred and seventy-two cases of epilepsy studied by him, he discovered that two hundred

and fifty-nine of them were due entirely to alcohol, one hundred and twenty to alcohol and syphilis combined, forty-two of them were due to traumatism and of the remaining one hundred and forty-five, sun stroke, ague, mental anxiety and the excessive use of tobacco, were supposed to be the causes. Thus, according to this observer, whose book as far as I know was the first book about epilepsy printed in America, fifty per cent of all epilepsies were due directly to alcohol and seventy-five per cent to alcohol and syphilis together. Besides, in the families belonging to the first class—those whose alcohol was the only cause of the affliction—thereby nine per cent of the victims were also congenital idiots.’

Bourneville, who studied two thousand five hundred and fifty-four children, admitted to the Becêtre and Fontain Villa, all of them suffering either from idiocy, imbecility, epilepsy, hysteria, found that one thousand and fifty-three of them were the offspring of drunken parents.

Demaux asserts that among thirty-six epileptics whom he examined during twelve years and whose histories were well known to him, five were conceived when their fathers were intoxicated. I select these illustrations from the extensive literature of the subject—drunkenness in the parent, epilepsy in the child—not to convince you of what you already know, but merely to refresh your memories in reference to what once was but a theory, but is now known to be fact, verified again and again.

Two illustrations from my own case book may be of interest. I. C., a lawyer who hardly knew the taste of liquor until he was a prosperous man, with no hereditary taint, in the beginning of his career became the father of four healthy children. Afterward, when he had attained comparative fame and a wine cellar and had become a good deal of a *bon vivant*, two other children were born, one of which developed uncomplicated epilepsy in his sixth year, the other had paralytic dementia with epilepsy.

Another patient, a traveling salesman with a good family history who, “even when on the road never drank during business hours,” with the beginning of prosperity this man began imbibing at dinner, and finally continued his potations

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into the night, his wife and friends frequently joining him. Three of his eight children are epileptics, and yet no one but his intimates are supposed to know of his conviviality, as he drank only in the night.

As far as alcoholism is concerned, my own personal experience would seem to imply—my practice being limited to private cases—that the danger to the prospective child depends not exclusively as to whether the parents, one or both, were habitual drunkards, as to whether they were intoxicated, or under the influence of alcohol during the time of conception—I would like to emphasize that—and that a drinking parent, other things being equal, if perfectly sober and free from the irritability, remorse and exhaustion, all the conditions consequent upon a debauch, is no more likely to produce epileptic offspring than an abstainer would, who might chance to be intoxicated for the first time; this awful possibility adding another weight to the already overburdened responsibility of paternity.

Two epileptics, at one time being treated by me, were traced by the parents respectively, to single transgressions in the use of intoxicants, and another, that of an imbecile epileptic girl, was conceived, the father confessed, at a time when because of business perplexity and failure, he had abandoned himself for a time to drink. Four children born before this crisis in his affairs, and two since, are perfectly well.

There has lately come under my care, also illustrating my theory, that sexual congress, occurring during a single, isolated indiscretion in drink on the part of otherwise sober people, is as likely, other things being equal, to result in epilepsy or other hereditary equivalent of epilepsy in the child, as if the parents were habitual drinkers.

I. B., a civil engineer, received a call to a position in another country. The night before his departure he was entertained by a friend, on which occasion he deviated from his custom of total abstinence to such an extent that when he left for home he was in a state of boisterous hilarity. Next morning he embarked for his new position. After three months' absence he returned to find his wife *enciente*. When her days to be delivered were fulfilled she brought

forth a daughter that developed epilepsy in her third year. She is now eleven years old and still an epileptic, the only one in a family of six children.

Such illustrations as these, apparently traceable to no other cause than solitary states of alcoholic toxemia on the part of fathers, ought to be universally proclaimed as a warning to all prospective parents.

