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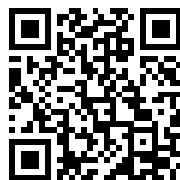
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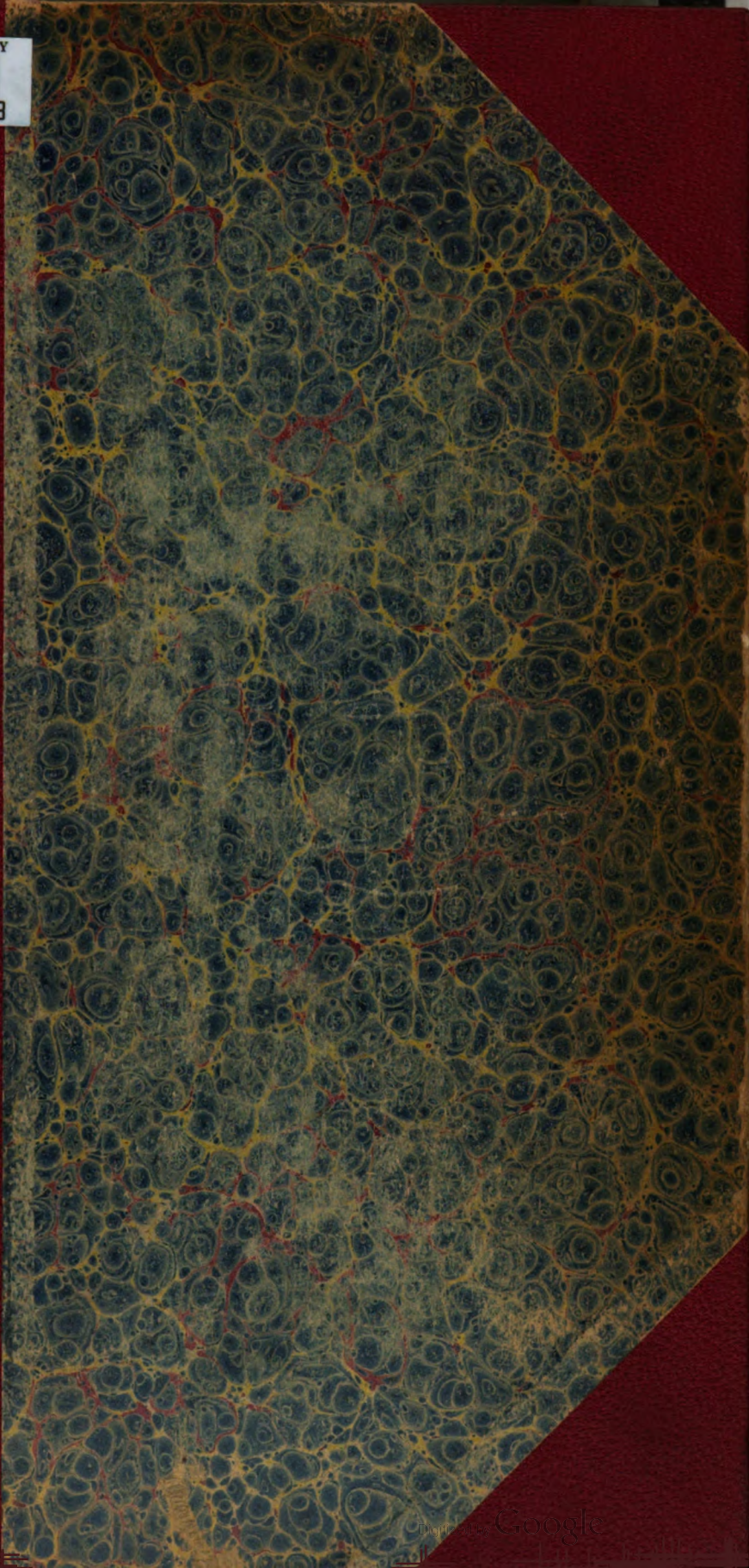
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OF  
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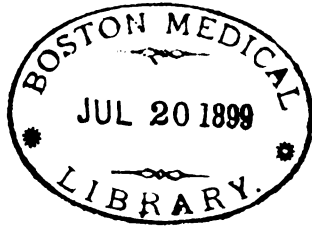
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# INDEX, VOL. XIX, 1897.

## A.

	PAGE.
Association, First Meeting, its Members, . . . . .	I
Asylum for Inebriates in California, . . . . .	70
Alcoholism in Children, . . . . .	88
Alcoholism in the Growth of Children, . . . . .	100
Alcohol when given to Children, . . . . .	103
Alcoholic Intoxication in a Child, . . . . .	123
Alcoholism and its Treatment, . . . . .	162
Alcohol increased Expenditures, . . . . .	195
Asylum for Inebriates, . . . . .	206
Alcoholism as a Disease, . . . . .	253
Alcohol on the Nervous System, . . . . .	287
Art to Increase the Drink Impulse, . . . . .	318
Abbott, Dr. A. C., . . . . .	384
Alcohol, Opium, and other Narcotics, . . . . .	420

## B.

Bovine in Inebriety, . . . . .	89
Beverage or Medicine, . . . . .	96
Bradner, Dr. N. Roe, . . . . .	270
Brush, Dr. E. N., . . . . .	289
Burrall, Dr. T. A., . . . . .	303
Bell, Clark, Esq., . . . . .	369

## C.

Crothers, Dr. T. D., 19, 79-87, 203-213, 301, 315-324, 374, 416, 418, 420, 425, 427, 428	
Cocainists, Confessions of, . . . . .	54
Coffee, Toxic Effects of Large Amounts, . . . . .	62
Cigarettes, . . . . .	69
Cocaine Poisoning, . . . . .	91
Compulsory Curative of Inebriates, . . . . .	111
Cocaine Poisoning, Symptoms, Magnan, . . . . .	161
Chlorodyne, Beware of, . . . . .	197
Congress at Brussels, . . . . .	210
Clay Inebriates, . . . . .	212
Charlatan Efforts to Cure Inebriety, . . . . .	270
Complete Blindness due to Overdose of Jamaica Ginger, . . . . .	344
Case of Dementia and Alcoholic Mania, . . . . .	374
Conclusions of Papers Presented at International Congress, . . . . .	389

	PAGE.
<b>D.</b>	
Degeneration from Toxic Drugs, . . . . .	65
Delirium Tremens, Responsibility of, . . . . .	72
Davis, Dr. N. S., . . . . .	82, 162
Disease of Personality in Inebriety, . . . . .	86
Dalrymple Home, . . . . .	282
Dangers of Alcohol, . . . . .	296
Drink and Insanity, . . . . .	300
Degeneration Race in Inebriety, . . . . .	301
Diet in the Treatment of Inebriety, . . . . .	427
<b>E.</b>	
Epilepsy, Alcoholic, . . . . .	236
Ellsworth, Dr. V. A., . . . . .	278
<b>H.</b>	
Huntly, Dr. W., . . . . .	30
Historical Address on the Journal of Inebriety, . . . . .	19
Heredity, . . . . .	97
Herter, Dr. C. A., . . . . .	123
Hutchinson, Dr. M., . . . . .	184
Hypnotic Suggestion in Inebriety, . . . . .	187
Howard, Dr. W. S., . . . . .	236
Home for Inebriates, First, . . . . .	278
Hall, Dr. H. J., . . . . .	306
How far is Inebriety Influenced by Stringent Times, . . . . .	399
Hasheesh (Cannabis Indica) Inebriety, . . . . .	402
<b>I.</b>	
Inebriety from Inheritance, . . . . .	68
Inebriety, Disease of Personality, . . . . .	86
Inebriety Cured by Bovinine, . . . . .	89
Inebriety, is it Inherited, . . . . .	92
Insanity and Inebriety, . . . . .	95
Inebriates, Compulsory Curative Treatment, . . . . .	111
Inebriates, Prison Treatment, . . . . .	142
Inebriates, Moral Types and Characteristics, . . . . .	152
Inebriate Paupers, . . . . .	169
Inebriate Asylums — Foxboro, . . . . .	185
Inebriety, Cure by Hypnotic Suggestion, . . . . .	187
Inebriates, Homes in England, . . . . .	191
Inebriety, New Law relating to it, . . . . .	198
Inebriety in Infancy, . . . . .	208
Inebriety from Snuff, . . . . .	211

*Index.*

v

	PAGE.
Influences of the Seasons on Inebriety, . . . . .	315
Insanity and Inebriety, . . . . .	318
Inebriate Mobs and Agitators, . . . . .	320
Inebriety and the Penal Law, . . . . .	329
Inebriety among Young Men, . . . . .	380
Influence of Acute Alcoholism on Rabbits, . . . . .	384
Inebriate Heredity in Crime, . . . . .	410
Inebriate Delusions, . . . . .	416
International Anti-alcoholic Congress, . . . . .	425

**J.**

Judicial Evolution as to Criminal Responsibility, . . . . .	369
-------------------------------------------------------------	-----

**K.**

Kerr, Dr. Norman, . . . . .	72, 111
-----------------------------	---------

**L.**

Law relating to Inebriates, . . . . .	198
Lett, Dr. Stephen, . . . . .	264

**M.**

Mason, Dr. L. D., . . . . .	1, 169
Morphinomanics, Civil Capacity, . . . . .	102
Moral Characteristics and Types of Inebriates, . . . . .	153
Mason, Dr. Osgood, . . . . .	187, 219
Morphine Habit, its Treatment, . . . . .	226
McPhedran, Dr. Alexander, . . . . .	242
McMichael, Dr. George H., . . . . .	253, 380
Morphine Habit, . . . . .	311
Mistakes in Diagnosis of Inebriety, . . . . .	412
Moral Palsy, . . . . .	428

**N.**

Nicotine, Effects of, . . . . .	132
Neuritis, Peripheral, . . . . .	242
Nicotine, . . . . .	287
Neurology, . . . . .	413

**O.**

Opium Addiction, is it a Disease, . . . . .	30
Organic Memories, . . . . .	81
Opium Poisoning and Pons Apoplexy, . . . . .	96
Opium in India, . . . . .	354

	PAGE.
<b>P.</b>	
Prison Treatment of Inebriates, . . . . .	142
Pitcairn, Dr. J. J., . . . . .	142
Palmer, Dr. C. F., . . . . .	152
Phenomena in Intoxication, . . . . .	203
Psychology, New School, . . . . .	209
Procedure with Inebriates, . . . . .	298
Phase of Inebriety, . . . . .	322
Pitcairn, J. J., . . . . .	329
Pathology and Treatment of Chronic Alcoholism, . . . . .	393
Phenomena of Mescal Intoxication, . . . . .	404
Pathogenesis of Delirium Tremens, . . . . .	409
<b>R.</b>	
Rugh, Dr. J. T., . . . . .	62
Report for Asylum of Inebriates, . . . . .	70
Reformed Men as Asylum Managers, . . . . .	79
Robertson, Dr. J. W., . . . . .	226
Rudolf, Dr. R. D., . . . . .	354
<b>S.</b>	
Searcey, Dr. J. T., . . . . .	65
Syphilis and Paresis, . . . . .	98
Seaver, Dr. J. W., . . . . .	132
Shattuck, Dr. Geo. L., . . . . .	198
Sunstroke in Inebriates, . . . . .	207
Stimulants, Vaso-motor, . . . . .	214
Suggestion as Remedy in Inebriety, . . . . .	219
Stimulants, Danger from Nerve, . . . . .	241
Suggestion in the Treatment of Inebriety, . . . . .	303
Study of Effects of Alcohol in Schools, . . . . .	418
<b>T.</b>	
Tuberculosis and Cardiac Alcoholism, . . . . .	44
Tussey, Dr. A. Edgar, . . . . .	44
Tea Cigarettes, . . . . .	69
Tobacco, Rare Effect, . . . . .	93
Treatment of Inebriates in Austria, . . . . .	99
Tobacco and its Influence, . . . . .	102
Tobacco and the Eyesight, . . . . .	225
Treatment of Inebriety in Russia, . . . . .	235
Treatment of Inebriates, . . . . .	306
Thomson, Dr. A. G., . . . . .	344
<b>W.</b>	
Walnut Lodge Hospital Report, . . . . .	179
Why Do Men Drink, . . . . .	264





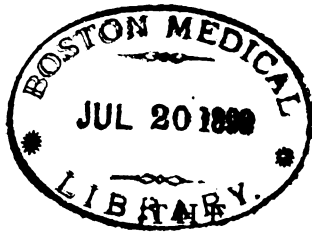






*N. S. Davis.*

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## THE FIRST MEETING OF THE ASSOCIATION AND THE ORIGINAL MEMBERS.\*

By DR. L. D. MASON, BROOKLYN, N. Y.

At a meeting of physicians, superintendents, and friends of inebriate asylums, held in the parlor of the Young Men's Christian Association, New York, November 29, 1870, at 12 o'clock, noon, the following named persons were enrolled:

Willard Parker, M.D., President, and D. G. Dodge, M.D., Superintendent of New York State Inebriate Asylum at Binghamton.

Hon. J. S. T. Stranahan, President, T. L. Mason, M.D., Consulting Physician, L. D. Mason, M.D., Attending Physician, Geo. J. Bennett, M.D., Brooklyn, Director, and Rev. J. Willett, Superintendent of Inebriates' Home of King's County, N. Y.

W. C. Lawrence, Superintendent, Daniel Allen, R. K. Potter, Theodore Prentice, Directors of Washingtonian Home, Boston, Mass.

\* Read at the special meeting of "The American Association for the Study and Cure of Inebriety," held Nov. 20, 1896, to commemorate the organization of the Association Nov. 29, 1870.

## 2 *First Meeting of Association and Original Members.*

P. J. Wardner, M.D., Superintendent of Washingtonian Home, Chicago, Ill.

Albert Day, M.D., Superintendent of Greenwood Institute, Massachusetts.

Joseph Parrish, M.D., President of Pennsylvania Sanitarium at Media, Pa.

C. L. Ives, M.D., Professor of Theory and Practice of Medicine, Yale College.

Alonzo Calkins, M.D., author of "Opium and Opium Habit."

The object of this meeting was to organize "The American Association for the Cure of Inebriates," (this association,) so that to-night we lack only a few days to complete the 26th anniversary of this society.

It would seem superfluous for me to dwell at length on the character and standing of the gentlemen who composed this meeting. Dr. Willard Parker was one of the leading surgeons of New York City, and for many years had held a prominent position as a teacher of surgery. And now, at the latter part of a life brilliant with professional, social, and financial success, he considered it a privilege to join with those who desired to lift the terrible burden of inebriety from its victim.

Dr. Theodore L. Mason was another of those who brought to this meeting an experience that had been developed in the full activity of a busy municipal life, extending over many years. For twenty-one years he had been identified with medical education, as president of the Long Island College Hospital of the City of Brooklyn, socially and professionally, and, in the exercise of his citizenship, he had been identified with almost every movement of note that had taken place during his residence in Brooklyn, and his associates at this meeting found him a most worthy counselor, a close student of the subject to be considered, and a fervent friend and promoter of the proposed organization.

Dr. Albert Day was one who had given his whole life in private and institutional work to the cause of the inebriate,

his treatment and cure, and the means of prevention, as well as the means of restoration, as pertaining to the inebriate. He had watched the temperance movement from its infancy, had seen its errors, as well as its successes, and the first application of remedial measures for the cure of inebriety as a disease, and the gradual setting aside of simply moral measures, which at one time dominated and constituted the only means of dealing with the inebriate.

Dr. Joseph Parrish was the prime mover and instigator of this meeting, and this association exists to-day, because of the energy and foresight of Dr. Parrish. At this time Dr. Parrish was past middle life, and in the full exercise of his mental and physical powers, and he threw his whole energy, his mind and heart and soul into this organization. It is needless to add he brought a rare experience as an alienist, as a specialist in mental disease, and also as a specialist in the treatment of alcoholism and the opium habit. As the organizer and first secretary of this association, he was earnest and indefatigable and successful in not only making the various meetings attractive and instructive, but by the work which evolved from the association, by his assiduity and practical suggestion carried the interest across the Atlantic and affected Continental Europe favorably for the inebriate, and to-day England and her colonies, and France and Germany, and wherever an inebriate receives the benefit of asylum, and wholesome and effective laws, it is all due primarily and in its inception to one man, and that man is the late Dr. Joseph Parrish.

I might make mention of the names of Rev. Mr. Willet, Dr. Daniel G. Dodge, and others less conspicuous, it may have been, in professional and social circles, but none the less energetic or in full sympathy with the purpose of the meeting.

My object in thus dwelling on a few of the most prominent and best known of those present at this meeting is to impress you with the fact that these men were not "temperance cranks," in the common language of the day, nor were they

#### 4 *First Meeting of Association and Original Members.*

those who had a faint conception of the work, the influence, and the opposition which such an organization foreshadowed. They were all men of rare and ripe professional experience, high social standing, and Christian philanthropists in the best sense of the word.

Twenty-six years have passed since these men met and counseled on that memorable occasion. Has their wisdom been justified? Were their surmises correct? Fellow-members, look around you. Asylums for inebriates are seen in every civilized quarter of the globe. Beneficent laws shelter, provide for, and protect him. He is no longer a pariah and outcast in the land, the flotsam and jetsam of the tide of public opinion, and the time is not far distant when he too, like his twin brother, the lunatic, will, in every state and in every country, receive the full benefit of institutional care and beneficent laws. It is well for us to-night to lay our gifts of reverence, love, and respect on the altar of memory, and say of the departed dead, you laid the foundations of this structure on the rock of hope, faith, and charity, — hope in the trust and confidence that your work would succeed, faith in the God above you, and in love for your fellowman.

This association must go on and it will go on with ever successful progress, if the spirit of its founders go with us. Let us see to it that we emulate that spirit, and carry this association forward into the yet unknown regions of scientific research.

Dr. Willard Parker of New York was called to the chair, and Dr. Joseph Parrish of Pennsylvania was chosen secretary pro tempore. On taking the chair Dr. Parker made an address, and it was so characteristic of the man and so fully in sympathy with the purpose of the meeting and the objects for which it was organized, that I shall take the liberty to present the address to you in its entirety.

**ADDRESS.**

Gentlemen: — The purpose of this meeting is the discussion of the subject of inebriety, and its proper treatment.

It is not a temperance, but a scientific gathering, made up of men having charge of the asylums and homes already established in the United States for the cure of the unfortunate victims of alcoholism.

In the beginning of the present century insanity was regarded as a visitation of God's displeasure, and not as a disease, the subject of scientific investigation, and amenable to treatment.

To-day we know, from the statistics of accurate observers, that eighty per cent. of the cases of acute insanity treated are restored to health and usefulness.

The important subject of inebriety is regarded now as was insanity some seventy years ago; the disease being considered irremediable, and its victims as forever doomed.

At the outset we are met by the inquiry:

I. What is alcohol?

The answer is — a poison. It is so regarded by the best writers and teachers on toxicology. I refer to Orfila, Christison, and the like, who class it with arsenic, corrosive sublimate, and prussic acid. Like the poisons, when introduced into the system, it is capable of destroying life without acting mechanically.

II. The character of alcohol being established, we investigate its physiological and pathological action upon the living system. It has been established that, like opium, arsenic, prussic acid, etc., in small doses, it acts as a mild stimulant and tonic.

In larger doses it becomes a powerful irritant, producing madness, or a narcotic, producing coma and death.

III. It being settled that alcohol introduced into the system improperly induces a general disease in that system, as well marked as intermittent fever, small-pox, or lead-poison, the question here arises, can that disease be cured? The an-

6 *First Meeting of Association and Original Members.*

swer is affirmative. Inebriety can be cured. Like other diseases, however, subject to relapses.

IV. It will be the object of this meeting to inquire into the best mode of treating inebriety.

1. Whether the city or country offer more advantages.
2. Whether large or small institutions accomplish most cures in proportion to the number of patients.
3. What legislation, if any, is needed.

We may inquire also into the advantage of supplementing the asylums with homes in our large cities.

Finally, it must be the steady aim of this body to impart scientific truth, and thus enlighten the mind of the public, inducing it to move in its power, and demand protection against a disease infinitely more destructive than cholera, yellow fever, small pox, or typhus, which are now so carefully quarantined.

At the conclusion of Dr. Parker's address the secretary stated that several gentlemen present had reported that they were in possession of papers to be read before the meeting, and it seemed desirable to arrange an order of business, that they may be properly presented; whereupon Dr. Wardner moved the appointment of a committee to prepare an order of business.

The chair appointed Drs. Wardner, T. L. Mason, and W. C. Lawrence, who retired for a few minutes, and returned with the following order for the essays, which was agreed upon:

1. The Pathological Influence of Alcohol, and the Nature of Inebriation, by N. S. Davis, M.D., of Chicago.
2. Philosophy of Intemperance, by Joseph Parrish, M.D., of Pa.
3. The Disabilities of Inebriates, by the inmates of the Pennsylvania Sanitarium.
4. History of Washingtonian Home, by W. C. Lawrence of Boston.
5. Restraint as a Remedy for Inebriety, by D. G. Dodge, M.D., of Binghamton, N. Y.



6. The relation of the Church to Inebriates, by Rev. J. Willett of Fort Hamilton, L. I.

7. Inebriate Asylums in their Relation to Social and Political Economy, by Albert Day, M.D., of Greenwood, Mass.

8. Moral and Social Treatment of Inebriates, by P. J. Wardner, M.D., of Chicago.

Dr. Wardner was requested to read Dr. Davis's paper, as the latter was unable to be present.

Dr. T. L. Mason rose to notice the point in Dr. Davis's paper which refers to legal provisions for inebriates, and thought one great object of this meeting should be to consider the question, *what can be done to procure legislation that shall recognize inebriety as a disease, as it does insanity*, and make provision accordingly.

Mr. Stranahan rose to urge that *intemperance should be announced by this meeting as a disease*; that this fact being admitted, the next question should be, what can be done to cure and prevent it by individuals, by law, and by the common sentiment of the people, all of which would be influenced by the decisions of this body.

Dr. Parrish then read a paper on the Philosophy of Intemperance, and also a communication to this meeting from the inmates of the Pennsylvania Sanitarium, on The Disabilities of Inebriates.

The question of restraint incidentally referred to in the latter communication elicited considerable remark.

Mr. Willett referred to the experience of the King's County Home, which was conducted without written rules; and though the class of persons received there are many of them taken from prisons and police stations, and some of them belong to what are known as the dangerous classes, he had no difficulty in controlling them without bars or locks.

Mr. Allen had the same views about restraint, and made an earnest appeal in favor of personal influence upon the inebriate. He was not to be controlled, but led, and if he could realize that efforts in his behalf were for his own good, and not

## 8 *First Meeting of Association and Original Members.*

for his punishment, he would appreciate them and be benefited. Mr. Prentice said that the people of Massachusetts had been educated up to the idea that intemperance is a disease, that it was now acknowledged in the courts of that state, and that inebriates were to be treated as diseased persons, and not as criminals.

Mr. Lawrence then read his paper on *The History of the Washingtonian Home at Boston.*

Remarks were made by Drs. Wardner, Day, T. L. Mason, and Mr. Willett, on the importance of individual effort, and against legal punishment, which were strongly seconded by Mr. Prentice.

Dr. Dodge then read his paper on *Restraint as a Remedy for Inebriety.*

Adjourned at 4:30 till 8 P. M.

### EVENING SESSION.

The meeting again assembled at 8 o'clock. Dr. Parker in the chair.

The first order of business was the reading of Mr. Willett's paper on the *Relation of the Church to Inebriates.*

Remarks were made by several members upon the influence that might be exerted by society to favor the restoration of inebriates; the fact that they were looked upon with suspicion, and constantly circumvented as a doubtful and uncertain class, had much to do with exciting the tendency to drink. If the church and religious associations would receive and foster such persons in their efforts, it was believed much more good would be accomplished, and it was thought that the Young Men's Christian Association in all parts of the country might accomplish great good, by attaching to their rooms lodging houses for inebriates, where they could be taken, instead of to police stations.

Dr. Day read his paper on *Inebriate Asylums as they Relate to Social and Political Economy.*

A discussion ensued on the question of the treatment of inebriate women in the same building with men.

Dr. Day reported having two ladies in his family, with seventeen men, who ate at the same table, and participated in becoming social amenities.

Mr. Willett spoke of the subject being one of great importance, and gave experiences from the King's County Home, where both sexes are included under the same roof.

Dr. Wardner read his paper on the Moral and Social Treatment of Inebriates. A discussion followed on the practice of holding social experience meetings, which was usual in some of the homes.

Dr. Parrish doubted the propriety of cultivating a tendency in inebriates to refer to their past lives, and make their experiences a subject of ordinary conversation. He feared the tendency of such practice was to cultivate looseness of expression which might lead to caricature and merriment. With his patients, he discouraged such allusions, and preferred that they should rather forget the past, availing themselves of every opportunity afforded by the present to promote their improvement, and look forward to a better life. He did not deny that such intercourse might be useful, if guarded by the solemnities of a religious meeting, but otherwise should discourage it. He felt sure that public sentiment was often influenced against the inebriate by well-meaning and yet indiscreet advocates of temperance, who present inebriates as subjects of laughter, and make stories and jokes out of their misfortunes, and he hoped the influence of this meeting would be against such performances.

Dr. Day approved of such meetings, and in his early connection with the Home, they became an established part of the discipline and treatment which had continued since that time. He thought much depended on men committing themselves, and that their influence was good upon others. He had found it to work well in Boston, but had not succeeded in establishing the practice when he took charge of the asylum at Binghamton, where it had never been adopted.

Mr. Lawrence found it to work well at the Boston Home,

## 10 *First Meeting of Association and Original Members.*

and more especially being in the city where the old inmates who remained steadfast came to the meetings and strengthened the hands of the new and weaker ones. He discouraged any thing like merriment and caricature, being satisfied that loose conversations upon the subject among each other was injurious, while the earnest appeals of inebriates to each other, based upon experience, were beneficial.

On motion, a committee was appointed to report a plan of permanent organization to-morrow morning at 10 o'clock. Committee, Drs. Wardner, Dodge, and Parrish.

Adjourned.