Aware of the pathologic effect of alcohol upon blood tissue and all the secretions of the body as revealed of late by the microscope and other instruments of precision, it is easy to believe that intoxication in the parent may appear as epilepsy, neuresthenia or other neuroses in the child; the impressions made upon the system by the injection of alcohol being so profound, the effect not only of predated but preconceptional impressions being known for centuries, dating as far back even as the book of Genesis. Just as "the pitted branches of the hazel and chestnut tree" had an effect we might say through the emotions on the conceiving cattle of Jacob, so alcohol, because of its deteriorating effect upon the whole system, even when but temporary, like the impression made upon the cattle by the prepared branches, transmits the deterioration in some other form to the offspring.

Thus is revealed another awe-inspiring crime against humanity, to be laid at the door of the giant evil alcohol. That same alcohol that, as has been said, "makes glad the heart of man" by paralysing the nerves that have to do with the transmission of painful impressions, and that lotus-like translates its direct victims into a world of mere dreams and delusions, from which there have been many tragical awakenings, from the time when the righteous Noah began to be a husbandman and planted a vineyard and drank of the vine, and was drunken, and was uncovered within his tent," up until the present hour.

How often in these days do we see robust, vigorous men, not known as drunkards, rather narcomaniacs, saturated with alcohol or tobacco or both, with children puny enough to inspire pity. "Tiny Tims" without that midget's redeeming sentimentality, and for whose constitutional delicacy, the climate of this blessed country is absurdly

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used as a scapegoat. And yet this fragility can hardly be accounted for in any other way, but that of their being conceived in tobacco or alcohol narcosis, and bred in consequent iniquity.

Muscular coal heavers, masons, blacksmiths, carters, laborers, as the case may be, living in the open air, with the strength of giants themselves, yet crowding our free dispensaries with a rickety rabbel of neurasthenic children; the sole heritage likely to be transmitted by them to a ghostly posterity.

TOBACCO

IN this age of the ever-increasing frequency of high blood tension, arteriosclerosis and cardiac weakness, the action of tobacco is becoming more and more a topic of importance. While it is true that the number of non-smokers among men is increasing, it is also true that the number of men, young men, and even boys, who smoke excessively, is increasing.

In investigating the exact pharmacologic action of tobacco, while we must seriously and carefully consider the scientific findings of laboratory investigators, it becomes evident that these findings do not express the whole truth of the action of tobacco on the individual addicted to its over-use.

The only active constituent of tobacco seems to be the alkaloid nicotine and this alkaloid acts principally on the nervous and circulatory system. In concentrated form it is one of the most quickly acting poisons, and may produce death in less than a minute by causing immediate respiratory failure, the heart beating for some time after respiration ceases. In less concentrated doses the symptoms are severe nausea, vomiting and purging, with profuse salivation, sweating and a gradually failing heart and respiration.

When nicotine is injected intravenously or subcutaneously, there is first a rise in the blood pressure, which is probably due to an irritant action on the blood vessel walls. This, however, is soon followed by a lowering of blood pressure due to the disturbing influence of the heart. The action on the heart varied with different doses, and often from minute to minute.

At first there seems to be decided inhibitory action, by a stimulation of the pneumogastric nerves.

If the dose is sufficient to paralyse the ganglia of the pneumogastric nerves, the heart becomes rapid, and soon the heart muscle itself is depressed and later paralysed. Most of the secretions of the body are increased, especially that of the salivary and sweat glands.

Nicotine is a stimulant to peristalsis, both of the intestines and stomach. Nausea and vomiting, though partially due to excessive stomach contractions, are also doubtless due

to the irritant or depressant action on the vomiting center in the medulla.

Cushny says that nicotine first stimulates and later paralyzes all the sympathetic ganglia. If this is true of large doses, small doses taken in constantly (as by smoking) by young boys must profoundly affect growth and nutrition.

The nervous twitching and fibrillary contractions of muscles seems to be due to an action on the central nervous system. Nicotine does not seem to be a stimulant to the higher centers of the brain, except possibly during the actual act of smoking or puffing at a cigar or pipe. The almost immediate action is a depressant and quieting one on the central nervous system; in other words, it acts as a narcotic. While large doses of nicotine will cause dilatation of the pupils, small doses (smoking frequently repeated) will cause the pupils, in the tobacco habitue, to be contracted.

While nicotine is mostly excreted by the kidneys, it is also largely excreted by the saliva, and probably slightly by the perspiration.

Like any other narcotic drug, a tolerance for tobacco is soon acquired, the desire for it soon develops, and the tobacco habit is easily formed.

It seems positively physiologically demonstrated that when tobacco is smoked, a certain amount of nicotine is absorbed, as, whether the effect is that of acute poisoning, as in a novice, or that of chronic poisoning in the over-user of tobacco, the symptoms and disturbances are those of nicotine. The amount of nicotine that will be absorbed from each "smoke" depends on whether it is a pipe, cigar or cigarette that is smoked, and whether or not the smoke is inhaled.

What it is that causes the tobacco smoking habit is not positively demonstrable, and perhaps the habit cannot be attributed to any one particular thing. The desire for a smoke is probably a combination of the narcotics, quieting effect of the nicotine; the quieting effect of the rythmical muscular activity of puffing; the desire for the periodic, irritant stimulation of the throat, and perhaps larynx; perhaps the psychic effect is watching the curling smoke, and

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the human feeling of sociability in smoking with others. There seems to be no doubt that cigarette smokers who inhale have the desire intensified by the irritation of the throat and such smokers are not satisfied with any other method of using tobacco, even if strong cigars are substituted for the weak tobacco cigarettes. Consequently the nicotine action comprises but a portion of their intense desire, the cure of which is the hardest of the tobacco habit. It is also positively true that the smoker who inhales (and inhaling occurs far and away most frequently among cigarette smokers) is the one who absorbs the most nicotine, and is the one in most danger of chronic poisoning.

The intangible signs of chronic tobacco poisoning are in boys, impaired physical growth and impaired respiratory ability, and in older men, a slowly developing arteriosclerosis. The tangible symptoms and signs of the over-use of tobacco are excessive nervous irritability and excitability as shown by nervous twitchings, fibrillary contractions, increased nerve reflexes, sleeplessness, palpitation, cardiac pains, loss of appetite, digestive disturbances and chronic inflammation of the throat and larynx.

To begin with, the simplest of these conditions, the chronic pharyngitis, lingual tonsil irritations, lingual tonsil cough and chronic congestion of the larynx, and laryngitis, are conditions frequently seen, and generally readily cured by the withdrawal of tobacco and the proper local treatment.

Whether the loss of appetite and dyspepsia are due to the impairment of the saliva which in over-smokers is loaded with nicotine and probably other tobacco extractives, or to excessive stomach irritability, or to impaired circulation (which is generally concomitant with digestive disturbances from this cause) cannot be proved, but probably all are factors in causing the impaired functioning of the stomach. In this condition it can generally be promised that if the tobacco is stopped and gentle tonic treatment given, the appetite will return, the digestion will improve, and the patient will put on weight.

The most frequent disturbance for which the patient who over-uses tobacco comes to the physician is cardiac disturbance, and generally he has recognized the cause,

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and has attempted to stop the excessive use of tobacco. The heart is found irritable, palpitating with the least exertion, and sometimes without excuse, occasionally sharp stinging pains referred to the cardiac region occur, the patient is breathless on slight exertion, and arrives at the top of a flight of stairs with a short dry catchy cough so typical of cardiac weakness. Examination of the heart often shows it slightly enlarged, and there may be a mitral systolic murmur, showing an insufficiency of the mitral valve. Such a condition of the heart from tobacco is found occasionally, while an irritable heart from tobacco is of frequent occurrence. Such a heart will generally recover entirely after the withdrawal of tobacco, with physiologic rest (as rising slowly and walking slowly, avoiding all haste, refusing to rush for cars, abstaining from severe muscular exercise, exertion) and the administration of small doses of digitalis or strophanthus. Of course during the treatment of such a heart, alcohol should be entirely avoided. Entire recovery of the "tobacco heart," if the patient has no other organic lesion, should be expected in from three to six months.

When the heart is seriously affected by nicotine other symptoms are frequently in evidence, such as a small amount of tremor exaggerated reflexes, and a tendency to cold hands and feet, with excessive sweating, especially of the hands. Such a condition of the hands and feet is particularly noticeable in young men and boys who are over-smoking and will generally disappear on the stoppage of tobacco and the administration of ordinary doses of strychnine.