Wednesday, 10 A. M.

Meetings assembled punctually, and the President took the chair.

The chairman of committee on permanent organization made the following report, which was adopted:

### PLAN OF ORGANIZATION.

1. The name of this association shall be the "American Association for the Cure of Inebriates."\*

2. Its members shall consist of Superintendents, Physicians, and Delegates from Boards of Directors of institutions for the treatment of inebriates.

3. Its object shall be to study the disease of inebriety, to discuss its proper treatment, and endeavor to bring about a co-operative public sentiment and jurisprudence.

4. Its officers shall be a President, one or more Vice-Presidents, Secretary, and Treasurer; each of whom shall perform the duties usually assigned to such officer, and shall be elected at each annual meeting.

5. The annual meeting shall be held on the 2d Tuesday of November, at such places as may be agreed upon from year to year.

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\* This name has since been changed to "The American Association for the Study and Cure of Inebriety."

6. Special meetings may be called by the President, on his own motion, or at the request of two or more members.

On motion, Drs. Wardner, Dodge, and T. L. Mason were appointed a committee on nominations for officers of the association, who, after a few minutes' absence, made the following report, which was unanimously adopted:

For President, Willard Parker, M.D., of New York; for Vice-Presidents, C. J. Hull of Chicago, Otis Clapp of Boston; for Secretary, Joseph Parrish, M.D., Media, Pa.; for Treasurer, Theodore L. Mason, M.D., of Brooklyn.

The following Preamble and Declaration of Principles were carefully considered and unanimously adopted:

Whereas, the "American Association for the Cure of Inebriates," having met and considered important essays on the various relations of inebriety to individuals, to society, and to law, and having seriously determined to use their influence in all suitable ways, to create a public sentiment and jurisprudence, which shall co-operate with the true methods for the recovery of inebriates, do make the following declaration of their principles:

1. Intemperance is a disease.
2. It is curable in the same sense that other diseases are.
3. Its primary cause is a constitutional susceptibility to the alcoholic impression.
4. This constitutional tendency may be inherited or acquired.
5. Alcohol has its true place in the arts and sciences. It is valuable as a remedy, and, like other remedies, may be abused. In excessive quantity it is a poison, and always acts as such when it produces inebriety.
6. All methods hitherto employed having proved insufficient for the cure of inebriates, the establishment of asylums for such a purpose is the great demand of the age.
7. Every large city should have its local or temporary home for inebriates, and every state one or more asylums for the treatment and care of such persons.

## 12 *First Meeting of Association and Original Members.*

8. The law should recognize intemperance as a disease, and provide other means for its management than fines, station houses, and jails.

Dr. Wardner offered the following resolution, which was unanimously adopted:

Resolved, That every superintendent is requested to keep an accurate history of all cases admitted into their asylums, touching the condition of the patient's history, when admitted and while in the house, and enter all the items that may be gathered about their future life after discharge, and give the association the benefit of such statistics, at each annual meeting.

In compliance with this resolution, Dr. Dodge and the secretary were appointed a committee to prepare a statistical table for use in all our institutions, covering the history and condition of the inmates, and that this table be the basis of our statistical reports next year.

Dr. Wardner offered the following, which was adopted:

Resolved, That it is important to connect with our asylums some system of healthy and profitable employment for such patients as can be induced to labor, and that it should be carried on under the direction of the superintendent.

Considerable discussion was had upon this topic. Dr. Wardner stated that the directors of the Chicago Home had had the subject under discussion, but were at a loss to know how to proceed, and were waiting the action of this meeting.

Mr. Willett reported the experience of the Home on Long Island, where they have several means for mechanical occupations, including a printing press, and with inmates who are taken from the dependent classes, labor could be required, etc.

Mr. Prentice stated the practice of the Home in Boston to be, to receive men from the city who were inebriated, sober them, and allow them to continue their occupations, while they boarded and lodged at the Home — so that they were enabled to pay their board from their earnings; but that this plan could only be effective with persons who could find employment in Boston.

Dr. Parrish thought that for other classes of patients there might be a system of mental training that would be pleasing as well as valuable in cultivating the judgment and improving the will, and he hoped something would be evolved from our experiences at home that would meet this want.

Dr. T. L. Mason offered the following resolutions, which were adopted:

Resolved, That the question of the cure of inebriates is one which depends largely upon the sentiment and practice of the community.

Resolved, That when the inmates of inebriate asylums leave the care of such asylums, it is the duty of their families, of the church, and of the people at large, to receive them without reproaches for their past lives, and give them encouragement and protection.

This subject was freely discussed, and a number of instances related of men who had left institutions with great promise of security and usefulness, but for want of being cordially received and aided, had become discouraged and relapsed.

Dr. L. D. Mason called attention to the fact that the opium disease required attention from this body. There are, perhaps, no institutions for inebriates, where opium cases are not sometimes admitted. At the King's County Home there are several at this time, and he hoped the subject would receive the attention of the members before the next meeting.

Dr. Parrish exhibited a copy of a bill recently presented to the British House of Commons, and which he believed had passed that body, defining intemperance, and declaring that the man who drinks frequently or habitually, to such excess as to be unable to take care of himself, is of unsound mind; and town and county authorities are, therefore, authorized to erect asylums and take care of such persons. Our laws are at fault in this regard. They do not define what intemperance is, or what an habitual drunkard is, and do not generally authorize anybody to treat him as a diseased person.

The importance of having uniform legislation by the several

## 14 *First Meeting of Association and Original Members.*

states of this country, was considered. The bill just read was on motion referred to a committee, with instructions to report a form of a law next year. The chair appointed Dr. T. L. Mason, Rev. J. Willett, and Dr. D. G. Dodge.

An informal discussion followed on the value of alcohol and its effects on the body, which is omitted as having little historic interest.

On motion of Dr. Wardner the following resolutions were unanimously adopted:

Resolved, That we thank the Young Men's Christian Association for the use of their parlor, and for the other courtesies extended to us.

Resolved, That we hereby express our thanks to Dr. Willard Parker for the genial and impartial manner in which he has presided over our deliberations; and to Dr. Joseph Parrish for his devoted and persistent efforts in this great and good cause.

The subject of publishing the proceedings and essays read to the association being considered, Dr. T. L. Mason moved that the secretary be authorized to arrange the minutes and papers for publication in pamphlet form, and that five thousand copies be published, the expense to be borne by the different institutions represented.

It was agreed to forward to Dr. Mason, treasurer, an allowance from each institution, to meet the cost of publication, which it was supposed would amount to not less than five hundred dollars.

Dr. Parker made some interesting remarks on the commercial value of men, showing the loss to the community in labor and productiveness of inebriates, and commended the subject to the careful thought and study of all present. Whereupon he was, on motion, requested to furnish a paper on the subject to the secretary for publication with the proceedings.

Adjourned, to meet next year in New York city.

This report of the first meeting is, in fact, a reproduction of the original minutes, and we thought it best to so present it,



because this meeting has become historic as the first meeting ever held, as far as we know, in the history of the world, in which the representatives of several asylums for the treatment of inebriety assembled to counsel with each other and to establish an organization which should mutually benefit those who composed its membership and strengthen the efforts then being inaugurated for "The Study and Cure of Inebriety."

We desire, first, to call especial attention to the character and the social and professional standing of the more prominent men who organized this association. Secondly, to the nature of the subjects discussed and the titles of the papers read. Thirdly, to the "Declaration of Principles," which was in reality a "Declaration of independence," for, upon its declaration and acceptance this association became at once independent of and, in a measure, in opposition to the scientific, moral, or religious, and legal views, that then prevailed, in regard to inebriety and the position it held in relation to science, religion or morals, and law. Suffice is to say that our predecessors and the founders of this association laid its corner stone well and truly and in great wisdom, and built for all time — for we believe that this corner-stone of our principles will remain, and that "the stone which the builders rejected will become the chief of the corner," nay, has so become, for, to-day, medical science, religion, and law have all come and placed their offerings of accord and respectful acquiescence upon it.

Another characteristic of this first meeting was the entire unanimity that pervaded its counsels and the active interest of those who participated in it.

As to the results of this meeting, it was not only to stir the scientific world in America alone, but Continental Europe was soon to be influenced by the proceedings of this association. Like the flash of a search-light across the darkened heavens of obscurity, mystery, and ignorance, our association was now signaling in a silent, but effective, manner. All civilized

## 16 *First Meeting of Association and Original Members.*

nations were to interpret the signal and, in due time, respond to us.

Twenty-six years ago this association stood as a lighthouse, casting its rays over the dark and troubled waters of popular and scientific thought, and guiding the seeker after truth to a placid and safe anchorage. Or, we may liken it to a bold headland protruding itself into the sea of stormy opposition and turning the adverse current of thought into proper and scientific channels.

The fact remains undisputed that this association, as the pioneer of correct scientific principles, has led medical science, as regards inebriety, from the low levels and mist-covered valleys of obscure and erroneous conception of the status and true condition of the inebriate to the clear atmosphere of the uplands of unclouded scientific vision, and the true and unbiased medical scientist now accepts and acts on the "Disease Theory of Inebriety," and now, not only the inebriate is regarded as diseased, and so treated, but even in English courts, noted for their conservatism, is regarded as an irresponsible agent, and the laws amended for his relief and protection, and medico legal science has gained a victory on behalf of the irresponsible inebriate.

But we cannot, as an association, rest until we have placed the status of the indigent or pauper inebriate on the same level with the indigent or pauper lunatic. Equally liberal laws for his control and maintenance should surround and be exercised on behalf of the inebriate as are for his unfortunate brother, the lunatic. Nor will this be effected until every state shall have its asylum for the care of pauper inebriates, that state care which is so desirable and effective in the case of the lunatic, and in case where the inebriate has property or controls that of others, laws must be enacted by which, in the earlier stages of his inebriety, he can be controlled, and the waste, ruin, and bankruptcy of his own estate or of the estate of those dependent on him prevented. Our association and an enlightened medical profession must urge medico-legal

societies to push forward the good work of sound and effective legislation to save not only the inebriate from himself, but also society from his wasteful and destructive tendencies.

As an association we must add to our members all those who have a direct interest in the study and cure of inebriety, and in securing the passage of legal measures that shall be effective on behalf of the inebriate.

This association, as the parent society, should establish *branch societies in every state in the Union, and every state should have its special asylum for the care and treatment of the pauper inebriate.* This association should urge energetically *state control* of the inebriate. The maintenance and treatment of the great army of inebriates will then be at the least possible expense to the public, and their destructive tendencies restrained and practically rendered inert. But, in order to secure judicious legislation on behalf of the inebriate, this association has another function and that is as an instructor or educator of public opinion. "The Journal of Inebriety," the official organ of this society, does this in a measure, but it only reaches a limited and special class. What is needed is the scientific discussion in a popular manner, that can be comprehended by a fair degree of intelligence the cardinal points of the whole subject. The people must be educated up to the fact that alcohol is *more destructive* than yellow fever, cholera, or small pox. These have slain their thousands, but alcohol its tens of thousands; and they must be taught that the inebriate is the standing exponent of the evil product of alcohol. Moreover, the disease theory of inebriety must be so presented to our legislators that they will *provide and maintain special institutions for the care and treatment of the inebriate.*

As an association we must study the great underlying or foundation causes of inebriety, heredity, disease, or accident, or the acquired forms. Our committee on nostrums has shown that many of the so-called *patent medicines are the cause*, oftentimes, of the alcohol or opium habit.

## 18 *First Meeting of Association and Original Members.*

Within a few years, quackery, under the guise of legitimate medicine, with philanthropy as a cloak, and using religious cant with all the adeptness that characterizes hypocrisy appeared in the United States, and attempted also to effect a lodgment in Continental Europe. This association, although maligned and threatened by the syndicate that controlled the so-called cure, held a special meeting and denounced it is the most iniquitous and stupendous humbug of the century. It was also largely through the instrumentality of members of this association, seconded by the intelligent and conscientious members of the medical profession, that the special legislation, backed by the bribery and corrupting influence of this syndicate, failed to mature, and became a dead letter.

Thus has this association been faithful to trusts bequeathed to it by those who founded it.

When Napoleon the Great was in Egypt he encouraged his battalions by pointing to the gigantic pyramids, as they overshadowed his camp, saying, "Soldiers, past generations look down upon you." But, fellow-members, I would not point to the past, however glorious, but to future conquests, and urge you not only for this generation, but for all generations to come, be faithful to the sacred charge intrusted to your care, and emulate the example, conscientious work, rare wisdom, prescience, and fidelity to trust of your predecessors, as shown forth so eminently in not only their first meeting, but throughout their entire connection with this association.

Our principles are just as true, concise, and comprehensive as they were twenty-six years ago.

Let us adhere to these principles which have withstood the assaults of quarter of a century, and with them emblazoned on our standard, as we have in the past, so in the future, withstand and conquer all opposition based on prejudice or ignorance. Only thus will the spirit manifested in the first meeting of this association reach its highest aspirations, and bring to their fullest development the objects for which this association was established.

HISTORIC ADDRESS ON THE JOURNAL OF INEBRIETY, ITS BIRTH AND GROWTH.\*

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

October 9, 1873, I was detained at Binghamton, N. Y., by the sudden illness of a traveling companion. At the hotel I made the acquaintance of some members of the Association for the Study and Cure of Inebriety. This association was holding a special meeting at the asylum in that city, following the regular session held in New York the day before. I was invited to attend the meeting, and heard Dr. Parrish read an elaborate paper on opium poisoning, followed by discussions by Drs. Mason, Parker, Wey, and others. This was my first acquaintance with this association and its members. The next year, 1874, I was made a member and read a paper at the annual meeting. The year after, 1875, I was elected secretary, which office has clung to me up to the present.

The meeting in 1874, at the Young Men's Christian Association in New York city, was of unusual interest. Six elaborate and very suggestive papers were read. The discussions and reports which followed seemed to rouse up new interest and was widely commented on and reported in the daily press. Some of the papers were reprinted and had a wide circulation, particularly Dr. Beard's paper on "Chronic Alcoholism." The transactions of that year were soon exhausted, so great was the call for them.

The next year, 1875, the association met in Hartford, Conn. Six papers were read, and several very elaborate reports of asylums were presented. A number of warm congratulatory

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\* Read at the anniversary meeting at New York, Nov. 20, 1896.

letters from eminent foreign physicians were read, and much enthusiasm prevailed. The same urgent call for the transactions followed, and some of the papers appeared in English, French, and German journals.

This demand for the proceedings of the association suggested the possibility of a journal which would gather up and put in a permanent form the literature of this subject. The papers read before the association had, in many cases, given a great impetus to the study abroad. Drs. Parrish and Dodge's visit to England and testimony before the parliamentary committee, together with Dr. Dalrymple's visit to this country and report of the work in America, had raised this subject immensely in the opinion of English and American physicians. At about this time appeared the curious circumstance of papers read at the association meeting translated into German and French, then translated back to English and quoted in American journals as from foreign authors. The early papers of Drs. Parrish, Burr, and Beard, were, in part, republished in many journals in this country as translations and referred to foreign journals. This has continued more or less ever since. Papers, editorial paragraphs, and clinical reports have been translated into German, French, and Italian medical journals, then translated back, and are published in journals of this country as selections from foreign literature. This peculiarity gives the impression that studies from abroad can be quoted as reliable, while the same facts asserted at home may be doubted.

During the spring of 1876 Dr. Magnan of Paris published a report on alcoholism, which attracted great attention. Dr. Bucknill of England attacked the theory of disease in inebriety and roused a controversy which spread through all the journals, and was eagerly followed up and repeated in this country. Dr. Parrish had become prominent as the leader of the theory of disease in this country, and naturally felt great solicitude in the result of this discussion. The need of a journal to group and defend the facts of this theory became

more and more apparent, and Dr. Parrish and myself were asked to formulate some plan and estimates for the publication of a journal. Dr. Parrish had journalistic experience, yet he shrank from taking the responsibility alone, or from having active charge, and preferred that it should be in the hands of a committee.

The time had come for a journal to represent our association and defend its principles, and it was evident that it would encounter bitter opposition, and meet with obstacles that might be fatal to its growth. The theory of the disease of inebriety was confronted by three distinct classes of critics. One who flatly contradicted this theory, and asserted that all drinking was vice and moral disorder. Dr. Bucknil of London and Dr. Gray of Utica Asylum, both eminent and popular alienists, were leaders of this class. Both were caustic voluminous writers with intense convictions, and sought every opportunity to ridicule and denounce this new so-called crank movement.

The second class were the reformers and reformed men and religious philanthropists, who accepted the disease theory in part, especially in extreme degrees of alcoholic excess, but insisted that all cases were moral lapses at first. That first vice, then disease, existed, and the treatment must be directed to the vice side always. They urged that faith, pledge, and prayer cures were the leading essential remedies.

The third class were temperance societies and clergymen, who saw in this theory excuses to drink, and irresponsibility, together with dire disasters to all progress along humanitarian lines. Eminent men in both legal, medical, and theological circles warmly defended these theories, and looked down with lofty contempt on the work and theories of our association.

An annual meeting reported in a small paper-covered volume of transactions, could not rouse much opposition, but a journal that should enter the field to defend these theories must expect criticism and severe opposition. Drs. Mason

and Parrish realized this clearly, and after much correspondence and conference, it was decided to begin the journal after the annual meeting in October, 1876. It was thought best to make the secretary the figure-head, or the man in sight, to receive the first shock of criticism and conceal the movements of the real forces behind. I was, at that time, assistant physician in the Binghamton Asylum, and it was thought best to have the journal sent from that place to secure the prestige of authority for the statements it might contain. Dr. Hawley of Hartford, Conn., who was a very enthusiastic member of the association, arranged to have the journal printed at Hartford and secured a considerable advertising patronage to begin with.

The seventh annual meeting was held in the hall of the College of Physicians and Surgeons at Philadelphia, September 26, 1876. This being Centennial year all the members were present and a large audience of persons interested and others from curiosity. The late Dr. T. L. Mason was president. His address was a very clear, conservative statement of the "Disease of Inebriety," and was followed by several excellent papers. Then came a confusing irregular discussion in which a large number of persons participated. Many of these persons wrote out their remarks in full and urged their publication in the journal, and because they were not used became indignant and estranged. At this meeting the journal was formally organized, with Drs. T. L. Mason, Joseph Parrish, and T. D. Crothers as editorial committee. The first two members remained on the committee until removed by death, and always gave the journal their most hopeful aid and counsel. The meeting was over and the journal was announced to appear in December. The first question was to make a journal clearly scientific in cast and tone, and free from dogmatism, also to give the principles of the association the clearest general setting possible. In brief, to make the journal a worthy pioneer in a new field and to disarm criticism, arouse inquiry, and attract students of science to follow up the lines marked out in verification or for correction.



Accordingly the first number of the journal, dated December 1, 1876, appeared November 22d. It contained Dr. Mason's address, which gave a clear review of the facts which led up to the question of disease and the growth and experiences of the various asylums and teaching of leading writers on this topic. The tone was scientific, generous, and clearly convincing.

Dr. Beard following, discussed the "Causes of the recent increase of inebriety in America." This was equally admirable in tone and suggestiveness, and was followed by a brief report of the meeting and a short editorial by Dr. Parrish, and the first chapter of an analysis of a hundred cases of inebriety treated at Binghamton.

Five thousand copies of this first journal went out to prominent physicians and medical journals in this country. A large number went over to England, France, and Germany.

A number of journals extended a hearty welcome; others were silent, or displayed a sneering contempt, and a few others became hysterical in denunciations.

The latter were the anti-diseased theorists. The temperance party and friends saw in the journal another scheme of the rum power, to make inebriety respectable.

The third party looked down in pity at the folly of attempting to prove such theories.

The second number appeared in March and soon after the first storm of opposition burst upon the journal. Severe articles appeared in the medical and secular press, denouncing the facts and teachings of the journal, and individual letters came in large numbers criticising the position of the journal and calling attention to its errors and misconceptions. Along with this came contributions from all sorts and conditions of men and women who thought they had something to say along the confused frontiers of science and religion and the drink problem.

Some of these people were very importunate to have their contributions appear in the journal. Such contributions were

usually unfit scientifically and brought no new facts or statements worthy of print. Some of these persons sent addresses and papers which were praised by their friends, and when unable to secure their admission in the journal became angry, unjust critics.

The close of the first year of the journal saw no diminution in the storm centers of criticism, but evidently a circle of subscribers and friends began to appear whose enthusiastic support gave renewed encouragement and lessened much of the sharpness of continuous condemnation. The eighth annual meeting was held in Chicago and was not so largely attended. Many excellent papers were read and some confusing discussions followed. Only the papers were published, and the failure to print the discussions brought out another storm of criticism. In reality these discussions were mostly precipitated by reformers who were anxious to mark out boundary lines of vice and disease and convert the meeting into a weak temperance society. For several years the society meetings, after the reading of the papers, would merge into an elementary discussion of these disputed questions in which nothing new was offered and very erroneous impressions were conveyed of the true work. It was finally decided not to accept invitations to visit other places, but to hold our annual meetings in New York where we could be comparatively free from enthusiastic controversialists.

Slowly and gradually the reformer class receded whose efforts each year was turned to modifying our principles and converting the society into a semi-scientific and religious body. The journal became more and more independent, the literature of reform asylums directed by reformed men, grew less, and a wider, more cosmopolitan class of articles appeared. Medical journals who at first looked down upon these efforts, now urged for an exchange of copies, some of the bitter opponents became subscribers, evidently to keep in touch with the progress in this field.

Ten years of struggle and effort went by, the literature had

began to take permanent form and shape and receive recognition in all circles of science. The association meetings furnished a few papers every year, but the bulk of the articles came from all over the world and the value of the journal became more and more apparent. During this first decade the journal suffered greatly from over-zealous enthusiastic friends who possessed very certain knowledge of the progress of science and the course to be pursued by the journal. The failure to follow their dictatorial counsels made correspondence exasperating, and in many ways detracted from a general recognition. One policy strongly urged was to devote part of the journal to temperance and moral work, to take up the evils of alcohol, and become a champion of special theories of cure. Another was to collect facts and statistics for educational work and help on the formation of homes and resorts for inebriates where they could be educated to sobriety.

A third policy was to become severely scientific and publish results of post mortems and only original work, most of which was in German, and when translated was often found to be some paper or facts the journal had previously published, appearing with changes and alterations. Many of these critics demanded that we follow lines of investigation which was utterly impossible. A prominent medical teacher was sure the results of numerous autopsies would bring out facts unknown before. He seemed to forget that the most thorough examination of the cadaver had failed to show any disease that was peculiar and common to insanity. Even recent microscopical study of the brain of acute maniacs revealed no differences from that of a sane person. One class of over-zealous friends of the journal have produced some embarrassment in urging the publication of strange remedies said to be followed by remarkable results. This was before the days of gold cure specifics, when sodium calcium, wine of antimony, tincture snake root, and complex forms of cinchona, were among the most prominent remedies urged. A large number of good men have had convictions that specifics would be found for the cure of inebriety. Their views have been urged, and when advised

to make further test before publication became offended. Many of the annual meetings of our association were very unprofitable owing to the element of credulity which gave readers of papers an over confidence in their conclusions which more time and study of the subject would have dispelled. The past ten years of the journal has cleared away much of the confusion and the controversy between the editor and contributor, which is now largely of the past. In the first decade a large number of papers offered contained most confusing statements of the vice impulse and symptom in inebriety. This was objected to by the editor as unscientific and impractical. Other papers were offered giving moral remedies great prominence. This was also objected to. The result was a long controversial correspondence and the withdrawal of the papers. On one occasion a leading medical man became very angry at the publication of his paper with these objectional passages cut out. Later, when the paper was republished abroad and prominently noted, he relented and became a warm friend. The early establishment and growth of asylums for inebriates have created sources of sharp controversy. Several asylums of this class have been closed through the ignorance and errors of their managers, also misdirected public sentiment. To keep out of these storm centers has been the policy of the journal, and while of necessity sailing very close to the turbulent waves, the excitement and tumult have been avoided. The gold cure specifics roused by the temporary flurry in the literature of the subject, which quietly passed away. One of the most gratifying testimonies of the esteem of the opinions of the journal was the large number of inquiries received from Europe concerning the gold cures; also from eminent men and journalists of this country. These inquiries still continue and are religiously answered. One of these specific schemes, finding that the journal was referred to so often as an authority, through an agent opened negotiations for purchase, suggesting an extravagant price. Failing in this they have, at different times, ordered large numbers of certain copies and mailed them with their circulars, creating the impression of full co-

operation. This, like the gold scheme, was of short duration and early death. Probably no one event has done more to raise the literature of inebriety into a permanent place than the International Congress of Inebriety at London in 1887. The eminent character of the persons who participated and the papers presented gave the subject a scientific place not occupied before. The great English opponent, Dr. Bucknill, was silent and his American associate, Dr. Gray, was dead, and a younger generation championed the theory of disease with an assertiveness that was startling. Dr. Kerr followed soon after with a text-book on inebriety which has since passed through three editions. In 1893 our association issued a volume on the same subject made up of papers which had appeared in the journal. This is published by Treat & Co., New York city. In this country the study of the inebriate and his malady has been most prominent. In England alcohol and its action on the organism has been principally studied. A society over which the late Dr. Richardson presided has been engaged in this study for over ten years. The second society for the study of inebriety was formed by Dr. Kerr in 1884, and this, with our society, are the pioneer organizations of the world. In France, Germany, Switzerland, Belgium, and Italy are societies for the study of the abuses of alcohol which occupies the same ground but give more prominence to the action of alcohol. Six International Congresses have been held in continental Europe in which all sides of alcohol and inebriety have been discussed. While these meetings are very largely attended and seem to rouse a great deal of interest, the only real scientific work they have done has been to study the effect of alcohol on the body.

The anaesthetic and depressant action of alcohol has been demonstrated by instruments of precision, and what some of the English physicians have asserted from clinical experience has been confirmed by the results of the laboratory work.

In this country we have led the scientific world in our studies of the inebriate and his malady. The journal still is without a rival; after a quarter of a century, no other journal has ap-

peared to divide the honors. The English society for the study of inebriety publishes a bulletin in which only their transactions appear.