Occasionally the first notification of excessive use of tobacco is an impairment of vision. This is of rather rare occurrence, although the tendency to small contracted pupils is of frequent occurrence. Generally the vision improves after the stopping of tobacco.

Much discussion has taken place as to whether the tobacco user gets cerebral stimulation or cerebral quietude from his smoke. As the tobacco user will generally get nervous irritability and probably cerebral irritability if he suddenly stops smoking, and becomes calm and quiet as soon as he takes his smoke, it hardly seems that the nicotine

could ever be a cerebral stimulant. Although the rythmical puffing at the cigar or pipe may produce cerebral stimulation by possibly increasing the blood flow in the brain, and though there may be some cerebral stimulation from the possibly slight increase in blood tension due to the active smoking and the absorption of nicotine, still the action of tobacco as a whole must be put down as sedative and narcotic. The nervousness is quieted, the cerebral irritation becomes diminished, calmness takes its place, and the man thinks and acts calmly, logically and with less haste. This, of course, applies to the men who takes his "smoke" regularly and has not developed chronic tobacco poisoning. The circulatory and nervous depressant effects which occur when the novice smokes his first cigar cannot be considered as at all symmetrical with the symptoms produced by a cigar smoked by one who has become tolerant to tobacco. The tobacco user without tobacco not only develops cerebral irritation as shown by irritability and nervousness, but also has an increased blood pressure from this same nervous tension. In his case certainly and probably in most instances, through the primary muscular effort of puffing at the cigar may increase the blood pressure; soon, secondarily, there is a diminished blood pressure, the irritable heart is quieted, the nervous system receives its desired narcotic and the man feels comfortable and contented. Under such conditions he certainly will do better mental work than without his cigar, unless he has entirely broken himself from the habit, and his system does not need or expect the narcotic influence of tobacco.

It seems to be a mistake to have believed that the smoke in a tobacco atmosphere does not contain nicotine, because if patients who show signs of the overuse of tobacco and who have diminished or even stopped its use, remain for several hours in a room filled with tobacco smoke, or ride for hours in smoking cars, they will again show signs of nicotine poisoning. In other words a man may smoke one or two cigars a day in the open air or in his own home with impunity, but the same amount of tobacco smoked in smoking cars will often produce symptoms of poisoning.

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habitual tobacco user who has developed an acute sickness or has been subjected to an operation, during convalescence may suffer from nervous symptoms and circulatory phenomena that are due to the withdrawal of his habitual narcotic. It cannot be stated offhand that even so simple a narcotic as tobacco can suddenly be withheld from a system that is undergoing other serious strains without causing serious symptoms. If a heart has become used to the quieting effects of nicotine on his nervous mechanism, and if some of the vital brain centers, especially in the medulla, have become used to the same narcotic, it is probable that serious symptoms may be prevented and a quiet nervous system and better heart action be produced by allowing such a patient to have a more or less frequent "smoke," depending on his previous habit. It is also possible, as so well recognized in the users of opium or morphine that tobacco to these habitues, while not a stimulant to mental activity or causing a patient to be mentally more acute, may still be a positive stimulant to the vital brain centers.

A positive demonstration of such need for tobacco in the convalescence of sickness is well shown by several cases reported by Dr. L. Bolton Bangs, New York, in the *Medical Record*, March 14, 1908.

To draw a moral from the above would be to urge the prohibition of the sale of cigarettes to young, growing boys, for physicians to discountenance positively preparatory schools that allow the youth of America to develop or continue the cigarette habit; to teach older boys and young men the physiologic disability that large and certainly excessive amounts of tobacco can produce; and to urge, after the young man has acquired his growth, such use of tobacco if he desires to use it at all, as will be less than enough to cause any of the well-known symptoms, which the man himself can be taught to recognize as these symptoms of the overuse of tobacco. The amount that each individual should or may smoke is an entirely individual problem. There is not, and never can be, a rule as to how much is excessive. One cigar a day may be as serious for one man as are six cigars a day for another.

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by the overuse of tobacco. Certain it is that not infrequently young boys and young men, generally cigarette users, get into such mental conditions as to become irresponsible criminally, mentally worthless and even insane. It certainly seems recognizable that serious heart weakness occurs frequently in acute disease, or after operations, in those who use tobacco excessively. Certainly great care should be exercised to use no drug that will cause cardiac depression in such patients and their hearts should be more carefully watched than the heart of an individual who does not smoke. It is quite possible that even during the acute processes a chronic tobacco user should be allowed an occasionally short "smoke."

In breaking off from the tobacco habit the question is, shall the patient stop abruptly or gradually? This is best determined by the man, who knows which is the best method for himself. Sometimes bromides help to diminish the restlessness and nervousness, sometimes strychnine is needed, and generally laxatives are indicated. Plenty of fresh outdoor air will generally aid such patients in ridding themselves of the habit.

EDITORIAL

Under the term Pathological Drunkenness, has been described a phase of delirium following the stupor from alcohol in which a single idea became persistent and culminated in crime.

After a period of protracted intoxication, the person recovers and seemingly is in possession of his senses, when suddenly without premonition or motive he commits murder or other atrocious crime, then recovers an apparent sanity. When examined by experts all common symptoms of mental derangement are negative.

There is no explanation of the crime or no range of physical causes that would anticipate such a result. The patient is promptly convicted and executed. In the history it appears that the patient had used spirit for a long time and was continuously stupid and semi-delirious, and that his apparent recovery was only a change of symptoms, and the sanity he manifested was purely automatic.

Suddenly an obsession grew up and was concealed or if it was made apparent was so childish as not to attract attention. This obsession stimulated a degree of reasoning and planning for the materialization of the act that had many elements of sanity and consciousness of the conditions, and yet in the reality it was just the opposite.

The toxic conditions extending over a long period before that must of necessity have imparied all possible sane reasoning and consciousness of the condition, and yet this fact seems to have been ignored. Several instances are reported of criminal assault and murder, and the reason given for the act was some event which happened long before.

The interval between the alleged reason for the act, and the crime gave no indications of any connection between them. There seemed to be a sudden awakening of the memory of an event in the past, and its culmination in an act that although committed with a degree of reasoning was unexplainable.

This is an extremely fertile field for investigation.

Every inebriate is literally a plague spot from which springs the most degenerative growths. His example alone is destructive and the stupid indifference that will tolerate its presence in the home or in the community is startling.

Smallpox and contagious diseases are quarantined at once and yet the physical degenerations and mental injuries are not to be compared with the disease of the inebriate who is a mental and physical suicide, and carries down with him, his home, his associates and all he comes in contract with.

The first effort of the community should be to remove the causes and isolate the victim and force him to use measures for restoration and cure. This is the highest kind of temperance work. Pledging

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temperance men and women, teaching the doctrine of total abstinence is only a part of the great preventive measures.

The victim must be stopped and treated and the community must help him to recover. No man has a right to destroy himself by alcohol and the community is bound to prevent it and take away all possible means for destruction. When this aspect of the subject is seen we shall have practical work everywhere by physicians as leaders and laymen as assistants.

The Semi-annual meeting of our Society at Philadelphia, Pa., April 6th and 7th, attracted much attention in the daily press, and was widely reported. Thirty-one papers were read, all of them giving greater prominence to the disease of inebriety, than at other meetings. Large audiences attended each session, and the reception given by Dr. Alfred Gordon of Philadelphia was very enjoyable.

There was a remarkable agreement in the general scientific principles presented by the various members, and some of the views advanced attracted a great deal of attention.

A series of lectures on alcohol are being delivered in Liverpool before The National Woman's Temperance Association that have attracted a great deal of attention, and should be an object lesson for work in this country.

The following are the titles of the lectures delivered so far: "Alcohol and Protoplasm," By William Carter, Prof. of Therapeutics in the Liverpool University. "Physiological Action of Alcohol," By Dr. O. T. Williams. "The Action of Alcohol on the Heart and Blood Vessels," By Dr. John Hay. "Effect of Alcohol on the Digestive System," By Dr. A. G. Gullan.

These lectures have been very largely attended and widely reported and such work should be done in this country.

A movement started in Ohio called the Freedom League of America or The Red Cross Society of Temperance has a great promise for the future. A number of gentlemen proposed to organize a work house hospital or sanatorium for inebriates of all classes, particularly those who are unable to pay.