The literature of inebriety, as seen in the *Index Medicus* monthly reports, comprises from eight to twenty titles of papers, pamphlets, and articles per month. These are exclusively in medical journals, and of course vary widely in value and treatment of the subject. Many of these papers relate to questions of alcohol and its chemico-physiologic action; others concern the inebriate and the symptomology of his malady. Evidently the "Journal of Inebriety" has created a distinct germinal epoch, in which new thoughts, new discoveries, and new conceptions of psychological phenomena are brought into prominence. The long levels of endless repetition of old thought and theories endorsed and repeated over and over are broken up and we have come upon a new era, not free altogether from error or mistakes, but an era of truths not yet fully understood, truths that are literal stepping-stones to broader and higher views. The journal represents an evolutionary movement and struggle to understand the phenomena of the drink craze. To ascertain and point out the causes and laws which control the despoliation and death of a hundred thousand persons in this country alone, we have reached a stage in the progress of thought when the phenomena of life and death are not considered as accidents or chance happenings, but as the operation of laws and sequences that can be traced and studied.

The period we have passed has clearly been formative. The journal has only gone forward and occupied new ground and marked some outlines for others to come along and develop. It has, through its literature, indicated the possibility of knowing the causes and conditions which provoke inebriety, and ascertaining the remedies and means of prevention.

Every year's advance gives renewed evidence that in the future inebriety and its victims will decrease until finally they will disappear and be stamped out as completely as germ diseases.

The vast armies of drug-takers, the mental and physical border-liners, who are being driven out, crowded out, and literally switched off from the main line of evolution and growth, to dissolution and death, follow an organized line of descent, unknown at present. Like explorers on the borders of a new land, we can see parts of distant rivers and mountains and long valleys, and feel confident that a great continent, with all its flora and fauna, and wide contour of hill, valley, and plain, stretches out through this unknown.

The "Journal of Inebriety" is the organ of all scientific pioneers who are gathering on the frontiers of this new land. The first quarter of a century has passed and the real work is beginning. Before us are the wide realms of unknown facts with all its complex and matchless laws, the knowledge of which will enable us to understand and successfully treat inebriety. Beyond this the prevention of inebriety opens up almost unlimited possibilities. The contempt, sneers, and opposition which have for a quarter of a century followed every issue of the journal, are still heard. But their hoarse voices are receding and the increasing demands for copies of the journal for libraries, laboratories, and institutions, both in this country and Europe, are significant omens of the future. Most of the early friends and contributors of the journal have passed away and a new generation is approaching this subject from a purely scientific point of view. Thus the "Journal of Inebriety" passes the first quarter of a century of its existence, dimly conscious of the great power and influence which it must wield in the coming years. To all its friends and well wishers, the warmest greetings are extended, assured that on the borders of this new land a new circle of co-workers and enthusiastic students are gathering. As individuals we shall disappear, but the work will go on, and this new realm of pathological psychology will be opened and occupied by a vast population of settlers. The confusion and mystery of the present will lift and reveal the movements of law and forces beyond any present conceptions.

OPIUM ADDICTION: IS IT A DISEASE?\*

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BY WILLIAM HUNTLY, M.A., B.Sc., M.D.

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Opium addiction can be judged from two standpoints.

We can, in the first place, look at it as a form of indulgence, one among others prevalent in our present day life and subject to the same general rules of moderation, social judgment, and control. Doing this, it is ranked, often unconsciously, with various extravagances of modern life, the luxuries of living and clothing, of food and drink, and we are apt to let the question slip, believing we have arrived at a just conclusion in the matter when we have summed it up in the two words — “moderation and excess.” Recent judgments have tended to lead us into this position, and yet, the term “moderation and excess” is, as a rule, so difficult to define that its use results more in confusion than clearness.

The extravagances of modern times in food and drink, dress and dwelling, while, in the elements of excess, terrible evils in themselves, do not directly call for medical investigation of these elements of extravagances.

Now, before we can class opium addiction with such indulgences, we would require to prove opium, in any form whatever, to be a necessity of our daily existence in the same way as food is a necessity, and require to prove, moreover, the presence of a normal appetite in man which the drug is intended to meet and satisfy. Inasmuch as some medical men have mentioned opium addiction in the same breath with excess in eating and drinking, it is necessary to refer to this matter; but reference is made with the purpose of pointing out the utter irrelevancy of the comparison.

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\* Read before the English Society for the Study of Inebriety.



[ We can, on the other hand, consider opium addiction as an indulgence sharing certain characteristics in common with other forms of addiction, and possessing certain qualities apart from them and peculiar to itself. ] In this case our inquiry would be suggested by lines of investigation pursued in such indulgences as alcohol, tobacco, and Indian hemp. There is here again a temptation to prejudge opium addiction by the attitude already adopted by us to those other forms. But, as medical men, we are called upon to leave such general terms as universal addiction, climatic necessity, moderation, excess, beneficial or non-beneficial, and other similar terms, and in a scientific spirit investigate every aspect of the problem. Universality of prevalence, antiquity of habit, racial peculiarity, and idiosyncrasy have all recently been employed in this question. Thus, to illustrate climatic and racial peculiarity, I have sat at table in India with two medical men, one from Persia and another from China, have heard opium addiction in Persia condemned and opium addiction in China condemned, and then the climate of India put calmly forward to support opium addiction in India. We find in tobacco addiction this prejudging from universality of prevalence preventing many men from accepting the finding of specialists on its effects. The eye specialist makes an ophthalmoscopic investigation of an eye and at once, from appearances observed, questions the man about his smoking. So constantly do certain optic phenomena accompany excessive smoking that the specialist concludes the smoking to be the cause. Yet, there are many medical men who deny this connection, basing the denial on general immunity and universality of the habit.

I draw attention to these points, seeing that the whole question of opium addiction has been involved and confused recently by many side questions and issues. Thus, we learn from India that opium smoking is reckoned worse than opium eating, and from China we are told that opium eating is held by the Chinese to be more disreputable than opium smoking; from the Straits we learn that opium hypodermic addiction

is rapidly increasing, and, in the meantime, is more to be dreaded than either smoking or eating. We are again asked to believe from Indian medical evidence that opium addiction, if stopped, becomes the natural and necessary precursor to alcoholic addiction; and we are advised by so distinguished an authority as Dr. Lawrie of Hyderabad to experiment with engine-drivers and signal-men for the purpose of keeping their minds clear and on the alert while on duty.

The general conclusion likely to be come to by a medical man resident in Britain from the reading of recent Indian evidence is that opium addiction is clearly a complicated question requiring still further elucidation. It is hardly to be expected that an indulgence prevailing over a wide area will have no attractions or benefits to recommend it; every form of sensuality has them. The individual who is on the point of entering upon any such form is drawn by these attractions, generally subjective and temporary, which for the time outweigh other considerations. But the medical man ought to be swayed by none of these considerations, and the universality of any practice should be to him no sufficient reason for favorably prejudging.

[So much is opium addiction complicated that there are those who would challenge the term "disease" being applied to the habit in general.] Those who hold it to be a disease have the satisfaction of knowing that they have an ancient Persian proverb on their side — "Opium, which is a remedy for many diseases, is itself a disease."

Historically, the habit is traceable in its beginnings to the early centuries of the Christian Era. The home of the plant is the shores of the Mediterranean, the discovery of the juice (*όπιος*), its mode of extraction, and its medicinal value are assigned with all probability to the Greeks. When the sceptre of Empire was on the march westward the spread of opium was going eastward, borne by those ancient traders and raiders, the Arabs. Persia, India, Java, and China were the routes, and from about the eighth century we find in literature testi-

mony to the use of the drug and the progress of the habit. History gives us no idea of the date of the origin of the alcoholic habit in India. In the records of some of the native states of Rajputana the alcoholic habit goes back to the mists of antiquity, but in the case of opium we get proofs which point us not only to time of entrance, but to the routes by which it came. Thus, at the outset, the habit cannot be defended by adducing antiquity. Without it generations lived and passed away, empires were developed and destroyed, and thus, in history, it lacks a defense which alcohol addiction can easily claim.

Nor can its necessity be advocated by its prevalence. To quote Sir William Roberts in his summing up of the statistics, "only a minority of the inhabitants, generally a small minority, even of the adult males, are opium eaters." The number of females who are addicted to opium is so infinitesimal, that these may be ignored. (So far, then, we have a habit or addiction which has grown to its present dimensions within the present era, which, through widespread, is not universal, and which is confined chiefly to males.)

In the East, again, we have the Japanese, boldly sustaining a policy of prohibition; we have sectarians among Mahommedans and Buddhists who forbid it. These have assumed an attitude of opposition, not as a result of scientific investigation, but from general experience of the nature and effects of the habit. We have in the laws of China a proof of the feeling against and an example of unsuccessful legislation in the direction of prohibition, and we have, latest of all, British restrictive action in Burma.

For all these efforts at suppression or restriction there must surely be very powerful reasons. Thus, we have reached this knowledge concerning opium addiction, that, in the language of the East, it is recognized as a disease which is mainly confined to males, and to a minority of these, is widespread, though not universal; a disease, the origin and history of which are fairly well known, and towards which, by certain nations and

sects, an attitude of condemnation and opposition has been persisted in.

Possibly, the main objection to any part of the above statement would be raised against the term "disease," being applied to opium addiction. Some have classed opium addiction with tea and coffee drinking. It has been called a tonic, a stimulant, a sedative, a prophylactic, a preventive, a climatic necessity, and other such terms, which, should they be absolutely true, would entitle it to rank among man's best blessings. Without discussing each term separately, their real value is discounted when we recall terms of like praise applied in the past to alcohol, and remember that notwithstanding all, alcohol addiction is scientifically held to be a disease. In many respects opium addiction can be studied along the same lines as alcohol addiction, and it is satisfactory to see the almost unanimous condemnation which has befallen alcohol addiction in the evidence of medical men who minimized the phenomena of opium addiction. It is playing with the subject to rank opium addiction with tea and coffee addiction; it tends little to settle the question to belaud it at the expense of alcohol addiction. Yet, it is satisfactory at length to have obtained from Indian medical men so crushing a condemnation of the alcohol addiction, and to read of their dread of its establishment in India. This was desirable, for in my own experience in visiting natives I found that natives generally had brandy ready to offer to European guests when a friendly visit was paid, in the common belief that alcohol in some form was universally drunk by English.

In India alcohol addiction is prohibited amongst many sects even to the point of forbidding to take as medicine any alcoholic tincture. By one state in Rajputana prohibition, with death as a punishment, was enacted by one of the rulers, and Englishmen, in India, more than the natives of India themselves, will be helped by the strongly expressed adverse judgment on alcohol from medical men before the Royal Commission.

Whether, then, we may belaud or minimize the effects of opium addiction, and whether it is found less or more pronounced in its effects on the individual or on society, opium addiction must ultimately come to be viewed as a disease. We may even describe some of its effects in words which convey the idea that it is a remedy, but when the habit, however begun, has become established, it can be proved to possess certain features which will entitle us to class it among diseases. The history and progress of the cause of temperance, the lengthened and protracted nature of the fight which has wrested province after province from alcohol as a therapeutic measure, and which has resulted in a growing limitation even of moderation in its use as a beverage, furnish us with a guide to the probable final decision of the profession on the opium question. And the confusion which has arisen is easily understood when we remember that opium addiction does not dwell in our midst, appear at our tables, nor make its presence known in the columns of the daily newspapers, as alcohol does.

In my own experience of opium addiction several features in the disease forced themselves into my notice as a medical man. First and before all others was the physical change made on the habitué. This has been denied, and has received no attention from Sir William Roberts in his memorandum. Some medical men indulge in a thoroughgoing denial; others would grant this alteration to those using the drug in great excess and deny it in other cases. I venture to hold that, more or less, it is present in all cases. Our knowledge of alcohol addiction may here help us. Many deny to all, save the drunkard, the seal of alcohol addiction in moderation on the features. A few skilled observers who have made the subject a special study will trace its markings in habitués of most temperate habits. There may be complications. We may have the alteration modified by Bright's disease, by cardiac and lung complications, by liver diseases, and by the temperament and constitution of the individual, but withal the marks of alcohol are there for him who will devote time to their study.

In like manner the alterations from opium are in evidence both in old and young. Surgeon Lieut.-Col. Hendley of Jeypore furnishes a list of 100 cases of children to whom opium was daily given, without, as he holds, any evil effect. In his list we find they are all labelled "healthy." The strangest case in that list is of a baby two months old; the opium was first given when a month old; the drug was administered during the period of one month. The child is reported, by the statement of the parents, to have been "ill since birth"; the reasons for giving opium presumably stated by the parents and recorded, are "to keep it quiet," not to cure or make well, and the medical remark at the close is that it is "healthy." We have here nothing less than a discovery of qualities and effects unthought of by the parents themselves, who did not begin the opium with the idea of improving the health. If there be no discovery we are forced to conclude that the term "healthy" is elastic in its meaning. A further glance at the statistics shows us that the most of the cases have been receiving opium for a few days, weeks, or a few months and none beyond a year. There is no mention of children who have been dosed with opium for two or three years. Now, it is generally agreed that the drinking of milk in some measure retards and counteracts the physical alterations produced by the habit. Therefore, during the period when milk is the sole food, the effects would least readily reveal themselves, and we would expect to see these effects appearing when the child's diet became a mixed one. Thus, we expect to find alteration in the child of one and a half to three years.

Malarial influences, exceptional tolerance, maternal instinct, peculiar climatic circumstances, have been put forward to account for the habit in the young. In the history of opium addiction the likelihood is that the habit of giving opium to children represents the latest development in the progress of the habit among the people, the least ancient development of a not very ancient habit. While there is no great uniformity among medical experts in their search for a basis which will

afford the practice a decent sanction, there is a wonderful uniformity in the reasons of those who give the opium to children.

In Dr. Hendley's list we have some twenty cases of fever out of the hundred receiving opium, yet the invariable reason, not excluding the fever cases, for giving the opium stated in the list, was not to prevent or cure the malaria, but simply to keep quiet. While thus the practice may be credited with a certain degree of antiquity, the one and sole reason for the practice recognized and acknowledged by the natives themselves is, to prevent crying. If there be other advantages they have in these long years never presented themselves to those who adopted the practice, and they do not seem to have thought of giving it in infancy for any other medical reason. Even medical men who went so far as to state that people gave it to children in the belief of its beneficial influence in capillary bronchitis, have never advanced malarial fever in defense of the practice. Brigade-Surgeon Keegan mentions prophylaxis in capillary bronchitis as a belief of the people. Granting this, it serves to show of how little value medically such expressions of native belief are, since there is no general treatment of capillary bronchitis in children which would be more disastrous than routine treatment by opium.

The question of opium addiction in children has a parallel in this country. The habit of giving gin or whisky to children was much more common long ago than now, so common that the gin-nourished child was a phenomenon to be seen and studied. By the growth of education, etc., on the subject, save in the lower ranks, very few, indeed, would carelessly give their infants alcohol. So in the giving of opium to children in India, education and opinion are acting in a similar manner. Yet, the phenomena of the effects of opium are to be seen — the emaciation, the dwarfed body, the shriveled dry skin and glazy look, the look of old age which comes over the child, and other such alterations have all been observed and noted. I can recall no more bitter denouncer of the habit in children than a Brahmin hospital assistant, who through sad

experience in his own family was led to study the question. The addiction complicates all cases of disease occurring during the term of the habit in children, and retards, if it does not destroy the chances of recovery.

In adults opium addiction soon makes itself known on the features. I can recall several impressive cases. In one case two photographs were laid before me of a gentleman living in Persia. The photographs represented a year of difference in the man's life. Copies had been sent to his wife in England who had lived in Persia with him several years. The wife, in the return letter, wrote that her husband must have been seriously ill, or had taken to opium. Her latter conjecture was correct. A year's addiction had made sufficient mark on him to allow of an unskilled observer pronouncing on the cause. Again, on an occasion about midday I was seated in the veranda of a castle with thirteen natives around me. I knew one of them intimately, but looking at them all I saw that the look and bearing of one was different from the other twelve. I then carefully looked over the twelve, and at the close of my inspection bluntly informed them that twelve were addicted to opium, while only one of them was not. This proved to be the case. The circumstance was unique, exactly the reverse of what is usual, namely, picking out the opium eater from among a group of non-eaters. Long practice and observation would, I have no doubt, make it possible to pick out even the very moderate opium eater from the abstainer. The brightness and clearness of the eye are the first to fade and grow dull, and in the extreme it becomes glazy, the head hangs forward a little and downward, a stoop for which no reasons from work can be brought forward shows itself, leanness, and, in many, a distinct discoloration of the skin, generally over the body, can be observed.

The Eastern proverb that an opium habitué is known three stages off can be verified by any medical man who takes the trouble.

Another point in dispute is the enslaving power of opium.



In this respect opium surpasses alcohol. The impression is conveyed by the statements of medical men that it is taken twice a day, before and near the time of the two principal meals, and, therefore, is an adjuvant to digestion, or a mild stimulant similar to alcoholic drinks at home. The undeniable very large percentage who take to opium for sensual purposes should dispose of the digestive theory.

There is this great difference between opium and alcoholic indulgence even in moderation, that as a rule, wines, etc., are partaken at the close of the day when work is over, and are never in moderate cases consumed to start the day; the general relation to work is more as a mild constitutional stimulant to overcome the feeling of weariness at the close of work, in a word, as a refreshment. The man may take a little more or a little less, but need not have an exact daily amount.

{ Opium is far more imperious in its demands. It can almost enable a man to regulate the clock. As the time approaches the craving becomes more and more intense, the discomfort greater, and when the time of taking it is past, and the drug cannot be had, wretchedness ensues.

The state of the excessive habitué is well known and is a pitiable one. Before the body can be stirred to work the opium must be partaken. The man's will is helpless until the goad is applied (and this is the case), even in so-called moderation.

I have met with cases among natives, of indulgence in alcohol, tobacco, and opium, at the same time, and when by the necessities of the case, one or other habit had to be abandoned, opium is the one which keeps its grip to the last on the victim. The habitué is its slave. To the confirmed eater, cutting off the drug is immediately followed by loss of the power to work and will, and loss of control of the secretions of the body, seen in running of water from the eyes, nose, mouth, and bowels, in a greater or less degree.

The rule of opium addiction is that the longer the habit is continued the more the consumer is under the grip of his master

the more the will power is abolished, the moral judgment weakened, and the hours and power of work dependent on, and carried on under the influence of the drug.

The rule holds good whether in so-called moderation or excess. The man who takes four grains daily lives in the power of that quantity as much as the man who takes forty.

I had all along believed that in this respect opium surpasses alcohol. Lately I came across the short story of a "Literary Gent," by the author of "A Dead Man's Diary," and there is illustrated what is regarded by the author as a law of alcoholic addiction, namely, the necessity of alcohol to inspire the pen of him who has accustomed himself to moderate potations in doing his work.

Whatever may be the exact truth in alcoholic addiction it holds true in opium addiction. Utter wretchedness and helplessness of body and mind succeed any effort to go without.

The questions of moderation and toleration come up for joint consideration. Is it an easier matter for a man to find the limit of toleration for himself in opium than in alcohol? For Englishmen the question is at once answered in the negative. The Japanese, as a nation, will not discuss either national or individual toleration. The Buddhist estimate of it results in its condemnation along with alcohol. Burma sees more danger in opium than in alcohol, and the Royal Commission\* associates badness of character with opium addiction as a consequence thereof. But the Indian (the conclusion is) has more self-control than the Burman. If this be so, then tolerance is not measured by a supposed mysterious power of the Indians to bear toxic doses with less effect than other nations, but by their greater self-control. We are asked to believe that each opium eater in India (with very rare exceptions) is able to find out his own tolerance; that tolerance may vary from four to forty grains, and that none of these doses when named the dose pointed out by tolerance produces detrimental effects. We assign to the average Indian the power to discover, in the case of a drug which is more powerful and more enslaving, what the average Englishman cannot find out in the case of alcohol.

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\* Page 87, Vol. iv.

I think the extreme cases, and especially the case of De Quincey, tell us that with steady practice any one Englishman or Indian can go on increasing and increasing the opium dose, the immediate toxic effect diminishing as the habit grows.

When begun for pain the opium eater in India goes through the same experience as the opium eater at home. He finds the first amount gradually losing its antidotal effect, the dose requiring to be increased, and as time goes on still further increased. This is the invariable rule. The limit of dose or tolerance, when taken for sensual or other reasons, is frequently gauged by the means of the man. He would take more opium daily if he could afford it. I have often met men who had increased the dose for a season, and then been compelled by sheer necessity to do with a smaller dose, with this result, that the disease for which the habit was begun, such as asthma, was not one whit better, while the new disease induced by opium enthralled and marked the wretched man. To cure these chronic diseases by the opium habit and expect to recover health, is to expect to quench our thirst by the waters of the ocean or by whisky.

The relation of opium addiction to disease may be summed up briefly.

It has not been proved to be a preventive or prophylactic in malaria. Investigation and experience on my own part give no support to this. I find a mildly malarious district to have its habitués quite as much as a marshy malarious one. I find men who have taken to the habit, with a view to mitigate the pains of malaria, too late to escape from the habit, finding its curative uselessness. I find a growing majority of educated and influential natives who would scorn not from religious reasons, but from their conviction of the character of the habit to mitigate the fever by the adoption of such means. I find malarial fever prevailing as much among opium eaters as among non-eaters, even though the habit naturally leads a man to incur less exposure and do less continuous work. These experiences are sufficient for me. Dr. Hendley's list shows that it does not exempt children from fever.

Again, I find that opium addiction does not cure or prevent attacks of asthma as has been claimed, and that the use of the drug medicinally in this disease is under like considerations with the use of other remedies. The opium habit is not to be recommended by medical men as a cure for asthma. In a word, the opium habit as a habit is not curative of any known disease, save, perhaps, as an alternative to alcoholic addiction by those who would favor opium.

And, again, it is clearly recognized that opium addiction renders a man less amenable to treatment when disease arises, and in certain affections in which recovery is critical, hampers and destroys the chances, by lowering the constitutional powers of resistance. It can be easily understood how harmful the opium habit may be in a country in which diarrhoea, dysentery, and cholera are scourges, and how ill adapted the opium habit is to help a man in these illnesses.

What *à priori* reasoning would lead us to expect was verified in my own medical experience. Looking back at my own experience and study of the habit, the result is a growing conviction of its effects which compels me to assume a hostile attitude to it.

There is much more that might, if space allowed, be said in detail concerning my observations and inquiries. And there is much still to be done. There is, for example, a line of inquiry directed to the trades, in which opium is taken with a certain degree of impunity, and those in which the taking of opium would mean loss of work and place. Questioning a coachman in the employ of the Kotah state I learned that the coachmen dare not take it with any expectation of keeping their post.

I learned that the light porters at our railway stations in India knew well that the opium unfitted them for work, while on the other hand, the native tailor, proverbial for his laziness, sits in the veranda half the day muddled with the drug.

In the matter of servants, Englishmen in India will not keep table servants who are opium eaters. I carefully experimented with two opium-eating servants. On my leaving for furlough, a brother medical who had not expressed him-

self against opium, asked if I had a good servant I could recommend. I mentioned that I had one who was an opium eater, and added that such constituted no fault in his eyes. His refusal of the offer was more forcible than polite.

Englishmen in India have not found the opium habit one which enhances the value of the servant on the score either of work or punctuality. This line of investigation it is my intention to follow up on my return to India. Dr. Lawrie urges it in place of alcohol for signal-men and other railway employes, in Britain. The result of this I prefer to leave to the imagination. It has not been tried in India, and is not likely to be.

TUBERCULOSIS AND CARDIAC ALCOHOLISM.

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By A. Edgar Tussey, M.D.

*Adjunct Professor of Diseases of the Chest in the Philadelphia Polyclinic,  
Medical Director of the Central Branch of the Y. M. C. A., Philadelphia.*

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The question, does the use of alcohol act as a prophylactic against pulmonary tuberculosis, is yet unsettled. It is safe to say, however, that the more modern researches are establishing the basis that the pathologic directions pursued by alcohol and tuberculosis are, in many particulars, similar.

Indeed, we feel after looking carefully over the scientific phases of alcoholism in general, and, more particularly, alcoholism as revealed by morbid changes in the great central organ of the circulation, that its prophylactic power is only apparent and the subject must very soon, indeed, be looked upon in a different light.

The truth in reference to the *seeming* opposition which alcohol offers to the tuberculous process, will, I believe, be contained in the following explanation:

The ability to use larger or smaller quantities of spirituous drinks for a longer or shorter period of time, is an index or register of the amount of vitality which an individual possesses. An organism so constructed as to resist successfully, for a longer or shorter time, the devitalizing effect of such an insidious enemy, is capable, also, of resisting those causes, remote or immediate, which are concerned in the production of tuberculosis, local or general.

We must make a fundamental distinction between indices and prophylactic influences or tendencies.

Will any one attempt, to-day, to defend the position that

the tissue after they have succumbed to the effect which spirituous beverages are capable of producing, are in a better condition to resist the ravages of destructive forces than they were before they became so affected?

Resistance is resistance, and the amount of abuse which some people will endure before yielding any external evidence of a pathologic process which exists within, is indeed most marvelous. After the turning point in the history of such abuse has really appeared, we have no valid ground for arguing that essential power to withstand the effect of one form of disorganizing agency, is not essential power to withstand the effect of another form or other forms.

Does that expression of degeneracy which typhoid fever often leaves in its wake — fatty heart, and fatty degeneration of the muscles in various locations — fit the vital forces for better combating the agencies which are known to produce consumption, or does it lay a foundation upon which phthisis may readily be laid?

Is degeneracy in any form a prophylactic feature in the efforts of the organism to withstand deleterious influences? Who would venture an affirmative answer to such a question?

While it may be found true that tuberculosis and alcohol do not affect the metamorphosis of tissue in *exactly* the same way, it *is* true that they both have the power to lower tissue metamorphosis below the functioning point. (The sequel of the retrograde change in either case is practically the same, namely, the reduction of vitality below the vital point.) It is highly probable, too, that the morbid changes in both diseases are produced by processes which are intimately related, if not similar.

I am not as yet prepared to take as radical views on this point as some of our best thinkers have taken. I have seen enough, however, to convince me that the character of the pathologic changes are closely allied, and operate through the same etiologic medium.

We are confidently hoping, too, that the power of the

microscope will, at a not far distant future, reveal more fully than it has done the deep substratum of cause which is presented in both diseases.

As a fitting negative to the foregoing affirmative, we note in passing, that those persons who offer little resistance to the action of alcohol are much more liable to have their resources reduced to that level, which is a standing invitation to the entrance of tuberculosis into the system.

One of the earliest indices of the fact that phthisis has made a habitat of the human body is the presence of a disturbed condition of the heart.

Everyone knows that the heart suffers soon, indeed, giving tangible expression of the injury received by diminished volume of the pulse and increased rapidity of its rate.

The poison of the disease probably acts both upon its muscular fibers and its motor nerve supply. Add to this effect some loss of that inhibitory or check-rein influence sent down by the pneumogastric nerve; take into account also a morbid irritability of the sympathetic supply, and we are not surprised at the early and varied disturbance in the circulation which is invariably present to a greater or less extent. Perhaps no more accurate register of the amount of resistance inherent in the tissues may be found than the facts which are attainable by a careful study of the arterial blood supply.

Notwithstanding this early effect, we have no clinical evidence that the heart gives up the struggle for life any earlier than the other important centers, the viscera and the structures in general.

The runner who has been injured in the outstart of a race to win a prize may not be fairly expected to arrive at the goal in advance of his fellows, or at the same time.

Will anyone venture the assertion that a heart which has been maltreated, wounded, and crippled, even though the injury be done by a germicide, has not been rendered thereby more or less unfit to hold out in the race for life with its fellow runners?



Let us note, moreover, in this connection, the special affinity which alcohol exhibits for the most highly specialized nerve centers and most delicately constructed muscular elements.

Indeed, it is highly epicurean in its tastes, selecting the daintiest morsels it can find and feeding upon them with remarkable avidity.

We wish to be included among those who contend for the position that consumptives die through the medium of respiratory failure rather than by cardiac failure. It is a biologic truth that the heart is not only developed earlier in intra-uterine life than the respiratory center, but has reached a higher level of perfection in its embryonic history.

Structures that have been developed to a greater extent in intra-uterine life than other portions of the body are less liable to early involution than structures which have been developed later.

The heart has been more fully developed in its embryonic condition than the respiratory organs. Therefore, it fails later, is less vulnerable to injurious influences.

But have we the clinical data for the use of our major premise? Undoubtedly we have. We have all noted how the heart continues to beat and to beat, and then to quiver and to quiver, before it relinquishes its last faithful efforts and becomes voiceless forever. Faithful it is, beautifully faithful, to a law of its existence which has fitted it for a function surpassed in the tenacity with which it clings to life by no other part of the vital economy.

The most carefully conducted clinical researches, and the most accurately formulated biologic principles are beautifully harmonious in their testimony that the organ whose every contraction is a beneficent effort to feed the hungry tissues, has had, by the Great Master Architect, impressed upon it a royal seal by which it has raised itself to a higher plane of perfection than the organs and structures which are more or less its subjects.

We may be pardoned for calling attention to the fact that

the length of time occupied in the developing of certain structures is a pledge of the type to which its standard of development belongs.

Pursuant to this law, that the early embryonic period at which the heart has reached a high comparative degree of perfection is the seal and pledge of the beautiful development of which it is potentially capable, the well-known microscopic character of its beautiful muscle cells, the wonderful delicacy and intricacy of its mechanism, nervous and muscular, and the beauty of its inhibitory and accelerator influences, attest yet more plainly that a process of early development is an index of that exalted form of function which is potentially inherent in all structures illustrative of this law.

How fitting it is that such a high order of evolution should characterize the range of the heart's activity since the influence of the fountain head is felt by all its branches, even the most minute divisions thereof.

Because the branches must suffer more than the fountain source we must watch with religious care the great center of supplies.

Alcoholism, then, exhibiting its maximum effect upon the cardiac muscles, ganglions, and nervous apparatus in general, is one of our most serious handicaps in the successful management of phthisis, local or general. If the respiratory centers and machinery yield their ground soon in the course of certain maladies, when the heart has not been crippled previous to the inception of the disease, how much sooner must it give over the struggle when its fountain source of nutrition has been broken by a subtle, all-pervading enemy to the nutritive energies. How silently, too, it engrafts its most pernicious effects upon the cardiac fabric. How difficult it is, at times, to trace the evil done to its real source, we all have seen. In not a few instances, it has been left to the scalpel and the well-directed lens to reveal what was before too obscure to diagnose with any degree of certainty.

The history, signs, and symptoms will, if rightly used, guide

us in a larger proportion of cases to the morbid heart feature present.

Any summing up of our patient's resources, his possibilities and probabilities of recovery, or length of days, which ignores the primary and secondary consequences of the alcoholic heart, must necessarily be radically faulty.

While, as a clinical study, it is impossible to estimate the degree of degeneracy which has taken place it is quite enough to determine that the heart's capacity for work has been much diminished.

Evidences of degeneracy which may be found to be present in various portions of the arterial system, in the viscera and the kidneys, should at once lead us to suspect that the heart is, perhaps, seriously involved in the general process of deterioration.

How much alcohol is capable of seriously injuring the heart is a question which deserves our most careful consideration.

The nervous distortions and obliquities which grow out of our modern civilization present themselves to the medical man as a complicated but most interesting study.

No feature in connection with this study is more marked than the varied responses which are given by the brain and other portions of the body to alcoholic beverages, under their multitudinous forms.

To no morbid influence is the susceptibility of the heart and the more highly specialized centers more varied.

The phrase "moderate use" must always be studied in the light of the susceptibility of the system to its influence. It is only in this way that we can determine whether the use of the drug has been the abuse of it. Any use of it at all would be, in not a few instances, an immoderate use of it. Personal vulnerability must ever be our standard. In this connection, hereditary biases must be taken into careful account.

It is certainly one of the great misfortunes of the human family that the children's teeth are often set on edge because a parent or parents have eaten sour grapes.

Because of hereditary transmissions of physical obliquities,

a few glasses may be the spark to the tinder-box lighting up a conflagration so destructive that no power seems to be able to extinguish it.

Most members of the profession are familiar with the example of the two small children who produced a fatal form of Bright's disease by haunting the family board to drink the few drops of wine which remained in the glasses used by the adult members of the family.

While such examples are rare they should not be without their practical bearing upon a study of this drug.

It may be well to state that malted liquors are especially likely to injure the cardiac walls.

Angina pectoris is probably one of the symptoms to which a fatty heart gives rise. This, taken in connection with the presence of other changes, especially in the kidneys, makes it almost certain that it is a ~~part~~ <sup>result</sup> of ~~an~~ <sup>injury</sup> sent up by a heart whose vitality has suffered serious injury. The great frequency with which this symptom is absent makes it necessary to look to other sources for a ~~means~~ <sup>basis</sup> of diagnosis.

If the heart has not been injured previous to the entrance into the system of the tuberculous virus, the relation which exists between disturbances in the temperature and the volume and rhythm of the pulse is more or less constant.

I do not look upon the changes spoken of as being reciprocal, but as being products of a common disturbing factor. All disproportionate effects existing among the temperature changes, respiratory changes, and circulatory changes must be looked for in a special, not a common cause of evil. I wish that I might write this basic principle in letters of burnished gold. We must make, too, a proper distinction between a weak heart and an irritable heart. While it is true that a weak heart may be an irritable one, an irritable heart is by no means a weak one. An irritable heart seldom produces dyspnea to any extent, while dyspnea is a constant accompaniment of a weak heart. All organic valvular trouble must be searched for. If found to exist then their true effect must be carefully

estimated. If not present, the problem is less difficult to solve.

It must be remembered, too, that where dyspnea bears a constant ratio to the circulation, a larger portion of it must be sought for as a disturbance which has a more complicated etiology. Marked dyspnea as we meet it in consumption does not imply a corresponding weakness in the action of the heart. I speak of this as it might be argued that because the dyspnea is great and the circulation very defective, a common cause was producing both disturbances, whereas the respiratory difficulty might be traceable largely to other sources.

Dyspnea is properly made up of the operation of six general causes:

- (1) The depressing effect of the tuberculous virus which permits no portion of the body to escape.
- (2) Diminished arterial pressure which embraces all organic valvular lesions not compensated, any and all causes which lower the contractile power of the cardiac muscles.
- (3) Undeveloped respiratory muscles which deprive the possessor of the use of some of the respiratory surface which he possesses.
- (4) An abnormally small vital capacity whose important influence as a factor in dyspnea is almost always overlooked.
- (5) An extensive area of infiltration, with its complicated results.
- (6) The direct and reflex effect of the pulmonary involvement upon respiratory innervation.

We see from the above that while one of the constant effects of tuberculosis is the production of dyspnea, which increases as the disease advances, the endless gradations in severity with whom we become familiar have often a most complicated origin.

All variations in intensity not traceable directly to the general operation of the malady, may be properly styled contingent products. By a wide experience and careful study, we may trace the operation of contingencies and give to them the part which they perform in making up the aggregate of respira-

tory difficulty. It will be readily understood that the operation of a constant cause will be diminished or intensified to widely varying degrees by the absence of pressure of one or more of the contingent influences enumerated. Why should it be thought strange then that presence of even very early involvements give rise to those marked differences in the respiratory disturbances which attend them? All expert chest examiners will readily endorse the statement that morbid changes in the respiration are rarely properly analyzed.

From the foregoing remarks we readily grasp the truth that the amount of dyspnea with which we have to contend, may only be used as corroborative testimony, that the heart is seriously impaired after the operation of the constant effect produced by the general disturbance and the operation of contingent causes in producing it, have both been carefully studied. Where, as previously stated, great weakness of the heart-walls may not exist without serious respiratory disturbance, serious respiratory trouble may and very often exists, in connection with a heart whose functions retain almost their normal integrity.

A small local tuberculous involvement, well-developed respiratory apparatus, the absence of all causes known to intensify the disturbance which we have learned grows out of a small local involvement, a minimum amount of disturbance in the temperature, the absence of any organic valvular heart trouble, with greatly diminished volume of the arterial wave, a rapid pulse, dyspnea proved by the process of illumination just mentioned to be strictly cardiac in its origin, forms a group of symptoms which point with almost unerring certainty to degeneration of the cardiac motor apparatus. I doubt very much indeed, if such a condition as I have just described can be found apart from the history of the use of a sufficient quantity of alcohol to produce fatty degeneration or infiltration of the heart. While the operation of the tuberculous influence is subject to so many variations in its operation upon the respiration, and while dyspnea is so variable a factor to tell us much about the intensity of the general cause, the heart is beauti-

fully exempt from such wide variations, and will probably hold out to the last whenever it has not been broken and wounded in the outstart. We believe that what we have said makes it plain that alcoholism in many of its forms should not be considered as militating against the operation of an agent whose destructive tendencies bear so many points of resemblance to its own. From the truthful statement which this article contains it is left for us to conclude that the long line of evil consequences which grow directly and indirectly out of a crippled heart, render the human body not only vastly more vulnerable to the operation of tuberculosis, but stand directly in the pathway of any course of treatment, I care not how well it may be chosen, which might otherwise have led to success. Since it is so difficult, perhaps impossible, to tell when the process of degeneracy has begun, especially in the delicate heart muscles and ganglia since the individual susceptibility to its most pernicious changes are so varied, is it not a dangerous, an extremely dangerous plan, to use it upon the basis of its germicide power? I believe its most ardent and conscientious advocates will readily agree with us, that when its use has set up a pathologic direction in the course of a healthy tissue metamorphosis, it is no longer valuable as an aid in repelling the advances of those influences which lead to tuberculosis. Since, too, its best friends must admit that no agency is more insidious in its advances than alcohol is, since we may not tell at first, and sometimes not until late in the history of its use, determine when the structures, especially the cardiac elements, have succumbed to its power — to change the current of these lines — does it not appear to you, my brother, as rather solemn practice to advise its use? There is something so sad to me in the thought that men, and women too, I am most sorry to say, are daily doing that which must soon depose the heart from the lofty eminence which it occupied, as a sacred birthright, forcing it to yield the scepter of its royal sway to the enemy to life, which has been invited in to dispute with it the right to a kingdom for which it has been so beautifully fitted to rule.

THE CONFESSIONS OF A COCAINIST.

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It cannot be without medical interest to hear from the lips of a devotee, and that devotee a medical man of great mental endowments and uncommon training, some account of the manner in which he found himself affected by the continued abuse of one of the subtlest of seductive drugs, cocaine, even though his record be not so detailed as that of De Quincey or so thrilling as that of Bayard Taylor.

My patient relates how he first came to take cocaine. It was in the year of 1885, when serving in the German Army. "I took it inwardly," he said, "in one-grain doses, and remember very well the marvelous effect when after marching 'par force' thirty miles in ten hours, including one hour and a half rest, I found myself, on arriving at quarters, fresh, untired, not thirsty nor hungry, but with bleeding feet." Going back to his medical studies, he had nothing more to do with the drug for some four years, though frequently brought face to face with morphinists and morphine-maniacs. In 1889, however, he was sent to relieve a country physician, whom he found lying in bed unconscious with a syringe sticking into his breast. Never in his life, he says, has he seen a more startling effect than that which then followed the injection of a twenty-per-cent. solution of cocaine. "Nearly instantaneously he sat up in bed, with perfectly clear eyes, and received me, a total stranger, in the most cordial manner." The occurrence haunted him day and night, but it was not until summoned to a late confinement some weeks later, when stiff and unable to move with lumbago, that he was weak enough to follow suit. "That night in the month of November, 1889, settled my future. Remembering well the effect of the cocaine, I took a syringeful (one-half centigramme) combined with morphine,



and two minutes afterwards one centigramme. Five minutes later I was ready to start a couple of miles in a snowstorm." He repeated the performance before driving home again. This early repetition, taken in conjunction with the dosage, raises the suspicion as to whether, after all, he has told the truth about the date of his first injection. However this may be, he took cocaine and morphine from that time forwards, increasing the dosage to six or eight grains daily of each drug, and soon (he says within a month) came to take not less than eighty to one hundred and twenty grains of cocaine daily. His highest single dose was twenty grains, the result being that he fell down suddenly, and remained in a cataleptic condition for some hours. His description of his symptoms is graphic, and, I think, in the main reliable:

The first feeling a cocainist has is an indescribable excitement to do something great, to leave a mark. But, alas, this disappears as rapidly as it came, and soon every part of the body seems to cry out for a new syringe. The second sensation — at first, at least, no hallucination — is that his hearing is enormously increased, so that he really (?) hears the flies walking over the paper. Very soon every sound begins to be a remark about himself, mostly of a nasty kind, and he begins to carry on a solitary life, his only companion his beloved syringe. Every passer-by seems to talk about him. Often and often have I stopped persons, or ordered the police to arrest them, thinking they were talking about me. After a relatively short time begins the "hunting of the cocaine bug." You imagine that in your skin worms or similar things are moving along. If you touch them with wool (especially absorbent wool) they run away and disappear, only to peep cautiously out of some corner to see if there is any danger. These worms are projected only on to the cocainist's own person or clothing. He sees them on his washing, in his skin, creeping along his penholder, but not on other people or things, and not on clothes brought clean from the laundry. How is this to be explained?

In my opinion it is a question of disturbance in the frontal cortex, originating, perhaps, in skin dysaesthesiae, and not a simple visual hallucination or retinal projection. Whatever

its origin, it is characteristic of the cocaine habit, and readily distinguishable from the hallucination due to alcoholic excess. The sight presented by such a patient "hunting for the cocaine bug" is one which, once seen, can scarcely ever be forgotten. In a recent case — that of the wife of a medical man — the patient was about to consult a skin specialist for this psychical hallucination! He continues:

About the same time appear many other hallucinations of the opticus, and, strange to say, self-suggested hallucinations also. Night turns to day. You sit up in your room syringing till the morning, and then fall asleep in a coma. In my case this occurred to such an extent that I had to engage a hospital warder, who came in the morning to revive me with about ten syringes of five-per-cent. solution, so that I was able to drive, not walk, fearing some one might garrote me.

Other dreadful hallucinations I had in thousands, all of a persecuting character, and frightening the life out of me so long as the effects of the drug lasted. You see small animals running about your body, and feel their bites. Every object seems to become alive to stare at you from all corners — look revolvers, knives, etc., and threaten you. Yet, as soon as the effect of the injection is over, you laugh at it, and produce willingly by a new injection the same terrors. About that time I bought three St. Bernard dogs, thinking they would protect me; but one night I found out they were talking about me — how they could get rid of me — so I stood up and shot one of them with a revolver, which I always used to carry. I think this was the most dreadful night of my life — I standing on the table, with an Indian dagger and a syringe on the ground; one three-foot-high dog going to die, and two rather dangerous dogs roaring and groaning aloud, reproachfully looking at me, who always fancied, "Now comes the moment when they will tear you in pieces." I stood the night on the table, till the arrival of my wardman, who hardly risked to enter the room.

The strangest thing, however, in the cocaine habit is that

there seem to be two souls in the cocainist — one infested by the cocaine, suffering, and tortured by its effects; the other normal, laughing at his fears, and saying: “What nonsense! it is only an hallucination produced by an injection.”

Not frightened enough by these experiences, and escaping from the troubles produced by his conduct, on he goes, taking more and more; and then enters a new kind of illusion, which finishes him up for the mad-house. I mean the revolting, dirty, sensuous illusions. The remembrance of it is for me so awful that I only tell you that one day every person I saw, near or far, appeared to be naked and in the most lascivious positions, alone or with others. I remember on entering the surgical theater to have seen everybody — operator, assistant, students — naked. In terror, I took to flight, ran to a medical friend at a lunatic asylum, and was placed under restraint. Well, this ended (January, 1890) my pure cocaine habit, which in a year's time eased my pockets of about \$8,000.

It was early in 1891 that I first met him in Melbourne. He was then a morphine-maniac, as well as cocainist. His appearance was characteristic. He was pallid and yellow, with hands trembling, cold, and sweaty, eyes sunken and glistening, pupils dilated, breathing short and hurried — restless, irresolute, and careless of his personal appearance. He appeared the embodiment of one who had just emerged from some terrifying experience. He soon became known to every chemist in the city, and from one and all bought syringes, cocaine, and morphine whenever money or credit permitted. Frequently his needle would be fastened to his syringe by sealing wax, shellac, etc., and when he had no needle at all he would cut an opening with his knife, and insert the end of the syringe direct. Almost the whole of his body except the face was marked with needle scars. A common practice was to mix four grains of morphine with two of cocaine — “sixpennorth” — in a two-drachm bottle, and inject by syringefuls until all was exhausted. The change from the shivering wretch before injection to the self-confident neurasthenic after injection struck

all beholders. His experiences embraced the whole gamut of wretchedness and shame, and included both hospital and jail.

As regards abstinence, he agrees with Erlenmeyer, that the symptoms are neither manifold nor severe. He said:

The tales about neuralgia, etc., are all lies, and, after two days' abstinence, the craving is relatively small — you feel, in fact, nothing, but the thousand possibilities of suggestion form the real danger. Then comes the maniac desire; it fascinates your whole body. Suddenly your chest seems to be screwed together, you cannot breathe, your eyes protrude, and, if you have no cocaine, you either commit suicide in some way without intending it, or murder one of your warders.

He summarizes the physiological effects of the drug as follows:

The cocainist early loses all appetite for solid food, but likes sweets, lollies, and cakes. Diarrhoea is soon produced, and immediate evacuation often follows big injections. Upon the muscular system the drug, as is generally recognized, acts as a most powerful stimulant for either single or continued effort. [Not only could he make long marches without becoming tired, but on one occasion, after injection, he says he lifted a cab with one hand on the axle.] It increases also the number of the respiratory and of the cardiac contractions (with vascular dilatation), as well as the quantity of urine (with large or repeated small doses, incontinence follows), and, enormously, the amount of sweat. Hence the great loss of weight. It stimulates also sexual appetite, though, later on, power is lost whilst desire remains. After each injection the pupil dilates, but remains dilated only because injections are continued. [When taking very large doses, he remarked that his iris seemed to separate into broad radii, with free spaces between.] As regards the brain, mental processes seem quickened, but a kind of hypnosis intervenes, so that the brain works without, and even against, the will. Immediately after the injection the cocainist becomes excited, and remains restless whilst under the influence. He likes manual work, however trifling, but has neither will nor ability for mental work, because he is bound to inject every five or ten minutes, or, in fact, because he never ceases to inject. The hallucinations and illusions already mentioned make their appearance early. One syringe

self-injected is, in my opinion, absolutely sure to produce the fascinating desire for a second. The individual is almost certainly then a cocainist, and will procure the drug for self-administration, even when apparently it is impossible to do so. All watching is useless. He has thousands of excuses to get a moment to himself, generally in the neighborhood of some chemist. Unscrupulous — even though still aware to some extent of his ties — he will get it, dishonestly if necessary; and, even when not craving for it at the moment, he will get it, because his only idea is to have it with him. The sense of right and wrong is not abolished, but he does not care much about trifles. Thus he sinks lower and lower, disregards his personal appearance, and, because they will always show, or sham to show, a certain respect to his higher education, he seeks the association of lower people. He thus becomes a scoundrel or criminal, and does not mind to do so so long as he gets his cocaine. It is extremely seldom that he makes a trial to free himself of the habit, mainly because he does not see any reason to do so. Suicide he never contemplates so long as he can get his beloved drug.

For purposes of contrast it may be well to add his experience of the effects of morphine:

A man may be for years a confirmed morphinist without being a morphine-maniac, and the results are very different in the two classes of cases. I have met hundreds of men, distinguished by intellectual power and refined sense, who were confirmed morphinists [and certainly, if his list is reliable, the names fully bear out his statement]. Such hate every low, unacesthetic object, and often indulge in princely habits which may cause their ruin. Morally they never descend to a low level, except, perhaps, during abstinence. By way of illustration I may quote the case of a morphinist who, during abstinence, stole an ounce of morphine, but who, as soon as he had injected himself, sent the money anonymously to the chemist from whom he had stolen it. Mentally there is undoubtedly a stimulating effect on the brain so long as the influence of the drug lasts. The brain seems to work quicker, conceive quicker, and, before all, the morphinists like to do mental, though he detests manual, work. In some eight hours after injection the sublime quietness of mind is replaced by restlessness. The *habitué* generally becomes pale, and loses both flesh and muscle. Many, to obtain a little color, add a certain

amount of atropine to the morphine. The desire for fluids seems diminished, and satisfied with choice drinks, if these can be had. To this, perhaps, may be ascribed the small quantity of urine generally passed. Morphinists can take regular meals, preferring well-flavored and sour articles, such as curry, pickles, etc. The sexual powers are progressively diminished, and women despised, except the highly educated and brilliant. A sense for the eternal feminine remains, but no power, no desire.

The morphine-*maniac* is quite a different person. One syringe self-injected for any pain is sure to have, as a necessary consequence, a second as soon as the pains recur, even though distressing sequelae have intervened. Even more dangerous in the establishment of the habit is the use of the syringe for insomnia. Soon he injects for the sake of injecting, until he gradually falls into a state of imagined abstinence. His moral balance disappears early, and for him a word of honor does not exist. Feeling that he is sinking to a lower level, he may make enormous struggles, but in vain. He cannot — he despairs, and gives up every hope. Highly increased doses momentarily restore his moral sense, but when the eight hours are over he is worse. Even when not abstaining, he may commit suicide, because he can no longer face his moral degradation. His despondency, his imagined abstinence, and the frequent injecting soon make regular brain work impossible, except, perhaps, in the morning. Even if able, however, he no longer cares for it, seeing the uselessness of his exertions. So long as he is under the influence he never has hallucinations, and seldom any illusions. Like the morphinist, he becomes pale and wasted, and shows the influence of the drug upon skin, bowels, respiration, eye, etc. He neglects his eating, however, and constipation frequently lasts for weeks, relieved immediately by a large dose of cocaine.

Regarding diagnosis and prognosis the same authority says:

The diagnosis of a morphinist is sometimes exceedingly difficult, because he tries everything to hide his habit. The contraction of the pupils, the marks of the syringe (if hypodermatically administered), and the "going away" from other people at certain hours, are, in my opinion, the only objective symptoms. The morphine-maniac is easily found out by the foregoing symptoms, by his dislike for females, and by his sudden nervousness and paleness, which disappear immediately

as soon as he has been, as he calls it, "a few moments in the fresh air." The cocainist is distinguishable by his change of associations, his neglected appearance (of which he seems completely unaware), his dilated pupil, restlessness, hallucinations, illusions, and expression of anguish.

The prognosis is exceedingly unfavorable. It depends in the first degree upon a perfect change of surroundings. The slightest article which could make a cocainist remember some moment of his sufferings is also able to recall the fascination. Even if free for a whole year, he cannot be trusted unless it be in new surroundings. And "kind friends" are only too willing to remind him of things which he has done and of which he is now ashamed. So that, sooner or later, he will take it again for "spite" or "fascination," or some other reason not to be explained by an uncocainized brain. For women the prognosis is — *pessima*.

With these words he concludes his account, which, though perhaps inaccurate in certain minor details, seems to me of special value in that it proceeds from a skilled observer, who himself has been behind the scenes and watched the phantasmagoria from the subjective as well as the objective side. It throws also an interpreting light even on the classical descriptions of Erlenmeyer, a summary of which may be found in Hack Tuke's Dictionary of Psychological Medicine, 1892, vol. i, pages 236-237. Perhaps, also, the insight thus afforded into the inner workings of an illusionized brain may lead some who have hitherto acted as hard, and even pitiless, critics, to recognize something more than "the party's criminal will" in the resultant phenomena. And may all echo the hope that this particular victim at least may find assistance and not hindrance on the dark and troublous road which he is now treading toward a better adjustment of his vital interrelations.— Doctor Springthorpe, in *Australasian Medical Gazette*.— *Medical Age*.