A large farm is to be bought and cottages erected and opportunities afforded for profitable work by the inmates. The institution will be managed by physicians and very much on the same principles as an insane asylum, only more freedom and direct personal care will be given to each patient.

It is proposed to make it self-supporting by utilizing the work of the men on both the farm and in work shops. A board of very influential men has been formed with Dr. W. G. Oswald as secretary and Dr. Crooks as superintendent.

It is a pleasure to note that the doctor has been visiting several

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eastern institutions and making extensive notes of their methods of treatment for the purpose of protecting themselves in the management of this new work.

There is no doubt of the success of such an enterprise when once fairly organized. Both patients and money will be secured to put it into practical operation. Like all other great enterprises its beginning may be slow, but its success is a matter of great certainty, confirmed in many ways and by the experience of all hospitals and sanitoriums.

Our Society will welcome this new work in every possible way.

In Kansas where prohibition of the sale of spirits exists, it was found that physicians' prescriptions could procure spirits almost any time. Medical men of low morals did a thriving business in some places writing alcoholic prescriptions. Arrests were made, but the doctor could usually give a very good reason for his part in evading the law. Recently a bill was passed both houses by a tremendous majority forbidding all physicians to prescribe alcohol in any form as a medicine, and proving a penalty of from \$100 to \$500, and from 30 to 90 days in jail. It was a curious fact that very few physicians protested against this bill, but announced publicly that they did not care to use alcohol as a medicine, there were so many good substitutes for it. This is another indication of the conviction in public sentiment that alcohol has little or no value as a drug and as a beverage it ought to be outlawed at once.

A church movement for the cure of inebriates has been started in New York of unusual interest and promise. The patient is examined carefully by a medical man and is given a Turkish bath; then taken into a room and treated by hypnotic suggestion. He is given strychnine, atrophia and other bracing drugs and told to come back the next day. Another Turkish bath, another suggestive treatment and more drugs. This is kept up for a week or more. The suggestive treatment consists of advice concerning his work, conditions of living and prospects for the future. If he is out of work an effort is made to help him. The results so far are, according to the clergymen in charge, marvelous. The principle is eminently scientific and practical and no doubt every person will be benefited and of course many of them will be permanently restored. Where occupation can be given, there can be no doubt that the patient will recover. We shall watch this work with the greatest of interest, and believe that if the so-called Emmanuel Movement should adopt these measures there would be some basis for their extraordinary statements of curing 90 per cent of all inebriates.

Four Epochs of Life, by Elizabeth Hamilton Muncie, M. D., with introduction by Rev. J. F. Carson, D. D., and Royal Copeland, M. D.

In this work Dr. Hamilton Muncie deals in a charming manner with sex-life from its inception to maturity, and into a fascinating story weaves that knowledge which all true parents feel should be transmitted to their children by themselves, but which so many do not transmit on account of the extreme delicacy of the subject.

The story shows how wise, practical, pure-minded parents taught the facts of life's mysteries from the plants, fishes and birds, until they reached by a most delicate and reverent path the embryonic development of the human being. It also gives material assistance to mothers in the understanding and training of their daughters during the most important years of their lives, and serves as an inspiration towards purity, nobility of thought and purpose and perfect health of body, mind and morals.

No book yet published has more beautifully or more successfully set forth the methods by which young boys and girls may be saved from the physical and moral wreckage which too often comes from ignorance or from knowledge acquired from vicious books or vicious companions. (Four Epochs Pub. Co., \$1.50 net.)

The Science of Living, or, The Art of Keeping Well, by William S. Sadler, M. D. The growing complexity of life and its ever increasing demands upon physical and nervous endurance make a physician's advice valuable to the well man as well as to the sick. The author, who is a widely-known physician and lecturer on hygiene, has written this book primarily for the man who is well and wishes to keep so. He is committed to no "school" and avoids fads, but gives sound physiological reasons for every rule of health he lays down. Adequate illustrations add to the value of this instruction and insure that even the uninstructed layman will find comprehension easy of some of the inwardness of the human body. A particularly valuable and timely section is that dealing with foods, in which Dr. Sadler not only gives the fuel value of all our foods, but describes the prevalent adulterations and tells how to detect them. Special pains have been taken to cover those parts of the subject which are usually forgotten by writers on health. (A. C. McClurg & Co., \$1.50 net.)