PROFOUND TOXIC EFFECTS FROM THE DRINKING OF LARGE AMOUNTS OF STRONG COFFEE.\*

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J. T. Rugh, M.D., Philadelphia.

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On July 10, 1896, E. M. F., a traveling salesman, came to this city, arriving about seven P. M., and with great difficulty walked to his hotel, about one square from the depot. He then complained of great nervousness and involuntary contractions in the legs and arms on attempting to move these parts. On arriving at the hotel, he went to bed, feeling that if he could rest for a while his condition of nervous excitement would pass away. However, he continued to grow worse, and about 9:30 o'clock sent for me. After carefully questioning him, I elicited the following history:

He is thirty years of age, married, and has one child. He has always enjoyed good health, though he has not been very strong. He is a graduate in medicine, although he has never engaged in practice. The family history is negative, except for the occurrence of epilepsy on the maternal side. During his youth, the patient had numerous attacks of *petit mal*, but never any distinct epileptic seizures. He has never had an attack similar to the present one, and this dates back three weeks, when he started on a tour to New York to place several large orders for his firm. During the course of his work, he was up until one or two o'clock in the morning, and after retiring would get but three or four hours of sleep. Upon waking, he would order a pot of strong black French-drip coffee sent to his room and would drink this before eating his

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\*Read before the Philadelphia County Medical Society, Oct. 28, 1896.



breakfast, which was very light and simple in character. In the course of the day, he drank ten or twelve large cups of this kind of coffee and ate but little food. If he went to a saloon with a customer, he would order wine or stimulant for him, but coffee for himself, and by this free use of coffee, he was able to fight off the fatigue which naturally attended this mode of life. This course was kept up for three weeks preceding his coming to this city. He drank some liquor, but not enough to produce any appreciable effect, and he was never intoxicated at any time in his life — a fact that is very important in the differential diagnosis, for a number of his symptoms were those of beginning *mania a potu*.

His pulse was ninety-six and full, but weak; his respirations shallow and numbering twenty-four to the minute. The pupils were normal, the tongue slightly coated, the bowels regular, the skin moist but not flushed, and his expression was agitated with the fear of some impending danger. His muscles were in such a state of tension that upon the slightest movement of arms or legs, clonic spasms occurred, though none was present when he lay perfectly relaxed, which, however, his exceedingly nervous condition would not allow him to do. If he tried to sleep, he would be seized with hallucinations just before losing consciousness, imagining that disasters were about to overtake him and seeing all kinds and shapes of images and objects. Then he would start up with fright and find himself in the greatest nervous excitement. When he stood up, he could close his eyes or look at the ceiling without wavering. His knee-jerks were slightly exaggerated, but sensation was perfect.

The diagnosis of coffee-intoxication was based upon the history of excessive coffee-drinking for three weeks, the absence of liquor-drinking in quantities sufficient to produce constitutional effects, the nervous symptoms (spasms of muscles, hallucinations, and extreme excitability), and the absence of an attack simulating *petit mal* in any way.

The indications for treatment were to clean out the bowels,

64 *Profound Toxic Effects from Drinking Strong Coffee.*

to steady the heart by a stimulant, and to give a hypnotic that would quiet without increasing the mental symptoms already present. For the first, I gave calomel, one-sixth grain every half-hour for eight doses, followed by a saline. For the heart, I gave caffein citrate, one grain every three hours, knowing that this would at the same time partly offset the withdrawal of the coffee from his system. Trional (ten grains every two hours for three doses) acted admirably as a hypnotic. I did not give morphin, which might have had a quicker effect, because of its tendency, in many cases, to produce mental disturbances without thoroughly relaxing or overcoming the nervous tension of the patient. Three hours after this treatment was instituted, the patient was resting more easily and asked for a glass of milk, which he took with a relish. He then went to sleep and awoke the next morning, after five or six hours of sleep, very much refreshed. I interdicted the use of coffee, gave a tonic of arsenic, strychnine, and quinine, and directed the man to spend several weeks at the seashore, as his former condition of *petit mal* was very liable to become one of true epilepsy unless he raised his system to the best state of health and maintained it there. He went to the shore and two weeks later reported himself as very much improved and feeling better than he had for months.

I have seen two persons who would be mildly intoxicated by drinking a large cup of strong coffee, but have never seen any one affected as this patient was, nor have I been able to find reports of any similar case in the literature of the subject. — *Medical Reporter.*

## Abstracts and Reviews.

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### DEGENERATION FROM TOXIC DRUGS.

The following extract from a work by Dr. Searcy will be read with great interest:

“ While upon human degeneracy, there is one subject I think worthy of mention. I allude to the general injury done in society to the brain, by the popular use of agents that are anodyne and anaesthetic in effect. It is well to study how such drugs have their effect in the body and why they are so generally used as luxuries. I can probably best illustrate with alcohol, which is very generally used, and which exhibits the methods of action of such agents very well.

“ Taken into the general circulation through the stomach, it is diluted with all the blood in the vessels. While alcohol undiluted has a very prompt effect on any of the structures of the body, mixed as it is with all the blood, it is so largely diluted that it only has its effect on the most delicate structures. No structures of the body are so delicate as those that do the functional work of the nervous system. The central axis-cylinders of the nerve-lines and the nuclei of the nerve cells, colloidal in character, are exceedingly delicate and sensitive to the hardening and coagulating effects of alcohol. These exceedingly delicate central structures of the nerve lines and cells have motion as their function — excessively delicate, rapid motion. Anything that hardens or stiffens these structures, so they cannot move or convey motion as readily, arrests their functions in proportion.

“ The first nerve cells and fibres reached by the alcohol in the circulation are those of the vaso-motor system that regulate the

calibers of the capillaries. To stiffen or paralyze them is to open the vessels. We see this in the first effect of the drug, in the general flushing of the system, the capillaries everywhere opened, and the heart beating harder and faster to fill the increased spaces. This is what is called the 'stimulating' effect. Soon, however, the most recently developed, and consequently most delicate, consciously acting cells and fibres of the cerebrum are reached. The first subjective consciousness of the stiffening, the drug occasions in them, is a dulling of sensibility, or less sensation. These structures are conscious or sensitive only when in functional motion and in proportion to their motion. To artificially prevent their moving is to have the conscious effect of lessening feeling. Dulled sensation is naturally a pleasant condition. To feel less, or not to be 'so sensitive,' is to feel better. If just enough of the drug is taken to partially arrest the capacity to move and sensate of these cerebral structures, as long as the condition lasts it is subjectively a pleasant one. If more be taken, or enough be taken to arrest all motion and all consciousness in the cerebrum, there is complete anaesthesia; because, as I have already said, in the body of man, practically, all consciousness is 'centralized' in the cerebrum. If enough of the anaesthetic is taken to arrest motion only in the cerebrum, there is only an arrest of conscious action; but if more, or sufficient be taken to arrest motion in the nerve centers that control respiration or the heart's action, the whole man stops and is dead.

"We need not go further to explain other effects of alcohol in the system, on structures of a coarser, lower grade. This is sufficient for our purpose; sufficient to show why it is used as a luxury. It is its brain effect for which it is taken as a luxury. In time by the use of repeated small doses, or in a single administration of a large dose, we see impairment of all the functions of this exceedingly important organ. And it is the chemical effect of the drug that does the harm to these delicate structures; there is no nutritive effect. Long-continued use brings the previously intelligent man into the defective

class — dependent and delinquent — cared for by friends or by the state.

“ There is a long list of such drugs, good in their places as medicines, in popular use as luxuries, reaching all the way from tea, coffee, tobacco, and alcohol up to opium, ether, and the stronger narcotics. Attention is here drawn to them for the wide-spread effect they have in deteriorating human cerebral abilities.

“ The effect on the cerebral abilities of the user of such agents is always deleterious, and the tendency is to impair his hereditary transmissions also.

“ Of late years there is a general understanding, without its being definite, or scientifically expressed, that the use of such drugs has a deleterious effect on the brain and general nervous system, which, understanding, is growing more and more pronounced. As is generally the case the more capable persons appreciate and learn first valuable information; so that, now-a-days, the use of such drugs is being left off more and more by the more intelligent, and their use more and more confined to the incompetent. As the world becomes more and more instructed upon the use of such agents, the gradual effect will be to lessen their consumption, or to limit their consumption more and more to those persons who are born neurasthenic and cerebrasthenic, already pointing downwards in abilities; and, as we see it abundantly illustrated in the world, the use of such agents will tend to hurry on their descent towards elimination. The representatives of degenerating families are now most given to such ‘ habits ’ in the best society.

“ Among the intelligent classes, however, there is many a person, whose sedative habits impair his general health, and who is in a most constant condition of discomfort, due in part to a general lowering of the cellular tone of his system by inactivity and in part to a constant ‘ auto-intoxication ’ from defective excretions, to whom the anodyne effect and so-called ‘ stimulating ’ effect of such agents is very pleasant, comforting, and seductive; who grows into the habit of their use very

readily; and who increases his neurasthenia by their use; and impairs his genetic-cell transmissions all the more by their use. We wonder why the children of such prominent men are nervous and hysterical, and often worse; they are very naturally so."

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### INHERITANCE IN INEBRIETY.

Undoubtedly, however, there are, in the case of insanity more especially, but also in that of other nervous diseases, certain concurrent causes which, where they exist, tend indefinitely to heighten the evil effect of the mere descent from neurotic ancestors, and which deserve to be specially singled out for remark, viz., the inheritance of phthisis; habits of alcoholic excess. As regards the first, there are many recorded facts, and many which I have personally witnessed, that show how disastrous it is for an already neurotic family to unite in marriage with a phthisical family; the offspring may be phthisical, but it is, at any rate, immensely probable that some of them will exhibit the neurotic tendencies of the stock with fresh and severe aggravation. Similarly, if an individual descended from a neurotic, but otherwise healthy stock, has the misfortune to contract phthisis in an accidental manner — *e. g.*, as the result of a neglected catarrhal pneumonia, the new morbid element in this condition may indefinitely aggravate the already nervous tendencies. Such an event is sometimes the precipitating cause of an outbreak of furious and rapidly fatal delirious mania.

The influence of alcoholic excess in heightening existing tendencies to nervous disease, and even creating them *de novo*, can be easily understood. There can be no doubt that this kind of excess most directly and actively interferes with the nutrition of the nervous centers, tending in fact toward the atrophy of the proper elements of nervous tissue, and the exaggeration of the mere connective-tissue elements of the ner-

vous centers. But, moreover, the nervous centers of many drinkers are hereditarily unstable, hereditarily predisposed to break down in one way or another. Hence the maximum of mischief is produced when such a subject takes to alcoholic excesses.

It seems, then, that the whole evidence afforded by the history of the neuroses points to the conclusion that of all the factors of these diseases which strongly tend to make them obstinate and intractable in type, there is none which is to be compared, on the whole, for efficacy, with a single fact of descent from a strongly neurotic family stock; and that of the subsidiary factors the most important are phthisis and alcoholic excess, which are eminently exhausting and depressing to the individual, and eminently calculated to transmit an enfeebled and badly self-nourishing organism to the offspring.—  
[Dr. Hitchcock in *Massachusetts Medical Journal*.]

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#### EFFECT OF TEA CIGARETTES.

One of the most injurious and dangerous of new fashions is the tea cigarette. That this is no empty, baseless story of a new craze is shown by the application made last week to the Commissioner of Internal Revenue at Washington for permission to manufacture tea cigarettes in Michigan. The applicant was told that to engage in such manufacture he must comply with the law governing the manufacturing of tobacco cigarettes, tea being a substitute for tobacco; that he must register, give bond, and so on, and that the cigarettes, when made, must be packed, stamped, branded, and labeled, exactly as the tobacco cigarettes, before the Government would sanction their removal from the factory for sale.

Several descriptions of the tea cigarette have been printed, but these have erred in the presumption that the tea was taken as sold, rolled up in a paper, and smoked. This would be practically impossible, as the sharp edges of the tea would cut

the paper in all directions, spoil the draft, and render the cigarettes unsmokable.

To make the tea cigarette one takes a grade of green tea which has but little dust, being composed of unbroken leaf, and dampens it carefully, just enough to permit the leaves to be unrolled without being broken, and so as to be left pliable and capable of being stuffed in the paper cylinder, while the dampness is not sufficient to stain the paper. The cigarettes are laid aside for a few days and are then ready to be smoked.

The feeling of a tea cigarette in the mouth is peculiar. The taste is not so disagreeable as might be supposed, but the effect on the tyro is a sense of thickening in the head and a disposition to take hold of something or sit down. If the beginner quits them, that settles it — he will not try tea cigarettes again. If, however, the smoker sits down and tries a second cigarette, inhaling it deeply, then the thickening feeling passes and is succeeded by one of intense exhilaration. The nerves are stimulated until the smoker feels like flying, skirt dancing, or doing something else entirely out of the common way. This stage lasts as long as the smoke continues, which is until the reaction of the stomach sets in.

Words cannot describe the final effects of the tea cigarette. The agony of the opium fiend is a shadow to that of the nauseated victim of the tea cigarette. It will be hours before food can be looked at, yet the first step toward a cure is a cup of tea. An hour afterwards comes the craving for the cigarette.

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## REPORT OF THE SOUTHERN CALIFORNIA STATE ASYLUM FOR INSANE AND INEBRIATES.

This admirable report for two years ending June, 1896, contains many very interesting facts. The following extract is worthy of note:

“There is another element which enters into the dilation of insane statistics in California. I refer to narcomania. No-



where else in the United States is the abuse of opium, morphine, cocaine, etc., so prevalent as on the Pacific Coast, and particularly in California. The Orientals have planted a pernicious habit in our soil. It has thrived. Its noxious influences permeate every stratum of society. All the state institutions for the insane have to deal with the insanities induced by drug inebriety, and the large ratio of mental aberration in our state is due, in a great measure, to the dissemination of this vice, which threatens the vitiation, physical, mental, and moral, of future generations. The number of patients who are committed as insane from narcomania is steadily on the increase. The asylums, hospitals, almshouses, penitentiaries, jails, and police stations give testimony to the accuracy of this statement. This class of dependents adds largely to the burdens of the taxpayer; and could some statute be devised by which the evil might be arrested, the ultimate results would eloquently indorse the wisdom of our law-makers.

“I would suggest that an earnest appeal be made to the legislature for the enactment of such severe inhibitory penalties as shall discourage the indiscriminate sale or distribution of drugs of this character. In my judgment, it should be made a felony to barter, sell, or give away, opium, morphine, cocaine, chloral, and other narcotics, except upon the prescription of a registered physician, the said prescription accurately to state the amount requisite, and to be but once filled.”

In a study of heredity 22.31 per cent. of all cases admitted had a history of insane ancestors. In two years forty-seven alcoholic cases were admitted, and twenty-nine morphine and cocaine cases. It is the usual experience in all Eastern asylums that ten per cent. of all general cases of insanity have an alcoholic causation. If this is true in this institution, of the 500 cases during the past two years, at least fifty more had an alcoholic origin, making over a hundred and twenty cases of drug insanities.

The superintendent, Dr. Campbell, is clearly doing most excellent work, and the hospital is evidently well managed and a pride to the State of California.

## JUDICIAL EVOLUTION IN THE RESPONSIBILITY OF DELIRIUM TREMENS.

It having been publicly stated that little regard need be paid to a recent isolated judicial charge laying down the criminal irresponsibility of delirium tremens, Dr. Norman Kerr thought it advisable to trace the gradual evolution of this newer, more humane, and juster legal view of accountability in this malady. The Scotch Judge, Lord Deas, in 1867, allowed a plea of delirium tremens in reduction of a charge of "murder" to "culpable homicide," and of another similar charge to "manslaughter," there having been mental aberration short of legally-proved insanity. A like reduction had been frequently allowed by several Scotch judges since. Indeed, in 1889, Lord Young declined to let the case go to a jury and discharged the prisoner (accused of "culpable homicide"), a married woman who, when in delirium tremens, caused the death of her infant child from neglect and starvation, on the ground that delirium tremens was a disease. Apart from mere reduction of the alleged crime, even weak medical evidence of the presence of delirium tremens was accepted as a complete answer by a jury in 1845, *Reg. vs. Watson* (York Winter Assizes), and also in *Reg. vs. Simpson* (Appleby Summer Assizes). In 1865 this plea was accepted in the case of *Reg. vs. Burns* (Liverpool Summer Assizes), Baron Bramwell ruling that, though the quality of the act might be known, the jury might acquit the prisoner if they believed he was suffering from a delusion leading him to suppose that which, if true, would have justified the act. A similar acquittal as insane, *Reg. vs. Chaplin* (Warwick Assizes, November), took place in 1878, the accused having been charged with feloniously wounding two persons, who, he supposed, had been breaking into his house.

In 1881 (*Reg. vs. Davis*, Newcastle, April 27th) a verdict of "Not guilty" was returned, on the ruling of Mr. Justice Stephen that delirium tremens was a distinct disease, the secondary consequence of drinking. The *Digest* and *Brett* both hold that the insanity of delirium tremens would excuse a man,

though voluntarily induced. In 1886 Mr. Justice Day (*Reg. vs. Baines, Leicester Assizes, January*) charged that if a man was in such a state of intoxication that he did not know the nature of his act, he was insane in the eye of the law, and that it was immaterial whether the mental derangement then resulting from such intoxication was permanent or temporary. In 1895 Mr. Justice Hawkins ruled that delirium tremens absolved from responsibility. Lord James (1892) laid down that if the delirium tremens has become chronic in its effects, or so advanced as to cause insanity, "it would be scant justice to ignore it on account of the cause which has produced it." So much for major crimes. In minor offenses this plea had also been allowed, since Lord Deas received it in a charge of theft about a quarter of a century ago; and in 1888 (*Liverpool Summer Assizes*) a lady laboring under the effects of delirium tremens, who had stolen a purse, a knife, a diamond ring, and 3s., was acquitted. Of recent years the number of minor charges in which this view had been taken had greatly increased.—*Norman Kerr, M.D., F.L.S., London, in British Medical Journal.*

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THE PSYCHOLOGY OF ATTENTION. By Th. Ribot, Professor of Comparative and Experimental Psychology in the College de France. Authorized Translation. Third Revised Edition. Chicago: The Open Court Publishing Company, 1896. Pp. viii, 120. Price, 75 cents.

This essay deals wholly with the mechanism of attention. Beginning with the spontaneous form, which is caused by emotional states and is the true, fundamental, and primitive form, the author passes to voluntary attention, and finally, without entering the field of psychiatry, discusses briefly the morbid states of attention. The assertion that the mechanism of attention is essentially motor — that is, always acting upon and through the muscles, mainly under the form of inhibition

— is supported by convincing evidence and argument. Most psychologists have overlooked the importance of spontaneous attention and its causation. It is stated that any man or animal hypothetically incapable of experiencing either pleasure or pain would be incapable of attention. It is not the relative strength of a certain state, not the intensity of the impression alone, that acts, but our adaptation or convergence. Our tendencies, as they happen to be crossed or satisfied, causing pleasure or pain — and this epitomizes our emotional life — these are the bases of attention. Tendencies are fundamentally movements or arrested movements; therefore attention, both spontaneous and voluntary, is from its origin bound up in motor conditions.

The physical aspect of the subject is considered and so are the limited contributions of physiology, but the path of the physiological psychologist is not easy, and conclusions are sometimes drawn from premises which the physiologist may still consider hypothetical. Interesting results of psychometrical observations are given, showing the varying activity of voluntary attention in different physical and mental states.

The morbid states of attention are treated of briefly, but with unusual clearness and simplicity of language and classification. The author disclaims the intention of entering the field of psychiatry, but his psychological standpoint forms a complement to the study of the pathology of the subject. The citation of numerous instances adds much to the interest of the work. The book is admirably translated and well printed.

Like the others of this series that have come to our notice, it is well worth the perusal of all thoughtful readers.

**THE DYNAMICS OF LIFE** — An Address Delivered Before the Medical Society of Manchester. By W. R. Gamers, M.D., F. R. S. P. Blakiston Son & Son, Philadelphia.

In an hour's lecture covering sixty pages, the author gives the latest and most suggestive studies on latent chemical ener-

gy, the dynamics of muscle, the dynamics of nerve, and the dynamics of disease, with a note on stimulation in the appendix. This is the most valuable condensed grouping of facts and theories to be found in the English language. No single volume will be of more practical value to the physician, giving clearer views of the phenomena of life, and opening new fields of study and thought. Works like this are invaluable to all thinkers.

**ON MEMORY AND THE SPECIFIC ENERGIES OF THE NERVOUS SYSTEM.**—By Prof. Ewald Herring. Open Court Publishing Co., Chicago, 1896.

This little work consists of two lectures delivered before the Imperial Academy of Sciences at Vienna, on memory as a general function of organized matter, and on specific energies of the nervous system. The first is a very clear study of the physical basis of memory. The facts of consciousness and sub-consciousness, with organic memory and its relations to habit and culture and reproduction are presented in a graphic, most instructive form. The second lecture brings out the fact that the specific energies of the cell and nerve fibers, both latent and cultivated, bring from the past certain predispositions and carry into the future certain tendencies, which constitute the vigor or weakness of the person. The innate energy of the organs remains unchanged through life, but the functional energy vary within narrow limits. We commend this little work as a most valuable, suggestive study of a subject that is usually confusing in larger works. It is one of the bi-monthly issues of the science library of the Open Court Publishing Co.

**OVER THE HOOKAH:** The Tales of a Talkative Doctor. By G. Frank Lydston, M.D., Professor of Genito-Urinary Surgery in the Chicago College of Physicians and Surgeons; Professor of Criminal Anthropology in the Kent College of Law, etc. Sold by subscription only. Price, in cloth, gilt top, \$4.00. Over 600 pages octavo.

Profusely illustrated from the author's designs by C. Everett Johnson. The Fred Klein Publishing Co., Chicago.

This large, well-printed, and finely illustrated volume represents a good deal of talent and descriptive power in the author. The impression on the reader is that a much better work could have been made of the stories, if served up in a different dress. A genial, rollicking, exaggerated style is so common in the sensational press of the day that it has ceased to become attractive. Stories, no matter how good, must have some distinct personality. Dr. Lydston is a genius in this class of literature, and while this effort is attractive, it is full of unmistakable signs of ability to do far better work. The hero of this book gives a great variety of experience, consisting of adventures, incidents, travels, and descriptions of men, together with his personal opinions on medical and humanitarian topics. All of which is very bright and entertaining and helpful to drive away care for both the physician and his patient. The literary world may expect to hear again from Dr. Lydston in the future.

*Appleton's Popular Science Monthly* begins the year with a most attractive table of contents. Some of the best discussions of new facts in science are to be found in this journal. No other publication in the English language gives so wide a range of scientific topics in a strong, clear prospective. Social problems and sanitary topics, and almost every question of modern civilization are reviewed in its pages. This journal is practically a course of scientific lectures every month, which no thinking man can afford to do without. Write the publisher, New York city.

*The Bulletin of the American Medical Temperance Association* is doing excellent work among physicians in this country. Every number contains facts of the greatest interest, directly challenging the theory and practice of many physicians who follow theories of the past without question. It is literally the voice of science calling for the facts on which alco-

hol is used as a medicine, asking for a reopening of the subject, demanding that the new evidence be considered, and that alcohol should be tried by the facts of to-day, not the theories of yesterday. This association and its journal has a great future in the certain evolutions of this subject.

The *Temperance Record* is an English weekly, edited by Mr. Robert Roe, which is one of the best journals of this class published. Every side of the temperance question is treated with great fairness. Medical lectures and scientific studies are presented on the same page with sermons, essays, and temperance appeals. Every aspect of the drink problem is discussed with candor that is charming. As the organ of the National Temperance League it is really the pioneer of the temperance cause in England, and a model which could be copied in this country with advantage.

The *Homiletic Review* for January begins the new year with an unusually strong table of contents. The Homiletic horizon is radiant with new and wider conceptions of truth, and this excellent journal gives a clear summary of its progress and development. No more acceptable present can be made than a year's subscription to this journal. Send to Funk & Wagnalls, publishers, New York city.

The *Medical Pioneer* is the organ of the British Medical Temperance Association, of which the late Sir Benjamin Richardson was president. This journal is exclusively devoted to the study of alcoholic as a medicine and beverage, and its physiological action on the body. It is a thoroughly pioneer journal of intense practical interest to every medical man. It is edited by the well-known specialist, Dr. J. J. Ridge of Enfield, Middlesex, England.

The *Monist*, published by the Open Court Co. of Chicago, Ill., is without a rival for suggestive stimulating discussions of problems of psychology and religious faith. Every physician

and scholar should read this journal, for its influence in opening up new ranges of thought and widening the mental horizon, and bringing one in touch with the great thinkers of the day.

*The Journal of Hygiene and Herald of Health* has been forty-six years before the public, going out regularly every month with its teaching to a large circle of readers. Its veteran editor, Dr. Holbrook, has the rare privilege of educating and training an unknown audience in the vital topics of health. Send to the editor, 46 East 21st Street, New York city, for a copy.



## Editorial.

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### REFORMED MEN AS ASYLUM MANAGERS.

It is confidently asserted that a personal experience as an inebriate gives a special knowledge and fitness for the study and treatment of this malady. While a large number of inebriates who have been restored engage in the work of curing others suffering from the same trouble, no one ever succeeds for any length of time or attains any eminence. The exceptions to this are traveling lectures and moralists, who depend upon emotional appeals as remedies. Physicians and others who, after being cured, enter upon the work of curing others in asylums and homes, are found to be incompetent by reason of organic defects of the higher mentality.

They bring to the work disordered memories and inability to reason impartially because of such memories. They are emotionally biased and are unable to correct the errors of personal equation. In practice they have irregular and changing conceptions of the case. At one time harsh and severe, at another they are weak and credulous; trusting to military rules of conduct, or no rules but those suggested by the impulses of the moment; assuming the inebriate has power of full control, or that he is unable to direct his conduct.

Books and papers on the nature and treatment of inebriety by such men give striking evidence of this psychical instability to reason and comprehend the inebriate. The strain of treating persons who are afflicted with the same malady from which they formerly suffered is invariably followed by relapse, if they continue in the work any length of time. The constant stimulation of the organic and psychical memories of the past in the efforts to determine what condition and measures

are essential in the case under treatment is followed by exhaustion and morbid impulses, that demands relief from drugs, of which spirits and opium are most common. Inductive reasoning from symptoms as to conditions and measures for relief is practically impossible, only in very narrow limits, in such persons. The personality and consciousness are defective, and organic and psychical memories unconsciously bias all judgment. The sense impressions, formerly perverted and palsied by spirits, are roused up again by the contagion of others suffering in like manner. The false ego of the patient after a time impresses itself on the physician whose mind has been in a similar condition. The result is credulity and most un-reasoning dogmatism in regard to inebriates and the results of treatment.

The personal experience of the physician who is treating the case is always consciously or unconsciously the basis of all theories of treatment. The man who has obtained relief by certain drugs, or who has, by the pledge or prayer, or forced abstinence become temperate, will reason that these means are effectual in all cases. There is always a dangerous contagion in the emotional strain of assisting others out of the disorder so vividly impressed on the brain of the person who has suffered in a similar way.

Certain temperance and reform lecturers may go on for years appealing to the emotions of inebriates to stop drinking, but they all suffer more or less from psychical strain and contagion. Usually they all break down and return to spirits or drugs after a time. The reformed men who receive inebriates in their family and enter upon the work of personally treating them, living in the mental and psychical surroundings of such cases, usually fail. Notable examples will be found in the managers of the gold cure empires. Every reformed man as a rule will relapse, particularly if he follows the business of curing others. In the history of asylums in this country, no reformed man has ever continued long in the work, or succeeded as a manager or physician in the medical and personal

cure of inebriates. The successful manager and physician in the personal study and treatment of inebriety must bring to the work a clear, unbiased mind. He must examine the facts of each case and determine their meanings in the spirit of an explorer in a new country. Inebriety is a question of scientific facts and their meaning; there can be no theories or opinions no sentiments or personalities. Each case is a new province of psychological pathology to be studied by itself. All efforts to understand such cases by the way of the emotions, and sympathetic following of the damaged reasoning will fail. No group of facts are final, and no means of treatment can be asserted dogmatically. Each group of facts are held for the present until a larger and clearer view is obtained. Each student who treats inebriety is always ready for new means and measures of treatment.

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### ORGANIC MEMORIES.

How is it possible to efface the organic memories of years of continuous poisoning by alcohol, by any combination of remedies possible to science? These organic memories have become permanent in alterations and perversions of nerve force and function, and have passed beyond the power of obliteration or removal. Such memories call for a repetition of the narcotic which developed this abnormality, but the checking of this demand for the time is not return to health or restoration. The army of men who assume to be cured by the gold remedies, must of necessity relapse, because no substitution by any remedies can replace the organic changes and memories produced by alcohol. The effort to do this is dangerous, because of the great possibility of still further injuring the organic structures and functions of the body and increasing the degenerations already present. The effect of alcohol on the delicate nerve tissues is practically unknown, and how is it possible to devise remedies to act on an unknown condition

in an unknown way? Through the mind these abnormal manifestations called inebriety may be overcome or held in abeyance for an uncertain period. Or through some physiological changes of structure and function, the demand for drink may disappear, but the conditions and causes of such changes are unknown. It is not possible in the present state of our knowledge of the brain and its physiology to know accurately what inebriety is, or what means or remedies will aid recovery. The scientific student concludes from a survey of all the facts that inebriety, in a general way, is an organized dissolution and disease, along lines of great obscurity. The only rational remedies and means for restoration are physiological and hygienic. Measures which will bring rest, change, and building up, and also antagonize the degenerations of the body. Drugs known or unknown alone are empiric, but means which assist nutrition, elimination, nerve and brain rest, with organic change of structure and function, extending over a long period are the only real appliances known. The inebriate is curable, but only by rational remedies rationally applied.

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DR. N. S. DAVIS.

We present the portrait of one of the most widely known physicians in America to-day. For sixty-three years Dr. Davis has been before the medical public as a physician, author, teacher, medical editor, and original investigator. From 1848 up to the present he has taught medicine continuously, and without doubt has been more influential than any other physician in the growth and development of medicine in the West. As the originator and founder of the American Medical Association, and its president, and also president of the ninth International Congress, he has become known to the medical profession all over the world. Among the many topics which Dr. Davis has taken advanced ground and became a pioneer investigator and teacher is that of alcohol. In 1854 he re-

ported some original investigations, showing that alcohol diminished the temperature of the body and thereafter condemned its use in medicine and as a beverage. Other experiments in this direction were made confirming his views, and from that time Dr. Davis has continuously urged, in the lecture-room and in numerous articles and essays, the danger from the use of alcohol and the need of original examination, rather than blindly following the theories of the past.

In 1870 Dr. Davis sent an article which was read at the first meeting of the Association for the Study and Cure of Inebriety, "On the Pathological Influences of Alcohol and the Nature of Inebriation." On different occasions Dr. Davis has contributed very interesting papers for our association on alcohol and inebriety. In 1891 Dr. Davis was made president of the American Medical Temperance Association, founded principally through his efforts, which position he retains up to the present. Dr. Davis has been an honorary member of our association from its beginning, and while urging the recognition of the disease of inebriety, has given more time to the study of alcohol and its effects on the body. His clear, energetic efforts to rouse scientific interest in the study of alcohol have marked a new epoch in rational medicine, a revolt against the delusions and theories which have held sway so long. Dr. Davis has gone far beyond his day and generation in opening up a new field and marking out new paths for scientific medicine in the future.

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A man who doubted heredity in inebriety, one of the reasons being his alcoholic ancestry and his total abstinence and disinclination for spirits, had the following history: From boyhood he had used tobacco to excess, smoking and chewing continuously. He was a gormand at the table and suffered from dyspepsia and intestinal disorders. As a business man he was irregular and unreliable, both passionate and suspicious, and of doubtful honesty. As a leader of novelties in every direc-

tion, he was enthusiastic, always advocating some new scheme for sudden wealth, or new plan for relief of evils, and always deserting the present project for some other one. He espoused the Keeley treatment for inebriety, then denounced it for a better gold cure plan. Then he was interested in charities and claimed unusual results from a new plan of helping the poor. He has been an exhorter, a lecturer, a traveling physician, an agent for an Indian show. His social life has been cloudy; three marriages, one death, one divorce, and one separation has marked this part of his career. His unstable defective brain was a distinct legacy from his parents, and the fact that he did not use spirits or have an appetite for them was a mere accident, due to some insignificant causes which only became prominent by accident.

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The recent death of Sir Benjamin Richardson takes away from the fields of science a very strong, robust, independent thinker. He examined and formed his own conclusions on all disputed questions and had the courage to defend his convictions at all times and places. He had an unusual power of popularizing facts in science and making them clear to every one. On the physiological action of alcohol he was not only a graphic writer, but an original experimenter, and more than any other man helped to clear away the confusion of theory and rouse new scientific interest in the alcoholic question. His "Cantor Lectures" and other papers on alcohol have been widely read and have stimulated new interest and entirely changed the alcoholic question, from the realm of morals and theories to that of exact study, as a problem in science. Dr. Richardson will be remembered as one of the great early leaders in reform circles who cleared the way and showed that reforms must be founded on truths of science to succeed. Also that evolution in any field is not by sentiments but by the teaching of facts. He was a leader, and his work and memory will go far down into the future.

The memorial meeting in New York on the 20th of November was very satisfactory. The papers were all historic and grouped many facts that will be of great interest in the future. Dr. Quimby's paper on alcohol could not be read for want of time, to the regret of many, who will be pleased to hear that it is to appear soon in *Life and Health*, an excellent journal, edited by Mr. Willis Barnes. Dr. Kerr's paper was read by title and will appear in a future number of the journal. Dr. Shepard's historic sketch of Dr. Turner and his work was very graphic; also Dr. Mathison's account of the first institutional care of opium cases and Dr. Bradner's paper on "Quack Remedies for Inebriety," were of unusual interest. It will be a pleasure to present to our readers, a review of the early history of this effort to bring inebriety into the realm of scientific study. This number of the journal begins a new era in the study of the subject. When another quarter of a century has rolled around our work and these studies will be seen in their true light.

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A valued correspondent writes us that he has gathered from correspondents and newspaper clippings the following facts about gold-cure institutes. During the year 1896 twenty-two so-called Keeley gold cures suspended and dissolved. Twenty-seven gold-cure homes, where specific treatment for alcohol and opium was given, have gone out of business. Five new companies have been formed to sell rights to use secret inebriate cures. Three ex-superintendents of gold-cure establishments have committed suicide.

To this we would add that in three years we have made notes of the relapse of nineteen physicians who have been medical directors of gold-cure establishments. Ten of these persons came for treatment in regular asylums, where no specifics were used.

**DISEASE OF PERSONALITY IN INEBRIETY.**

The physiological and psychic consciousness of the man and his relation to all things external to himself may be called his personality.

In inebriety this is always perverted and changed. In a large number of inebriates abnormal and defective organic conditions exist prior to all use of spirits. The use of alcohol deranges first of all the psychic life with its sensations, desires, feelings, volitions, memories, reasonings, inventions, etc., also the relations to the surroundings. Alcohol attacks the organic harmony of the organism, by depressing, exalting, and perverting vital forces. The nutrition, the elimination, and the conservation of energy are changed. The consciousness of these changes is obscured and covered up. Both the organic and psychic consciousness often fail to reveal the true condition. The personality of the man is broken up. His organism is unbalanced, his mentality is deranged, and this increases with the use of spirits.

The senses become more unreliable and the power of correcting the sense errors more difficult. Doubts of the power of correctly appreciating events and conditions, both external and internal, grow less and less, and finally disappear. A new personality with an exalted ego comes on; or the ego disappears, and an imbecile dependence on others follows. All the higher conceptions of his relations to others disappear, or are so loosely held as to be abandoned at any moment. Nothing remains but the physical or organic conceptions, which dominate. These disturbed organic activities make up the personality and constitute a group of manifestations and symptoms which may be clearly called disease. The organism is disordered, the senses are deranged, the impressions on the higher brain centers are misleading, and the acts and conduct absurd. The temporary palsy from the action of alcohol on the sensory nerves are interpreted as ideal states of health. The increased circulation of the blood in the brain with increased mental activity, is considered renewed power and force.



These delusions grow and extend to all organic sensations, and finally all subjective impressions are perverted, and the real personality is gone. The man is no longer able to measure or estimate his real condition. The personality he displays is an evanescent, unreal one, growing weaker steadily. This dissolution of personality noted in inebriety is constant and uniform. When intoxicated a new personality appears; when sober, the old personality comes back but changed and modified. Finally the alcoholic personality becomes so prominent that all others are obliterated. Surroundings and conditions of life may preserve an automatic personality for a time, but even this becomes changed, and the dissolution of the brain has passed all power of concealment. This disease of personality may be seen in persons occupying places of trust and honor in the community. They are not considered inebriates although known to be using alcohol freely. Such men display great perversions of judgment and character; take anomalous positions on questions of politics, religion, and science; lead some strange reforms or crusades to change the present order of society; or suddenly become defaulters and outlaws, or hypocrites, following lines of conduct that suggest insanity.

Some of these cases are temperance reformers, whose zeal passes all bounds of reason and whose judgment indicates a total loss of the higher conceptions of life. The brain and body is in a state of anarchy. Disease and disease impulses predominate, which may pass on to well-known forms of insanity, or continue until death from some acute disease follows. There is a rich field of psychological study along this line awaiting investigation.

## Clinical Notes and Comments.

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### ALCOHOLISM IN CHILDREN.

Dr. Goriatchkine has made a very interesting report on this subject to the Moscow Society of Paediatrics. He has seen quite a number of cases of ethylism, not only among the poor and working classes, where, unhappily, the example is often set by the father of the family or by the fellow-workers, but also in families belonging to the higher classes.

The author cites, as an example, the history of a little girl of five years, who often partook of cognac, of malaga, and of port wines. The use of spirits began when she was two years of age, on the advice of a physician who was treating her. By little and little the child has become accustomed to this treatment, and actually she takes two small glasses of port and a teaspoonful of cognac each day. The child is anaemic, has restless sleep with nocturnal terrors, and the liver and the spleen are hypertrophied. In other cases the intoxication was more manifest, and showed the ordinary signs of chronic alcoholism.

In order to estimate the frequency of alcoholism in children and the causes which explain it, Goriatchkine has questioned the parents of all the children that he has had occasion to see in consultation at Saint Olga's Hospital. In four months he has been able to collect information of one thousand six hundred and seventy-one children (eight hundred and forty-one boys and eight hundred and thirty girls) from one to twelve years of age; of this number five hundred and six children (two hundred and eighty-two boys and two hundred and twenty-four girls), — that is to say, about one-third, — take alcohol, either as a result of their environment or (in half

the cases) upon the advice of a physician. This abuse often commences in the first year. The author is convinced that, if there are so many alcoholics among the children, it is in a great degree the fault of physicians who habitually prescribe the various forms of alcohol, either to stimulate the appetite or for other objects. Children thus frequently receive different preparations (vermifuges, diarrhoea remedies, etc.) in alcoholic infusion.

However, in the great majority of cases, alcohol is not indispensable, and ought to be replaced by other substances. In all cases the utility of alcohol is far from demonstrated. In prescribing alcohol, the habit may be formed, the need of an excitant may be felt, and in predisposed children, the issue of alcoholic parents, the alcoholic diathesis created by the alcoholism of the parents and remaining until that time in a latent state may often be awakened.

The administration of alcohol in chronic troubles of nutrition, to "give strength" to the child, appears to be not only useless, but even dangerous, on account of the need which it creates. On the other hand, there is no known authentic case in which alcohol shall have rendered real service. The fact that for the past six years alcohol has been used only in cases of extreme urgency at Saint Olga's Hospital (Moscow), is a proof of the manner in which one may omit it in medicine.

Therefore, the author advises strongly, in accord with Strümpell and Smith, to avoid prescribing alcohol as much as possible, and to oppose the parents with all one's power if they try to make children take it, under whatever pretext. — *The Charlotte Medical Journal.*

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### BOVININE IN INEBRIETY.

For some time past we have given bovine in cases of exhaustion and extreme debility, with general good results. In some cases a rapid improvement followed, which could not

be traced to any other cause. Recently, a case of general prostration, following the removal of morphia, was given bovine exclusively as a tonic every three hours. After the fourth dose a decided improvement began. The nervous irritation became less, and a short refreshing sleep followed. The exhaustion grew less and the heart-beat stronger and less frequent. The second night he slept soundly for four hours. The improvement was steady and rapid for the next four weeks, until discharged. This case was a chronic neuropath and a great variety of distressing neuralgias are sure to follow when morphia is withdrawn. In this instance very little neuralgia followed, and was of short duration, and less acute than usual. The absence of the usual insomnia could only be referable to the chemical and nutrient action of the bovine. The second was that of a former opium inebriate, who suffered from neuralgia, confined to the nerves of the upper extremities. At times he feared he would have to use opium again for relief, and this greatly distressed him. I tried various remedies, but had to change them often to prevent the contraction of an addiction for any one drug. Finally, I gave two-ounce doses of bovine four times a day. The result was that after two days he improved steadily, the neuralgias disappeared in a week later, and now, five weeks after, there has been no return of the pain. He still uses bovine, only in smaller doses, and has increased in vigor and strength materially. In a third case, from which the morphia was withdrawn, followed by the usual nausea, with colic pains and general weakness, bovine was given in two-ounce doses. After the second dose it was retained, and all the acute symptoms subsided, and recovery followed without any unusual symptoms.

In these two last cases the action of the bovine must have been chemical, as well as nutritional, neutralizing some conditions of acidity, or other chemical states, and supplying some nutrient want or condition of starvation in the system. These three cases are instructive and suggest the possi-

bility that bovine may, in certain conditions of poisoning from alcohol, opium, or other drugs, be a constructive remedy to check poison degenerations and build up cell and tissue more positively than any remedy known at present. We suggest that our readers try this remedy in similar cases and report the results.

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### COCAINE POISONING.

Weinrich, of Nitze's clinic (*Berl. klin. Woch.*, March 23, 1896), discusses cocaine poisoning originating from the urinary passages. The symptoms are very variable, but they are mostly referable to the nervous system. Thus, cocaine must be used with caution in neurotic individuals. The symptoms may consist of stupor, vertigo, headache, and these may end in collapse with severe praccordial anxiety. Clonic and tonic spasms are noted, which may produce sleeplessness and restlessness in some people, and unconsciousness in others. Mental excitement and a mild degree of mental aberration may be observed. Paralysis, tremor, slight loss of co-ordination may also be among the motor symptoms. If respiratory difficulty, cyanosis, loss of consciousness supervene the prognosis becomes very serious. The unfavorable action of cocaine on the heart rarely becomes threatening, the respiratory symptoms being the most significant. A feeling of suffocation, with irregular stertorous breathing may arise, and eventually Cheyne-Stokes breathing. Death may result from respiratory paralysis. Idiosyncrasy to cocaine is sometimes very marked, so that the size of the dose may be almost without perceptible influence on the intoxication symptoms produced. The author records two cases of cocaine poisoning, the first he had seen among several thousand of bladder cases which had been cocainised. In comparing experiments on animals with observations on man, it is proved that cocaine can be absorbed from the bladder, but the absorption is so slight as to be practically without significance. With increased dexterity in the use of the

cystoscope perhaps weaker solutions of cocaine can be employed or no local anaesthetic used at all. Cardiac and vascular diseases, pernicious anaemia, are contra-indications to its use. The horizontal position should be adopted when it is used. Chloroform may be used when spasms arise, but the chief remedy against cocaine poisoning is artificial respiration. The proposal of Gauchier to add nitroglycerine (coc. mur. Merck 0.2; aq. destil. 10.0; sol. nitroglyc. (1 per cent.) gtt. x) is worth bearing in mind.

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### IS INEBRIETY INHERITED?

A most prominent question, one, too, which has been made the subject of much inquiry, is the extent to which the habit of intemperance may be the result of a faulty nervous organization inherited from intemperate ancestors. Upon this point there is a large preponderance of opinions, affirming that inheritance is not only a frequent, but a very powerful factor, in the development of drunken habits. As might partly be expected with a subject which the profession at large has treated with extraordinary neglect, the opinions of experts have been widely different, while the laity are inclined to sneer at the idea of drunkenness being inherited. An editorial paragraph, for example, in a contemporary, represents a physician of some repute as giving his opinion that the paroxysmal form of drinking, which is very frequently inherited, is more likely to be amenable to prolonged forced abstinence, than is the form of drunkenness which is the mere result of sottish habits gradually adopted under ordinary external temptation. Now it seems to me that all the evidence seems to prove that the fact of an inherited disposition makes the case more difficult, and more absolutely requiring a long period of detention and enforced abstinence, than those of ordinary tipping. Until recent years I thought paroxysmal drinking practically incurable by incarceration or anything else, that

the sufferers from it were almost always members of the families which were strongly tainted with insanity; and that the only paroxysmal drinker whom (in a considerable experience) I ever knew cured, was a man in whose family the insane taint was very slight, if not absent.

The opinion of the physician quoted above represents a belief that is exceedingly prevalent, even among medical men who should know better, respecting the character of inherited tendencies, not only to drink, but to nervous diseases generally. In one shape or another I frequently encounter the idea among medical men, that the nervous diseases of persons who belong to neurotic families are slighter, and more spontaneously curable, than those which arise entirely from external circumstances, in persons whose ancestors have been free from nervous diseases. How such an opinion first arose there is some difficulty in understanding; and as I believe it to be directly contradicted by the results of careful observation, it may be worth while to investigate the matter a little further. — *Dr. Hitchcock, in Mass. Medical Journal.*

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#### A RARE EFFECT OF TOBACCO.

The following case is interesting, on account of its extreme rarity, and the great importance of the etiological diagnosis. E. H., a healthy looking person, 25 years of age, bookkeeper by occupation, was seized with convulsions, epileptiform in character, five months since. Both of the elements of epilepsy were present, namely, loss of consciousness, and rigidity of muscular system. For two months he had one or two convulsions a week, and they were growing progressively more severe and frequent, although he began taking rather generous doses of the bromides, from the very beginning. The family history was good, there being no narcotic tendency in any member of it, nor had the patient himself exhibited any nervous manifestations, previous to this time. Upon examina-

tion, the heart, kidneys, lungs, and liver were found in a healthy condition. The digestion was good, the bowels regular, and no indication existed of any irritation in the intestinal canal. There was no disease of the generative organs at the time, but one year previous he had an attack of gonorrhoea. The urethra was examined, and proved to be normal in every respect. The foreskin, so often the cause of nervous diseases, had been removed two years before. There was no history of syphilis, or was there any constitutional cachexia, to which his complaint could be attributed. The eyes, nose, throat, and ears were favorably reported upon by a specialist of recognized ability. After a most careful examination, no cause of peripheral irritation could be discovered. The patient's habits were good. He was not addicted to the use of alcohol in any form. He was temperate in sexual intercourse, and at no time practiced masturbation, which is supposed by many to be a very fruitful source of epilepsy. Every known cause of nervous disorders could be eliminated, except the use of tobacco; and although this was not carried to any great excess, still, by the process of exclusion, we became convinced that tobacco was the real cause of his trouble. Prof. John B. Elliott of New Orleans and Dr. R. W. Knox of this city, both of whom saw the patient in consultation, coincided with this view, and the subsequent history of the case proved the correctness of it. All medication was discontinued, and the patient was instructed to stop the use of tobacco entirely, since which time there has been no return of the convulsions. The most remarkable feature of this case was, that, while the use of tobacco had given rise to epileptiform convulsions, not one of the more common effects of nicotine poisoning of the nervous system had ever been present. It would have been more in the natural order of things, for at least a slight derangement in the circulation or respiration to have occurred before the climax was reached. In other words, we would have expected a "tobacco heart" to have preceded a "tobacco convulsion." Had not the result of treatment been a complete verification



of the etiological diagnosis, we would have had very serious doubts as to its correctness, for tobacco is an extremely rare cause of such a condition, and besides, this particular case pursued a course contrary to all reasonable expectations.—  
*J. W. Scott, Houston, Texas, in The Southwestern.*

INSANITY CAUSED BY INEBRIETY.

The following table, compiled by *The Voice* from the report of the State Board of Statistics of Mass., ending Aug., 1895, is worthy of note:

QUESTION.	Yes.	No.	Not Ascertained.	Totals.	Per Cent. Due to Intemperance of Those Ascertained.
Is the person's insanity due to the use or abuse of intoxicating liquor ? . . . . .	883	1,123	330	1,836	25.4
Did intemperate habits of one or both parents lead to the insanity of the person considered ? . . . . .	20	921	895	1,836	2.1
Did intemperate habits of grandparents of person considered lead to (his or her) insanity ? . . . . .	184	170	1,482	1,836	52.0
Did intemperate habits of other persons lead to insanity of person considered ? . . . . .	41	404	417	862	9.0
Total average of persons considered, . . . . .					1,567
Total average of cases ascertained, . . . . .					786
Total cases where insanity was caused by drinking habits of self or other person, . . . . .					628
Per cent. of cases ascertained in which insanity of person considered was due to drinking habits of self or other person, . . . . .					79.9

*"Inebriety.* — Approximately, in consequence of the drinking habit, which so generally obtains in the United States, a million of men are impaired in their capacity for the skill in their work, 200,000, with their families, are in constant despair, and 100,000 die annually."

The above paragraph, going the rounds of the press, is undoubtedly a minimum statement. The statistics of any city or large town more than confirms it. The causes of death in charity hospitals and in private homes brings additional proof.

**BEVERAGE OR MEDICINE.**

The determination of whether a certain compound is a beverage or a medicine is clearly set forth in the Intoxicating Liquor cases, 25 Kans., 751.

“If the compound or preparation,” said the Court, “be such that the distinctive character and effect of intoxicating beverage is practically impossible by reason of the other ingredients, it is not within the statute. The mere presence of the alcohol does not bring the article within the prohibition. The influence of the alcohol may be counteracted by the other elements, and the compound be strictly and fairly only a medicine. On the other hand, if the intoxicating liquor remain as a distinctive force in the compound, and such compound is reasonably liable to be used as an intoxicating beverage, it is within the statute, and this, though it contain many other ingredients and ingredients of an independent and beneficial force in counteracting disease or strengthening the system.” The doctrine of this decision and the justice of the test which it proposes are amply supported by the other authorities, both earlier and later.

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**OPIUM POISONING AND PONS APOPLEXY.**

The symptoms of these two conditions resemble each other so closely that hemorrhage into the pons varolii is often mistaken for opium poisoning. The contracted pupil, contracted so closely that it is not much larger than a pin's head, was supposed to be a distinctive symptom of opium poisoning, and yet that symptom is equally marked in pons apoplexy. In both cases we have the slowness of respiration, the uneasiness, the pinhole contraction of the pupil, the stertorous breathing, the twitching and convulsive movements of the face and limbs. These symptoms may be present in varying intensity, but they are just as likely to be present from one cause as the other. Fortunately, pons apoplexy seldom occurs. Out of 386 recorded cases of brain hemorrhage, three only were of pons

hemorrhage. The symptoms resemble each other so closely that in a trial for murder, in the absence of opium found in the stomach, an autopsy can only reveal the real cause of death. The presence of the clot settles the matter so far as poisons is concerned, but even the skill of the chemist fails in differentiating between the vegetable opium and the ptomaines generated in the system, both producing the identical symptoms. In face of the liability to errors of diagnosis in which a human life may be sacrificed, would it not be wise to adopt some other punishment for murder than the halter or the electric chair? — Ed. *N. Y. Times*.

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### HEREDITY.

Dr. Caulter, medical director of Chicago Life Association, makes the following remarks in the *Medical Examiner* for December:

*Alcoholism.* — Some may wonder at the presumption which allows the discussion of the subject of alcoholism under the head of heredity. But I venture to say that it belongs there as much as does any condition already referred to. I do not, of course, claim that the desire for stimulants *per se* is transmitted, but rather a defective brain and nerve power, which defect may become manifest later on in neurasthenia, or retarded development and co-ordinate conditions, all of which very materially decrease the powers and capacity of resistance, and to just such extent increase the hazard of the risk.