Education in Sexual Physiology and Hygiene, by Philip Zenner, M. D. There is a crying need and growing demand for the instruction of children in sex matters. A lack of such instruction does incalculable harm. This volume dwells upon methods of teaching which should secure the good without the ill effects of such instruction. The book also contains much instruction for the youth and adult. (Robt. Clark Co., \$1.00 net.)

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Practical Hydrotherapy. A Manual for Student and Practitioners, by Curran Pope, M. D.

That a substance so plentiful as water has such an infinitude of applications as shown in this work, is but another demonstration of the omniscience of our Maker. The appearance of this text-book marks an era in hydriatics. In preparing this book the author adopted the plan of ascertaining all the facts, no matter from what source, added his experience as active head of a sanatorium and teacher of hydriatics to students and nurses for twenty years, and from the data thus obtained the different chapters have been written.

As the title indicates, the work is nothing if not practical. The history of the subject from Hippocrates to the present day is given in chronologic order. This is followed by general considerations of the anatomy and physiology of the skin. The physiological use of water, internally and externally, with classification of temperatures, is taken up very fully. Then follows in order a review of associated procedures, as sunlight, incandescent light, arc light, hot-air cabinet, Turkish bath, vapor cabinet, Russian bath, superheated dry air, with physiologic action and therapeusis.

The chapters on functional nervous diseases, mental diseases, drug habits, alcoholism and diseases of women, are especially strong, and contain the conviction of an independent thinker with a wide practical experience as does also the chapter on the rearing of the delicate, tubercular and neuropathic child.

In the therapeusis of the diseases discussed, not only are hydriatic and other drugless methods given, but also the use of drugs in conjunction with these methods. (Cincinnati Medical Book Co., \$6.00 net.)

Mind and Power, or, The Law of Dynamic Mentation,

"The universe is a great organism controlled by dynamism of the psychical order. Mind glams through every atom. . . . There is mind in everything, not only in human and animal life, but in plants, in minerals, and in space."

This book of over 400 pages is an attractive grouping of facts conclusions, theories and probabilities, that are not only startling, but bewildering. The reader is taken into a new world of dynamic forces and shown things almost unutterable, and beyond the power to follow in the language of to-day.

The mind and its influence on the body, and the possibilities of its development into a great practical working force, are discussed with a certainty, that, to say the least, is very cheery. Many of the chapters are fine models of fair rational reasoning.

Others carry the reader into unknown realms that are bewildering, and hard to follow. The tone of the book is extremely optimistic and sometimes dogmatic, but it is a realism that is cheery and helpful.

The personal range of life is widened and made better by such books, and the author, while not always convincing, is certainly suggestive, and the reader is thankful for the book, and the excursions into the limitless beyond which the author has given him.

We commend this book as a study, worth a very serious consideration, and rereading, not for the exact information it gives, but for the intimation of the possible future, and wonderful facts which may come from farther research in this direction.

Every thinker and scholar should go with the author through these varied chapters, because of its training and educational value to appreciate the great mind realm by which we are surrounded.

The style and type of the book are excellent, and we heartily commend it to all our readers. The price is \$2.00 postpaid.

ABSTRACTS

Delirium and Delirious States.

Swift, in speaking on this subject, remarks about the treatment that should be directed to the cause, and when the condition is due to the ingestion of a toxic substance, as alcohol, bromides, etc., this cause may be removed. It is to be remembered that we frequently have to do with a condition which is primarily physical and not mental, and the treatment is somewhat the same as that of any acute disease, the chief indications being to keep up the strength of the patient by appropriate nourishment and to prevent exhaustion from the motor unrest, which is frequently extreme. Of quieting measures the continuous warm bath is generally preferable to soporific drugs. By this method—which is warmly advocated by Kraepelin—the patient is kept in a warm bath at 92 (F. to 95) F., until the restlessness subsides, and is then put to bed, when he frequently falls asleep. When restlessness reappears he is again placed in the bath, and this procedure is continued until his quiet becomes permanent. This method is particularly useful in delirium tremens; but in asthenic conditions, caution must be used, and the patient's pulse and general condition carefully watched. In