I maintain that the persistent use of alcohol is sure to make an indelible impress upon the nerve stability of posterity; the organism receives a certain bias from which it cannot escape, and as such plays an important part in heredity and the family history.

Is it not strange that our honored judiciary do not take a more decisive position relative to an agent which is the acknowledged progenitor of crime, pauperism, and insanity,

and which is universally recognized as the principal feeder of our jails and almshouses? And is it not strange that certain of our medical directors who have recognized these conditions as real, live, active elements in the consideration of the hazard, should be considered as cranks or bigots? All simply because they will not suborn conscience by rating as "first class" an applicant who, through alcoholic excesses, either of himself or his ancestry, has impaired that all-important, most delicate physiological function, brain power.

The retrograde hereditary tendency of chronic alcoholics has long been an established fact in neuro-pathology. Dr. Hughes says, "whether alcoholism be a vice or a disease, its ending is invariably in a condition which is either the beginning or continuance of a transmitted neuropathic or neuropsychopathic heritage," either of which are equally undesirable elements in an insurance risk.

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### SYPHILIS AND PARESIS.

In a paper on hereditary syphilis and general paresis in the insane, by Dr. Williams, occurs the following most significant passage:

"Practically seventy-five per cent. of all cases of general paralysis exhibit proof of primarily syphilitic infection." The history of all cases is "the typical man of the world," ambitious, fond of society and high living, a light sleeper, and a heavy drinker, then come delusions and well-marked paresis." Four cases are noted where syphilitic teeth were prominent, although no history of syphilis could be obtained. Each one had used spirits freely. The pathological conditions in chronic inebriety, syphilis, and paresis, are all alike. The thickened membranes and meningeal changes are the same. The neurosis which predisposes to insanity, paresis, or inebriety may be of syphilitic origin. A history of using alcohol exists in all cases of paresis, and it is significant of contributing causes not yet studied.

**TREATMENT OF HABITUAL INEBRIATES IN AUSTRIA.**

A most interesting report on "The Treatment of Habitual Drunkards in Austria and the 'Curatel' Procedure" has just been issued. From this report it would appear that legislation on the subject of drink and drunkards has actually taken place in Austria, drunkards coming under the law in that country as "spendthrifts" or "idiots." The process of "Curatel," whereby the court appoints a curator or administrator for persons who do not look after their own affairs and who are unable to defend their rights, is made applicable not only to children, lunatics, and idiots, but also to those who, having been declared "spendthrifts" by a magistrate, have been deprived of the administration of their property. A man may be judicially termed a "spendthrift" if it appears, on examination of the charge, that he is running through his property in a senseless way, and that he is exposing his family to future destitution by contracting loans under reckless or ruinous conditions.

In some kingdoms, as in Galicia and Lodomeria, there is a special law for the prevention of drunkenness, and one section provides that on being convicted of drunkenness three times in the course of one year, the district authorities may forbid the offender to visit public houses or liquor shops in the neighborhood of his domicile for the period of one year, under pain of fine or imprisonment. The inadvisability of mixing mere drunkards with the insane in asylums is fully recognized by the Austrian authorities. Last year a bill for the erection of public asylums or establishments for the cure and reform of drunkards was brought into the Reichsrath by the Minister of Justice. These institutions are intended for the reception of (1) those who have been judicially punished for drunkenness three times in the course of one year; (2) those mentally affected owing to habitual or periodical use of alcohol who have been admitted into hospitals or lunatic asylums, and who, although they

have recovered their sanity, have not sufficient self-command to resist the temptation to drink; and (3) those who, owing to habitual or periodical abuse of alcohol, endanger the moral, physical, or financial security of themselves or their relations. Provision is also made for the compulsory retention of patients for a period which may not exceed two years, and placing the police and judicial authorities at the disposal of the administration of the asylum in order to recover fugitives from the same. Consideration is given to the proper safeguarding of the individual from the illegal and undue application of the various processes upon which detention in an asylum may be carried out.

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#### THE INFLUENCE OF ALCOHOLISM ON THE GROWTH OF CHILDREN.

*The New York Medical Journal*, November 7th, publishes the following:

“At a recent meeting of the Académie de Médecine, a report of which appears in the *Presse Médicale* for October 14th, M. Lancereaux reported two cases which had come under his observation. The first was that of a child thirteen years old. From the age of three years she had taken fifteen ounces and a half of wine a day. At nine years of age she had had typhoid fever, followed by purulent pleurisy and pneumonia, and since then had coughed continually. The abdomen had enlarged and the patient had suffered from cramps at night. She had had several attacks of epistaxis. When the author saw her she complained of a tingling sensation in the extremities, of nightmare, and of catarrh. She was no larger than a child of nine years; she was thin and pale, and showed no sign of puberty; the heart was large, and the abdomen, which was very large, was distended and flatus; there was also ascites. The liver and spleen were large, and the urine presented albumin. During the patient's stay in the hospital she showed uraemic symptoms. Under the influence of a milk diet the

liver and spleen diminished considerably a year after her admission, but she did not grow.

“The second observation related to a child fourteen years old. When she was twenty months old her mother had given her wine, and from the age of two years she had taken from a pint to a quart of wine a day. When she was eight years old digestive trouble had occurred, and, to strengthen the child, her mother had increased the quantity of wine. At six years of age she had had nightmare and cramps, and the abdomen had begun to enlarge. At the present time she was of about the size of a child of six years. Her height was about thirty inches; her head was small and the expression childish, but she was very intelligent. The thyroid gland was very small, and the thorax was retracted at the upper part and enlarged at the lower part, which was due to the development of the abdominal organs. The abdomen was very large; there were ascites with an abnormal development of the abdominal subcutaneous veins. The heart, liver, and spleen were large. The patient passed a pint of albuminous urine every day. Digestion was badly performed, and the lower limbs were atrophied and paretic. During her stay in the hospital she presented uraemic symptoms. She was placed on a milk diet, and the digestive troubles improved, but she did not increase in size.

“M. Lancereaux stated that he had tried to reproduce these lesions by experimentation in two rabbits who were subjected to progressively increasing doses of wine. One had died at the end of twenty days, without presenting any visceral alterations. The other had died after thirty days, and presented haemorrhage of the stomach. The liver was of a pale grayish color, and the spleen was tumefied.

“The histological examination demonstrated traces of an irritating influence in the liver, which were found principally in the central parts of the lobes. The connective tissues of the portal spaces did not present lesions that were very clear, but

the subhepatic veins and the capillaries were filled with leucocytes and proliferated endothelial cells. The glandular parenchyme was remarkable for the considerable size of its nuclei, which were vesicular; the cellular protoplasm seemed to be intact.

“ M. Lancereaux thought it was impossible, in view of these observations, to deny the injurious influence of alcohol on the growth of children, and he said that this was one of the causes of degeneration and depopulation which physicians should energetically fight against.”

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#### INFLUENCE OF TOBACCO UPON ITS USERS.

Dr. C. H. Powell describes eleven effects of tobacco in an article to the *General Practitioner*. These are as follows: Greater hyperemia of the nasopharynx than any known agent; frequent recurring attacks of quinsy; laryngitis of a subacute form; chronic periodical cephalalgia from hyperemia of the frontal sinus; chronic hyperemia of the eustachian tubes; gastric derangements; polyuria, cold hands and feet; impaired intellect; great weakness of the heart's action; lessened respiration; diminished oxidation. Each of these influences is fully discussed. The author concludes that tobacco is one of the slowest, and one of the surest, poisons to the human race. — *Brief.*

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#### THE CIVIL CAPACITY OF MORPHINOMANIACS.

M. Berrillon said: A recent civil process presents for consideration by the society the following question: Should morphinomaniacs, by reason of their morbid habit, be considered as incapable of giving proof as to whether they are, or are not, of sound mind (*sains d'esprit*), to use the expression of the “ Penal Code ” ?

M. H. Lemesle said chronic morphinism presents phases and



degrees variable according to the resistance of the subjects and the doses employed, and which admits of their being classed as morphinomaniacs in very different categories as respects their mental condition. There are periods in which they are absolutely irresponsible, and others in which they are perfectly *sains d'esprit*, of sound mind.

M. A. Voisin: It is with morphine as it is with quinine and strychnine. Those patients in whom it is indicated bear large doses without risk; morphinism only occurs from the abuse or irrational use of the drug.

M. P. Valentin: Morphinic dipsomania may be likened to alcoholic dipsomania; in each case it is the idiosyncrasy of the subject that creates the peril; the morphinomaniac does not become so voluntarily, he must be predisposed.

M. Dumontpaller: One thing is necessary to establish the "civil capacity" of a morphinomaniac, and it is a certificate of mental alienation. There is no evidence that madness is more frequent in morphinomaniacs than in other neuropaths addicted to morbid habits of the same kind. In all cases there is no identity between madness and morphinomania. — *From a discussion by the French Society of Hypnology and Psychology, reported in the Medical Times.*

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#### WHEN SHALL ALCOHOL BE GIVEN TO CHILDREN?

Grocz warns against the abuse of giving children wine or brandy in an unsystematic way and in reckless doses, as also against the early use of alcoholic beverages. Besides reporting two cases of acute alcoholic intoxication, which evidenced itself in a comatose condition and severe tonic and clonic convulsions, he mentions severe dyspepsias, cases of epilepsy and chorea as the sequel of an early abuse of alcohol. A certain number of neurasthenic conditions in children are to be traced to it.

For twelve years the police arrests for drunkenness alone averaged in Hartford 62.8 per cent. of the whole number, while drunkenness and its allied offenses numbered 80.67 per cent. This proportion is perhaps somewhat larger than in most places, but it may be generally expected to be at least as high as three-fifths.

Ninety-five to ninety-seven out of every hundred incarcerated in our jails are self-confessed drinkers, although they pleasantly add "moderate" to the title, and from 43.6 to 56.1 per cent. of them are there especially for drunkenness, and fully 66 per cent., or two thirds of them, are there for that and its resulting crimes. There were 1,393 of them there last year out of a total of 2,111.

Of the 381 captives in our State Prison last year, 46.8, or almost half, thought drink had done it. — *Prof. McCook, before the Century Club, in Hartford, Conn.*

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The statute law of Vermont has a provision making it possible for a wife or the children of a person confined in prison for intoxication or crime committed while intoxicated, to recover two dollars for each day of confinement of said convicted person of the party who sold such person so confined any part of the liquor he drank. This section was enlarged by making it possible for the town upon which the family of the convicted person is liable to come for support to bring a like action and recover the per diem damages.

A law was also passed requiring the judges of city, county, and municipal courts, before whom persons may have been convicted of selling liquor, to report such cases to the United States collector of internal revenue, in order that he may ascertain if such person has paid the United States tax.

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“*Ardendale*,” Brooklyn, N. Y., an institution for the cure of mental and nervous diseases, alcohol, and drug habituation.

We desire to call attention to the opening of a new institution for the cure of mental and nervous diseases, including alcoholism and the various forms of drug habituation. .

The medical director, Dr. Duryea, is peculiarly fitted by long and special experience for the supervision of such an institution.

The staff, both consulting and visiting, are well known not only in their own immediate professional circles, but throughout the land and abroad in their specialities.

One of the consulting staff, Dr. L. D. Mason, has given a lifetime to the study and cure of alcoholism and other forms of drug habituation, and for thirty years has devoted himself to this speciality. He is firmly convinced that patients of the better class should be cared for in private institutions, and that the state or county should provide and care for *pauper inebriates only*, and that the state or county should not interfere with private institutions in the care of that class of persons who are able to pay for their treatment; in other words, the status of the pauper inebriate should be on the same plan as that of the pauper insane. Dr. I. L. Shaw is one of the leading neurologists of Brooklyn, Professor of mental and nervous diseases in the Long Island College Hospital. Drs. Browning, Barber, and O’Connell are all well known neurologists. Dr. Browning, in addition to his speciality, is also a teacher in this department.

Dr. W. N. Bates of the consulting staff is one of the leading surgeons in Brooklyn, and attending surgeon to Brooklyn City Hospital.

With such a staff the institution ought rapidly to attain a position of desirable prominence and usefulness in the community, and we commend it not only to the medical profession, but to the public generally, as an institution conducted on the highest ethical and scientific grounds.

## VINO-KOLAFRA.

The question was asked, Is vino-kolafra in any sense a remedy for inebriety? The following test case was made to answer this question at Walnut Lodge Hospital, Hartford, Conn., T. D. Crothers, M.D., superintendent: H. B., a workman, 32 years of age, and chronic inebriate of fifteen years duration, came for treatment. His father and grandfather both were inebriates, and he used beer and spirits from early childhood. From fifteen he has drunk to intoxication at irregular intervals. For the past six years he has been a periodical drinker, having distinct free intervals of sobriety of from two weeks to three months. He has taken the Keeley cure twice and abstained from drink for one month at the first time, and ten days at the last time. Since he has used spirits in greater excess and been more delirious and prostrated than before. At the last attack he was violent and his friends were alarmed, fearing he would commit crime. At the beginning of the attack he was brought to this hospital. All spirits were removed and two ounces of vino-kolafra given every two hours. After the second dose he became quiet, and after the fourth dose went to sleep and awoke quite rational four hours later. This medicine was continued with the addition of a bath and calomel purge for two days, then reduced to the same quantity four times a day. On the fifth day he complained that the drug caused nausea and was unpleasant. It was then discontinued and the usual bitter tonics substituted. In this case the vino-kolafra seemed to have some special sedative and neutralizing power which overcame the cell and nerve irritation present. This case seemed to answer the question strongly in the affirmative that vino-kolafra is a remedy for inebriety, particularly in the early stages of treatment.

Perekhan, J. S.: Ferratin, Iron Tonic and Food. (*Chicago Medical Recorder*, January, 1896.) The author reviews the literature on Ferratin, quoting Schmiedeberg, Germain, See, Dujardin-Beaumetz, Marfori, Jaquet, Fackler, Einhorn, and

others, and then cites a case of anemia in his own practice "because the improvement under the use of Ferratin was so striking as to merit special mention." Patient, a girl of 17, became anemic after an attack of grippe, lost her appetite, etc.; condition on November 15th as follows: face pale, of wax color, lips and conjunctiva almost white, headaches, insomnia, constipation, shortness of breath, bad appetite, etc. Half gramme doses three times daily, with hygienic regulations, caused improvement after first week, and gradually her appetite returned, headaches and insomnia disappeared, red color was restored to lips and face, and within five weeks the blood corpuscle count showed an increase from 2,100,000 to 4,150,000 per ccm. Author concludes that "Ferratin can be safely recommended as a hamatinic remedy, with suitable diet, hygiene and exercise not to be neglected."

S. L. Reed, M.D., Highland Park, Ky., Oct. 28, 1896, writes:

"Have only time at present to copy notes in reference to case in which I used bromidia. Was called suddenly, early on morning, June 10th, to see Mrs. McG. Patient had been under treatment of Dr. R., who had been called, but failed to answer. Found patient suffering with acute mania, very violent and destructive. On questioning family found patient had delivered herself four days previous of a three-months foetus. Since that time patient had been receiving enormous doses of morphine with no apparent result. As patient was beyond control, improvised a straight jacket of her husband's sweater and bicycle belt. Ordered half-ounce Bromidia (Battle & Co.) every half-hour until quiet. In two hours patient was sleeping. Patient continued to receive Bromidia whenever indicated, along with other treatment, and in a few weeks was apparently well, although Dr. R. still has her under observation. This will show the superiority of Bromodia over morphine, especially in cases with head symptoms.

I have had moderate success with Iodia, but could sing the praises of Papine in several columns if I had the time.

## UP-TO-DATE TREATMENT FOR EPILEPSY.

Hydrocyanate of Iron-Tilden has been meeting with phenomenal success in combating this dread disease. Epilepsy is an affection so very intractable, as a rule, that the ordinary remedies and methods fail to give even slightly satisfactory results, indeed, they often appear to hasten the very disturbances which they are intended to correct.

Many of the most eminent neurologists have abandoned the bromides and now rely entirely upon the efficacy of the Hydrocyanate of Iron-Tilden. J. H. Dearborn, Beverly, Mass., writes, "I am using Hydrocyanate of Iron-Tilden in a case of epilepsy that has baffled the skill of eminent physicians in London and the States, with marked success. I can heartily recommend it."

Literature and Epitome of Cases in practice will be furnished upon application to The Tilden Company, St. Louis, Mo., or New Lebanon, N. Y.

Professor Thompson writes: Diastase is a vegetable ferment which has the property of converting starchy foods into a soluble material called maltose. Like the ferments in the saliva and pancreatic juice, it acts in alkaline solution, but unlike them, it continues to operate in acid media, and, therefore, its action is not disturbed by the gastric juice. Diastase is a peculiar substance which causes the ripening of fruits and vegetables by converting their starches into dextrans and sugars; hence fruit becomes more and more digestible as it ripens.

*Celerina* continues to prove a most practical remedy. The following, from Dr. Harrison of Abbeyville, S. C., expresses this fact clearly: "I have used *celerina* in appropriate cases, and can heartily recommend it to all who wish an elegant preparation, combined with undiminished therapeutic activity. It is peculiarly fitted to such cases as delirium tremens, headache from debauch or excessive mental or physical exertion.

*Mercauro*, prepared by the C. R. Parmele Co., is undoubtedly a tonic in a large number of cases of inebriety. How it acts is not clear, but evidently it influences in some profound way the nutrition and organic processes, and antagonizes the depression which demands spirits. I would urge that it be given as an alterative tonic in all cases. This form of mercury seems to be preferable to all others.

The *Review of Reviews* is essentially a busy man's journal, giving a clear idea of the history of the world and its literature. No more useful journal can be found.

The Wheelers' *Tissue Phosphates* needs no praise; they prove their value wherever used. Such drugs are standards in the treatment of disease.

The Lambert Pharmacal Co. of St. Louis, Mo., has for years put on the market *Listerine*, one of the best standard antiseptics known. Its uniform power and increasing value, wherever used, commends it as the most useful practical remedy which can be used in disease.

P. Blakiston Son & Co., *Physicians' Visiting List for 1897*. This is the forty-sixth year of its publication and may be said to be an evolution towards a perfect visiting list, far in advance of a host of competitors. It is literally one of the most practical and valuable books of this class on the market.

The *Arethusa* Spring Water Company of Seymour, Conn., have put upon the market an excellent mineral table water, which has become very popular wherever used. They offer a case on trial to any hospital or practicing physician who wishes to test it.

Maltine is made from three cereals — barley, wheat, and oats. It is rich in diastase. It may be taken either plain, with cod liver oil, with coca wine, with pancreatin, with hypophosphites, etc., in tuberculosis and other diseases.

Reed & Carnrick of New York city have two preparations on the market which have become very valuable in general practice. One, called *Protonuclein*, which is obtained from the lymphoid structures of beef and pigs, and is a stimulating tissue builder and nutrient of great value and usefulness. The other is *Peptenzyme*, a digestant and special remedy for all forms of malnutrition. Both of these combinations are very popular and are used extensively. Send for samples and the literature of the subject.

Fellows' *Syrup of Hypophosphates* may be prescribed as a home remedy for a great variety of nervous and bronchial troubles and general debility. It has been on the market for many years, and has a wide, well-earned reputation.

The *Worcester Fire Pail* is indispensable in every home and hospital. It is cheap, practical, and always ready for use.

*Horsford Acid Phosphate* has come to be a home remedy that it is practically indispensable.



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RISE AND PROGRESS OF THE MOVEMENT FOR  
COMPULSORY CURATIVE TREATMENT FOR  
HABITUAL DRUNKARDS IN BRITAIN.

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BY NORMAN KERR, M.D., F.L.S.,

*President Society for the Study of Inebriety; Chairman British Medical Association,  
Inebriates Legislation Society; Consulting Physician Dalrymple Home for  
Inebriates; Vice-President International Congress of Medical  
Jurisprudence, etc.*

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The first reference to the diseased state of the habitual drunkard which I have found in England was in 1839, in the well-known prize essay, "Bacchus," by my lamented friend, Dr. Ralph Gaines Grindrod. This pioneer, in his scheme of temperance reform, including the recognition of constant drunkenness as an indication of a diseased condition, which should be treated by enforced residence with appropriate environment and under medical care. He says: "The habit of drunkenness is a disease of the mind." Again he writes, "Drunkenness is also a disease of the body." Accordingly, in commenting on treatment, with a view to cure, he lays down that "curative means, moral and physical, must be employed

in the restoration to health of reformed inebriates." Under therapeutic medicines Grindrod gives a prominent place to complete abstinence from all intoxicating liquors, to suitable hygienic conditions, to tonics and other simple medicines. Grindrod freely quotes from the works of the illustrious Benjamin Bush, so that we in Britain have really been indebted to the advanced medical mind of America for our earliest knowledge of the physical aspect of drunkenness and the tendency thereto. Thrice happy mother to be thus blessed by the brilliant scientific thought of her greatest daughter!

At a later period the great movement for compulsory therapeutic seclusion of the habitual drunkard, which has now attained to so great power and influence as to have received official endorsement from five different governmental commissions, and to have been embodied in a cabinet bill which passed a second reading in the House of Lords, was also the legitimate issue of a renewed American invasion of England. Dr. J. E. Turner of Maine, U. S. A., whose name should ever be renowned in the annals of medicine and of mankind as the name of the man who inaugurated the first home in the world for the remedial care and treatment of inebriates, in the course of his heroic twenty-nine years' struggle before the foundation stone was laid, visited Great Britain and conferred with British physicians on the subject so near his heart, some where about the year 1846. Dr. Turner aroused a keen interest in the minds especially of some Scotch medical men, who had already been having the subject under consideration.

Partly as a result of these conferences, there was a favorable reference in the Scottish Lunacy Report of 1857, followed, in 1858, by two papers of great value by Sir Robert Christison and Dr. Alexander Peddie of Edinburgh.

It ought to be here stated that in virtue of an excellent provision, not then existing in any part of the United Kingdom, except Scotland, which was there amended in 1866, it has been possible for an individual to enter an asylum for the

insane on his own written consent, with the sanction of the Commissioners in Lunacy. In the five years prior to 1875, no fewer than one hundred and eighty-four patients had thus been received, a large number for so small a country as Scotland. Since the last Lunacy Act of 1891, a similar procedure has been legalized in England, and, though I never advise this course (as in my opinion it is unwise to mingle lunatics with inebriates, in the curative interests of both), unless the patient refuses to go to a hospital for the special treatment of inebriety, I have seen cases, mostly of morphinomania, in which some good had been effected.

From time to time, papers by medical men were read to medical societies, contending that habitual drunkenness was practically a disease, and that other forms of drunkenness were often the issue of diseased conditions, till the late Dr. Donald Dalrymple, M.P., a respected physician practicing at Norwich, crystallized these views in a bill, which he introduced in the House of Commons in 1870.

This bill provided for the scientific care and seclusion of inebriates, voluntarily and involuntarily. Patients applying of their own accord were to be admitted, on the receipt of a written application to the effect that they were inebriates and desired admission. Inebriates were to be compulsorily sent in on the request of a near relative, friend, guardian, or on the certificate of two duly qualified medical practitioners, and the affidavit or declaration of some credible witness. In this bill, there was provision also for the establishment of inebriate reformatories, sanitariums, or refuges, and for the maintenance of habitual drunkards therein, the cost to be charged on the rates; for the appropriation by boards of guardians of a special place for habitual drunkards; for the committal of an habitual drunkard, unable to pay, to a retreat, by a magistrate or justice, sitting in Petty Sessions, on the production of two medical certificates, for a limited period, and for the committal without certificate of any person convicted of drunkenness

three times within six months. During 1871 Dr. Dalrymple paid a visit to North America, where he inspected eight special institutions in the United States and one in Canada. So remarkable was the account which he gave of the results of treatment at these homes, that the House of Commons appointed a select committee to receive evidence, and report on the whole subject of habitual drunkenness. The committee consisted of fifteen members of Parliament, who chose Dr. Dalrymple as their chairman. Again, there was great indebtedness to American medicine in the weighty and skilled evidence of my lamented and revered friend, Dr. Joseph Parrish, then of Philadelphia, and of Dr. Daniel G. Dodge, then of Binghamton. On their testimony, which, in its leading features, was supported by English and Scotch medical evidence, the select committee recognized the existence of a diseased form of drunkenness, "uncontrollable by the individual, unless some extraneous influence, punative or curative, were brought into play," in which disease "self-control is suspended or annihilated, moral obligations are disregarded, the decencies of private and the duties of public life are alike set at naught, and individuals obey only an overwhelming craving to which everything is sacrificed, confined to no class, conditions, or sex, and hardly to any age."

The committee condemned the placing of inebriates in lunatic asylums (except during a brief period, as in a paroxysm of delirium tremens), as improper and not allowable, adding that "The presence of recovering inebriates in an ordinary hospital for the insane is prejudicial to the other inmates in various important particulars, while the discipline and diet needed for the insane is unsuitable for the convalescing inebriate." The committee, after stating their belief, founded on the evidence advanced, that there had been an average of at least 33 per cent. of permanent cures, recommended that after three convictions magistrates should be empowered to require a surety for the sobriety and good conduct of the

party for a fixed period, and, in default thereof, or if the surety be forfeited by a fresh offense, then to sentence the convicted to a considerable period of detention in an industrial reformatory for inebriates, the prisoner having been registered as an habitual drunkard.

The committee recommended that sanatoria or reformatories should be provided for those who, "notwithstanding the plainest considerations of health, interest, and duty, are given over to habits of intemperance, so as to render them unable to control themselves, and incapable of managing their own affairs, or such as to render them in any way dangerous to themselves or others."

Referring to the British witnesses, the committee remark that a large proportion were members of the medical profession, and that the medical evidence proved clearly that the mania for drink often arises from cerebral disease, that, in sober and sedate men, cases of "dipsomania" were caused by falls on the head and sunstroke.

Owing to the resignation of the ministry and the ensuing adjournment of the House of Commons, and to the death of Dr. Dalrymple, that gentleman's bill was not proceeded with.