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some cases soporific drugs may be combined with the bath treatment. Heart stimulants, strychnine, and digitalis, may be indicated. In alcohol delirium, however, alcohol should be avoided, and if polynemittis exists, even small doses given as a stimulant may be distinctly harmful. When a delirium tremens is threatened during enforced abstinence in the course of an acute illness in an alcoholic person, the case is somewhat different. On this point a diversity of opinion exists, but the author believes that small doses of alcohol are here beneficial. In senile delirium, also, the effect of alcohol may be distinctly good, being not only stimulative, but sedative as well. Nourishment should be given at regular intervals as in any acute illness. If, owing to the mental condition, the patient cannot be made to take the necessary amount, tube feeding may become necessary.

Beer No Preventative of Drunkenness in Germany

Those who think that the substitution of beer for other liquors is a good temperance measure may be surprised to know that in Germany, "the land of beer," certain humbug cures for drunkenness find it profitable to flood the country with advertisements of its drink cure "powders," drawing from the poor wives of drinkers, and often from the drinkers themselves, large sums of money. But this is not the worst; as the remedies fail the drinker loses hope, and so does not try any other means of cure. A vigorous resolution asking the government to prohibit these "swindle" cures was passed by the representatives of the 50,000 German abstainers who held an enthusiastic congress at Flensburg the last week in July.

Beer and Delirium

The idea that beer drinkers escape delirium tremens has an explanation that is far from favorable to the use of beer. That is, that they die of other maladies caused by beer before reaching the delirium stage of alcoholism.

Dr. Gudden, in a German medical journal, explains that the typical beer drinker is either carried away by heart disease, tuberculosis, kidney disease or other diseases in which beer is a factor; or else he is obliged by the setting in of these diseases to abandon or greatly reduce his beer allowance.

Dr. Gudden reports two cases of frenzied hallucination in alcoholic subjects, one 39, 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 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 enormous amounts of fluid pumped through it year after year.

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The beautiful story has been so charmingly told that it must fascinate every reader. Not a trace of vulgarity, crudeness, or coarseness is to be found in its pages. Neither is it sentimental, or repellent in the opposite direction. Our author has steered a middle course and taken her ship into harbor without jar or shock. All who read this book will be given exact information, and, at the same time, be lifted morally and mentally. It will give courage to the expectant mother, relieve the puzzled parent, and properly answer the wonderings of youthful minds.

.....We offer our sincere congratulations to Dr. Muncie, and, at the same time, in the name of our common profession, thank her for giving us a volume which can be commended to our patrons.” Royal S. Copeland, (A.M., M.D.) Dean, N. Y., Hom. Med. College and Flower Hospital.

.....I've been waiting all these years for someone to write just such a book. Put me down for 100 copies.” Dr. L. M. Barnett, Brooklyn, N. Y.

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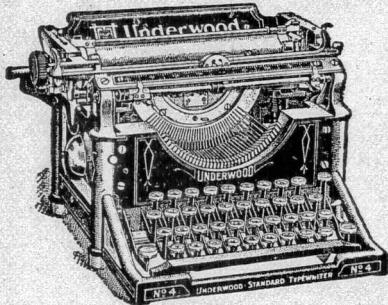
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PUBLIC HYGIENE

By Thomas S. Blair, M. D.

This is not only the most important work on public Hygiene, but as a matter of fact it is the only one covering this vital subject in all its phases. It is a work that should be in the library of every doctor, every board of health and school board, all sanitarians, hotel men, hospital officers, park boards, many classes of municipal officers, farmers of the advanced order, architects, builders, plumbers and manufacturers, and in fact, every intelligent reader who realizes that proper sanitation is the basis of public health. Dr. Blair is neurologist at the Harrisburg (Pa.) hospital, and the author of A Practitioner's Handbook of Materia Medica. He has been assisted by numerous specialists everywhere recognized as the leading authorities in their several lines.

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Chap. XXIV—Laboratory Methods in Health Work.
Chap. XXV—Medical Societies and Sanitation.
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