Three years later, after papers read by Drs. Peddie and Boddington to the Public Health Section of the British Medical Association at the Edinburgh meeting of 1875, the association appointed a committee on legislative restraint for habitual drunkards, now known as the Inebriates Legislative Committee, of which the late estimable Dr. Alfred Carpenter, J. P., was appointed chairman for the first eight years, when he was succeeded by the writer, who has occupied the post for the past thirteen years.

A committee of the Social Science Association acted with the British Medical Association special committee, this joint action resulting in the formation of a new Association for the Promotion of Legislation for the Control and Cure of Habitual

Drunkards, my devoted and able colleague, the late Mr. Stephen Alford, F.B.C.S., acting as honorary secretary.

Sir William Charley, M. P., Q. C., late recorder for London, drafted a bill for the last-named body, which, somewhat modified, received the royal assent in 1879, having been conducted through Parliament by Sir Charles Cameron, Bart., M.P., in the House of Commons, and by the widely-loved and philanthropic Earl Shaftesbury, in the House of Lords. This bill, when originally introduced in 1877, contained provisions for the involuntary admission and detention of habitual drunkards whose will-power had been so broken down as to render them incapable of applying voluntarily for reception or seclusion (with the new feature of conceding to the alleged inebriate the option of appearing before a jury or a magistrate); but the opposition in Parliament to the enactment of compulsion was so resolute that, to save the bill, its sponsors were obliged to exercise every change relating to compulsion. In the passage of the bill we were greatly aided by the friendly officers of the House Secretary, now Lord Cross.

Though so shorn of its strength for good, the royal assent was the affirmation for the first time in English jurisprudence, of the great principle that a man has a legal right to surrender his liberty for a lengthened period, for curative purposes.

It may be amusing to refer to the difficulties which had to be surmounted, even at the eleventh hour. There was but one uncompromising opponent left in the Commons. He was an old and able lawyer, an independent and resolute man, and one whom every one said could never be got to alter his mind once he had "put his foot down." He had announced that he would "block" the bill as a deadly blow to the 'liberty of the subject,' who had committed no crime. This he reiterated to me when I "bearded the lion in his den," or, more accurately, in the lobby of the House, where, during the progress

of the bill, I had to spend many weary hours. After repeated discussions, he at length consented to cease opposition if the duration of the bill were limited to two years. Afterwards, he agreed to accept five years. The bill passed the Commons. A noble peer in the House of Lords undertook to propose a doubling of this term, which was agreed to. On the return of the bill from the Lords to the Commons, our old opponent yielded to the further extension of time (though he still strongly objected to compulsion on principle), on the ground that the experiment should have a fair trial. Were he alive now, he would, I am sure, be ready to grant that the result of the experiment has shown that his fears were groundless, this temporary act having been made permanent in 1888.

The Habitual Drunkards Act of 1879 defines an habitual drunkard as a person who, "not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself, or herself, or to others, or is incapable of managing himself or herself, and his or her affairs."

Under the provisions of the act an habitual drunkard may be admitted into a retreat licensed by the local authority, to which retreat is attached a qualified medical practitioner, on the production of a statutory declaration by two persons that the applicant is an habitual drunkard, and on his own application for admission, for any period not exceeding twelve months, which application must be attested by two justices, who shall have satisfied themselves that he is an habitual drunkard, and has understood the effect of his application for admission and detention. The applicant, when so admitted under the act, unless discharged or legally authorized by license, is not at liberty to leave the retreat until the end of the period for which he has surrendered his freedom. On a patient's escape the licensee is bound, under penalty, to apply to a justice or magistrate for a warrant to retake and convey the escaped person before the issuing authority. Without the au-

thority of the licensee it is a penal offense to introduce into a retreat and supply to any inmates any kind of intoxicant or sedative narcotics, or stimulant, drug, or preparation.

For the protection of the patients and the prevention of abuse there is a Government Inspector of Retreats, with power of appeal to any judge or secretary of state, who can at any time order special visitation and discharge, and who has power to close unfit retreats.

In 1884 the British Society for the Study of Inebriety, of which I have had the honor to be president ever since, was inaugurated by a luncheon, at which the toasts were honored in non-intoxicating wines, in the rooms of the oldest medical society in the British metropolis, the Medical Society of London, at which among the company were the presidents of the medical society and of three other medical corporations; the late eminent Dr. W. B. Carpenter, F.R.S.; one hundred medical men, among whom were Sir Charles Cameron, Bart., M. P.; Sir Spencer Wells, Sir Edwin Saunders, and Dr. Farquharson, M.P.; besides the Bishop of Ripon, the Dean of Hereford, Lords Shaftesbury and Claude Hamilton, and an Indian judge, Sir Patrick Colquhoun. The quarterly "Proceedings" have comprised some important papers, conspicuous among which was a report of the first International and Colonial Congress on Inebriety, held in London in 1887, which was attended by representatives from England, Scotland, Ireland, Wales, Canada, Australia, New Zealand, the United States of America, France, Germany, Russia, Austria, Holland, Belgium, Sweden, Norway, and Italy. At that congress I had the great privilege and high honor of welcoming a brilliant delegation from the United States, composed of the late distinguished Dr. T. L. Wright of Ohio and Dr. Joseph Parrish of New Jersey, Mr. Schermerhorn, secretary to the delegation, and the accomplished editor of the "Quarterly Journal of Inebriety" and high authority on inebriety, my esteemed friend, Dr. T. D. Crothers of Walnut Lodge Hospital, Hart-



ford. These gentlemen contributed largely to the *eclat* and usefulness of the congress.

The Dalrymple Home for the Treatment of Inebriety was established at Rickmansworth, in Hertfordshire, in 1883, with a disinterested proprietary, as a scientific experiment under conditions believed to be the most likely to insure a fair trial of the provisions of the Habitual Drunkards Act. No secret alleged "cures," from the great profusion of which commercial speculation has reaped enormous financial returns, as for ages have been gathered in by the "cancer curers" and their congeners, are employed; but each case is made a careful study of, and all the honest resources of scientific medicine and hygiene, with the highest mental, moral, and religious influences, are brought to bear in treatment. The results have been very satisfactory, though these are not characterized by the sensational figures which are so often paraded. The after history of the 377 patients who have been discharged from this hospital shows that 122 have been permanently restored to sobriety, reason, and the capacity to resume the fulfilment of their varied duties in life. I may be here allowed to utter a note of warning against too credulous a belief in wondrous tales of universal, or nearly universal, "cures." A lengthened experience has taught me, when stories of the alleged "cure" of from seventy to one hundred per cent. of cases of inebriety are thrust upon me, to waste no time on the miraculous draught, but live on in the hope of one day being entertained with the fable of 101 per cent. of such "cures"!

There have been other homes in England, some of which have been unsatisfactory, others have been satisfactory; but, unfortunately, the latter have not, as the Dalrymple Home has always done, published tabular records, so that I am unable to make any practical or scientific use of what they have issued.

The Government Inspector has issued his thirteenth annual report, in which he has reported favorably on the condition of the patients.

The question of pauper habitual drunkards, who are perpetually going into a workhouse when prostrate after a debauch and claiming their discharge as soon as they are patched up again, and thus are recapacitated to renew their excessive indulgence, has been freely ventilated. In 1881 the Inebriates' Legislative Committee of the British Medical Association issued three circulars to English Boards of Guardians, inquiring if the boards were in favor of being empowered to detain habitually drunken paupers for treatment, or to pay for their treatment at a special institution. The first circular was sent out in 1881, with a total of eighteen replies, fourteen being favorable, two unfavorable, and two neutral. In 1882, to a second circular there were forty-nine replies, twenty-seven being in the affirmative, eight in the negative, with fourteen neutral. In 1889 there were 229 responses, 131 for, fifteen against, and eighty-three neutral. The guardians are now practically all of one mind on the subject, and are anxious for general compulsion as well.

Scotland has always been more advanced and more unanimous in favor of legislation for compulsion than England. In 1888 a striking memorial to this effect was presented to the Marquis of Lothian, Secretary for Scotland, signed by noblemen, clergymen, lawyers, physicians, and others. In legal circles most of the opposition has been met in England; while to the Scottish memorial the names were appended of judges, as well as of officers of the leading legal corporations.

In 1895, after having taken an enormous amount of skilled evidence, a Scottish Government Departmental Committee recommended thoroughgoing legislation, which had also been as strongly recommended shortly before by an English Government Departmental Committee. The British Prisons Committee and the Canadian Royal Commission on Intoxicants about the same time condemned the existing penal incarceration of inebriate offenders, and strenuously urged the claims of curative treatment.

So weighty has all this evidence been, that Mr. Asquith, the late Home Secretary, brought a bill before the House of Commons as a government measure, which provided for the remedial seclusion of every grade of habitual drunkard, criminal and non-criminal. This was a noble redemption of the promise which he had made to a joint deputation from the British Medical Association, Inebriates' Legislative Committee, the Society for the Study of Inebriety, and the Homes for Inebriates Association.

Unfortunately, with the fall of the late ministry of Lord Rosebery, that excellent bill expired. The present Home Secretary, Sir W. M. Ridley, gave us a courteous reception, and expressed his opinion that amended legislation was urgently called for. He, however, pointed out the practical difficulty in the way of dealing with non-criminal inebriates, owing to a fear that the liberty of the subject might be imperilled, and that such a law might be abused in the sequestration of sober rich persons by their interested relatives; but he thought that there would be little opposition to the substitution of curative detention, instead of prison discipline, for such inebriates as had come before the courts and lost their liberty judicially. He has intimated that he hopes to introduce a bill with the latter object in the next parliamentary session.

While we shall persist in pressing the obvious need for legal therapeutic seclusion of non-criminal diseased habitual drunkards, we, in Britain, shall cordially support the government in giving us this installment of better law, the results of which more scientific, humane, and just treatment will further and further deepen in the public mind the conviction that inebriety is a true disease, which can be cured if dealt with on sound therapeutic principles.

A word on British colonies. In Victoria and South Australia the law is right, but homes are lacking. In Canada a good beginning has been made in the establishment of homes with ample powers, and in Cape Colony an act similar to the English Habitual Drunkards Act of 1879 has just been passed.

With the existing laws and institutions in some Swiss cantons, with the special Asylum for Inebriates now being reared in the neighborhood of the Seine in France, with the governmental proposals in Austria-Hungary, and with the splendid record of your magnificent provision, law, and work in the United States, we in the old country will steadily persevere in the earnest hope and confident anticipation that success will ultimately crown our efforts, and that every civilized community on the face of the earth will ere long redeem the injustice of the past and of the present day by the enactment of righteous legislation, and by the provision for the poorest of inebriates of the most effectual means whereby these sorely afflicted ones may be enabled to be delivered from the appalling tyranny of a disease, the utter misery of which has never been surpassed by the most abject bondage which the world has ever known.

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An exhaustive report by the well-known physiological chemist, Prof. R. H. Chittenden of Yale, would seem to justify the claims set forth by the American Ferment Company regarding their new vegetable digestive agent *Caroid*. This report shows the digestive activity of Caroid in various mediums and in comparison with other well-known digestive agents. It would seem that Caroid, which is a highly concentrated extract from the Pawpaw plant, is not restricted as to class of food, medium, or combination with other drugs so far as its activity is concerned. This is a matter of decided interest to medical practitioners. We are glad to see that the price of this new ferment does not make its general use prohibitive.

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The *Arethusa Spring Water Company* of Seymour, Conn., will send some trial bottles to any physician who wishes to test it. We commend it as a valuable water.

ACUTE ALCOHOLIC INTOXICATION IN A YOUNG CHILD, FOLLOWED BY CONVULSIONS AND PARALYSIS OF CEREBRAL ORIGIN, AND BY MULTIPLE NEURITIS.

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BY C. A. HERTER, M.D.,

*Visiting Physician to the City (Charity) Hospital; Neurologist to the Lying-in Hospital, etc.*

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Acute alcoholic intoxication is so rare an occurrence in very young children that the condition and its consequences have as yet been but imperfectly studied. The following instance deserves to be placed on record as an instructive illustration of the severe and prolonged nervous disturbances that may follow a single large dose of alcohol. Although it was disappointing not to be able to determine the precise anatomical basis of these disturbances, there is some compensation in the observation of the clinical fact that such grave symptoms may be followed by what is to all appearances a complete recovery:

Charlie O'N., aged three years, admitted December 13, 1895, to Dr. Holt's service in the Babies' Hospital. Father and mother healthy. One other healthy child. Patient never nursed. He had chicken-pox; no other contagious disease. Father of patient is a barkeeper, and the child is accustomed to small drinks of whisky. Patient perfectly well until three weeks ago, when he is said to have drunk twelve ounces at least of pure whisky one afternoon. He fell at once to the floor, cried for about two minutes, then went into a stuporous condition which lasted fourteen hours. He gave evidence of intoxication, laughing and singing, dozing

at times throughout the night until eight o'clock in the morning, when he had a convulsion. Previous to the convulsion there was no paralysis. The entire face twitched, and both legs were drawn up. Convulsions recurred in five or ten minutes. Patient was given a mustard bath and castor oil. He had a movement and was apparently relieved, and went to sleep for about half a day. Was in a drowsy, stupid state the greater part of the time for a week; then the effects of the whisky seemed to wear off, and he was for a time brighter. During the next ten days he was still sleepy and irritable. There was perfect motion in the extremities during these ten days, which make seventeen days from the time the whisky was taken. Four days ago he gave evidence of pain upon urinating. From the time of intoxication until four days ago he spoke at times.

*Status Praesens, December 13, 1895.* — Both pupils respond to light. Very slight rigidity of the neck, if any. Apparently entire loss of sensation over the upper extremities. There is some apparent loss of power in the upper extremities. The feet are cold. The left leg is spastic. Sensibility is present in both lower extremities. The extensor longus pollicis is tightly contracted, lifting the great toe to nearly a right angle. The left leg is held slightly lifted from the bed. The right leg is lax and can be moved slightly. There is entire absence of patellar reflex on the right side; it is present on the left side, but diminished. Phimosi is present. Pulse, 150; temperature, 99.5 degrees. He passes water with difficulty. The bladder is apparently full. Heart negative. Spleen and liver not enlarged. Right kidney enlarged; left kidney felt.

*14th.* The patient vomited everything in the afternoon. Pulse 160, regular, fairly strong. Respiration 32, regular. Abdomen not retracted. Liver felt just below the border of the ribs. Spleen not felt. Since admission he has lain most of the time in a condition of semi-stupor, making no signs for anything. Last night for a few hours he was extremely irritable. Pupils are slightly dilated, and there is slight vertical nystagmus. Very slight rigidity of the neck. The feet are dropped; knee-jerks lost. During examination he had a convulsion lasting about ten minutes. It began in the right arm and face, then it affected the right leg, the face subsiding

first. He was given chloroform for the convulsions, and an eighth of a grain of morphine hypodermically.

15th. — Vomiting has ceased. There is constant drowsiness. Pulse 150, regular, fairly strong. Respiration regular. Slight rigidity of the right hand and forearm. Pupils normal in size and respond to light.

16th. — Two slight convulsions this morning of the same character as those on December 14th. Stupor not quite so deep. Marked general rigidity, a little more marked on the left side than on the right. Very slight stiffness of neck. Pupils dilated, but respond. Abdomen slightly retracted. At 4:40 P. M. a convulsion occurred, lasting five minutes. Convulsive twitching all night. Swallowing difficult.

17th. Rigidity continues, and is most marked on the left side. Right leg completely paralyzed. Left leg and arm weak. Pupils alternately contracted and dilated. Respiration slightly irregular. Frequent slight convulsive seizures on the left side. Continues in stupor. During the night he moans occasionally as if in pain.

18th. — Rigidity continues, but is variable. Stupor less marked. Pupils dilated. The contracture of the extensor of the great toe on the left side seems permanent.

20th. — Rigidity continues, left leg still remaining flexed.

21st. — Great restlessness during early morning.

22d. — Vomited twice.

23d. — Stupor and rigidity still more pronounced. He is fed with difficulty. At 10:30 P.M. severe general convulsion occurred, especially of the left side. Extreme conjugate deviation of the eyes to the right occurred before and during the convulsion. During the past three days there has been slight, but increasing flexion of the left thigh. The leg is now so extremely flexed that the heel is fixed firmly against the buttock. The right foot is extremely extended. Both hands are tightly clinched. There is some oedema of the dorsum of the left hand. There is fibrillary twitching of the tongue. From time to time there is a rapid coarse tremor of the left side. During the night he has little or no sleep. His head is rolled almost constantly.

24th. — Tremor continues to occur. Pulse and respiration regular, but pulse very weak. Skin covered with miliaria eruption. There is conjugate deviation of the eyes to the right.

25th. — Repeated convulsions for two hours, of the same character as before. Chloroform is necessary to control them. Left side is in tremor most of the day and night.

27th. — *Tache cerebrale* pronounced.

28th. — Has considerable cough. Signs of hypostatic pneumonia behind.

During the following week the condition of the child remained practically unchanged, except that signs of consolidation of the right lower lobe became pronounced. By January 2d the convulsions began to be less frequent and the general rigidity somewhat less. The pupils at this time were very small, equal, and did not react to light. There is slight varying strabismus. The stools continued to contain considerable mucus.

January 8th. The patient lies in a stuporous condition, the right arm paralyzed, right leg weak, left leg in extreme contracture, and the hand in typical bird-claw-hand position. Pupils medium, about equal, react to light. Slight varying strabismus. Knee-jerks not obtainable, perhaps owing to contractures.

10th. — Mental condition somewhat improved. He can be roused.

11th. — Ophthalmoscopic examination: edges of discs somewhat hazy; vessels radiating from disc abnormally full. No distinct signs of optic neuritis.

13th. — The child is very restless, with constant rolling of the head. Has repeated slight convulsions, chiefly on the left side. There is pronounced wrist-drop. The left wrist is extremely flexed. The right foot extended. The left foot slightly flexed.

14th. — Face and neck are flushed. On the hands and knees are numerous erythematous spots of about the size of a penny, which disappeared after a few hours. There was no marked change in the condition of the child until Jan. 23d, when the mental condition seemed much improved for a time. He recognizes his father. Contractures unchanged. Wasted muscles are tender to pressure. Vasomotor disturbances are frequently noted, especially flushing of the face. He continues to roll the head from side to side. Pupils dilated, but respond to light. Signs of complete consolidation of the right lower lobe continue.

29th. — He vomited once at 10:30 curds and mucus.



*30th.* — There is a moderate purulent discharge from the right ear.

*February 1st.*— He was very restless during the night; coughed considerably.

*2d and 3d.*— The condition of the patient is bad; he has lost four pounds and four ounces since he has been under observation. He is weak and looks pale. There is considerable cough. The most striking thing about the appearance of the child are the contractures of the muscular atrophy. The right arm is rigid, slightly flexed at the elbow, and the wrist is flexed and rigid. The first phalanges are well extended, the second and third flexed. There is slight return of power in the upper arm muscles. The right thigh, leg, and foot are moderately flexed, the muscles of the anterior tibial group are completely paralyzed. The left arm and forearm are very rigid and the wrist is markedly extended. The left hand is clinched and adducted. The left thigh and leg are in extreme flexion, very difficult to extend, the thigh is adducted, and the foot extremely extended. The extremities are everywhere considerably atrophied, the wasting being more pronounced on the right side, where the forearm is one-fourth of an inch smaller than the left, and the thigh three-fourths of an inch smaller in circumference. There is considerable atrophy of the right dorsal interossei and muscles of ball of thumb. Knee-jerks are not obtainable. Sensibility normal. No rigidity of neck; no strabismus.

*6th.* — Left leg and thigh give no response in any of the muscles to a strong faradaic current. In the right leg there is no response to faradism above the knee; below the knee there is no response except in the tibialis anticus and extensor longus pollicis. No response in any of the abdominal muscles to the faradaic current. On the left side the deltoid and pectoralis major contract feebly to faradism; triceps very feebly; biceps, no reaction; extensors of wrist, fair contraction; flexors of wrist, very feeble contraction. The interossei still react on the left side. In the muscles of the ball of the hand there is very feeble contraction. Muscles of the neck are normal. Contraction of the left side of the face feeble, but distinct.

On the right side, the deltoid gives fair contraction, but rather feeble.

The pectoralis major very feeble. The triceps fair; biceps good, rather slow. Extensors of wrist, good contraction.

Flexors of wrist, feeble. Supinator longus, fair reaction. Interossei, good reaction. Muscles of hand, little finger, fair reaction. Right facial nerve and muscles, fair reaction, rather feeble.

*Upper Extremities.* — All muscles react fairly well to galvanism; some muscles rather sluggishly. In every case the cathodal closure contraction is stronger than the anodal closure contraction, but in some muscles, especially on the left side, the former is very little stronger than the latter.

*Lower Extremities.* — Leg contraction everywhere obtainable with galvanism, to some extent. Cathodal closure contractions somewhat stronger than anodal closure contractions.

The child continued to lose weight until March 2d, when he weighed five pounds and twelve ounces less than on admission. Up to this time there was occasional twitching about the eyes and mouth, and occasional vomiting. In other respects considerable improvement was noticeable at this time. The contractures were less marked, and there was considerable recovery of power in the right arm, including the hand. By March 18th, some power of speech had been recovered, and from this time on recovery was rapid in every direction. By April 6th he was able to use his hands freely and to move his legs about, but was still unable to stand. The contractures had disappeared, and the muscles had begun to regain their loss of volume.

*April 28th.* — The child has apparently entirely recovered. He walks well. There is no contracture anywhere, and the measurements of corresponding parts are the same on both sides. The knee-jerks are present. The muscles everywhere react promptly to a faradaic current of moderate strength, except the left quadriceps extensor, which reacts feebly. The child speaks fairly well, but stammers very much. He is said to have stammered before the onset of this illness. He is bright and fairly intelligent, and there is no evidence that his mental condition has been impaired by his sickness.

Briefly stated, we have here a child three years and a half old, who, after a large drink of whisky, went into stupor varying in depth and lasting more than two months; had a large number of convulsions, partly general and partly limited to

the left side; developed right-sided paralysis, which was especially marked in the arm; extreme contractures, especially of the left side, and loss of faradaic irritability with wasting, and during the first two months had pupillary symptoms, strabismus, and repeated vomiting. During six weeks there were the signs of complete consolidation of the right lower lobe. From December 13, 1895, until February 7, 1896, there was an irregular fever, which was not usually very high.

When the patient first came under the observation of the writer it was thought doubtful whether the draught of whisky could be held responsible for the symptoms. The paralysis, the stupor, the repeated convulsions, and the fever, persisting as they did, made it likely that the case was one of meningitis, implicating especially the convexity. When strabismus, vomiting, and irregular breathing became prominent, it became difficult to resist a strong suspicion that the condition was one of tubercular meningitis. With the development of marked contractures in the extremities, with considerable muscular atrophy, loss of knee-jerk, and tenderness of the muscles to pressure (when the mental condition was such as to permit a reaction to painful sensations), it became highly probable that the child had developed a multiple neuritis of alcoholic origin. The alcoholic origin of the symptoms was made very probable, if not certain, by reliable information (not at first obtainable) as to the quantity of whisky taken.

When the symptoms of multiple neuritis became fully developed and their dependence upon alcohol became clear, it was evident that the cerebral symptoms which marked the early stage of the illness were likewise the consequence of intoxication by alcohol.

As to the nature of the anatomical changes, which we must assume to underlie the persistent cerebral symptoms, we have no information. A somewhat extended search through the modern literature of acute alcoholic poisoning has failed to discover a similar case in which the histological findings throw light upon the conditions present in our case.

Although it is necessary to use the greatest caution in transferring to man the results obtained by the experimental study of alcoholic intoxication in lower mammalian forms, the recent observations of Berkley are of considerable interest in connection with the case under discussion. This observer made a careful study, by means of the Nissl method and the silver-phospho-molybdate method, of the brains of three rabbits which had been fed during three weeks with considerable, slowly increasing doses of alcohol. All the animals showed a marked loss in weight, and two of them died in convulsions. Sections from the cortical portions of the cerebra showed that the cell bodies of the nerve cells failed to give their stichochromic structure. They stained imperfectly; there was beginning swelling of the nucleoli, and there was swelling of the branches of certain dendrons, while in other cases the dendrites were apparently atrophic.

The axons and collaterals were not implicated in the degenerative process noted in the dendrites. The cell bodies of the vascular neuroglia cells appeared increased in size, and their protoplasmic extensions were thick and knotty. In the blood vessels pronounced changes were detected. In the arteries and intermediary vessels of the nuclei of the endothelial cells were everywhere swollen and in places fragmented. The alterations in the muscular protoplasm of the vascular walls were especially distinct, and indicated that the cells were undergoing a retrogressive process. In the perivascular spaces were large numbers of leucocytes in various stages of degeneration, often a number of large granular protoplasmic bodies without nucleus, and a quantity of finely granular detritus. There seems little doubt that the alterations in the nervous structures are chiefly dependent on the vascular changes which were observed.

It is not unlikely that acute alcoholic intoxication in man gives rise to alterations in the vascular and nervous elements of the cerebral cortex similar to those just referred to. Fu-

ture studies will positively determine whether this is true. It is certainly unnecessary to assume the presence of a gross cerebral lesion like meningitis to explain the symptoms in our case, and a slight cortical encephalitis would probably account for both the paralytic and the irritative manifestations. The writer recalls the case of a child with pneumonia, in whom there developed a persistent paralysis, chiefly unilateral in distribution. The autopsy revealed no coarse lesion; but a microscopic examination of the motor cortex showed the presence of slight vasculitis and perivasculitis.

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#### COMPARATIVE EFFECTS OF DIFFERENT ALCOHOLIC DRINKS ON MEN.

Lanceraux has investigated the changes taking place in the nervous system due to abuse of different alcoholic drinks, wine, beer, absinthe, essences, etc. Some of his conclusions are as follows:

“In excessive use of alcoholic drinks of high percentage of alcohol, the tactile and thermal sensibilities do not seem to be greatly altered, while sensibility to pain seems exaggerated. In those that use absinthe and similar drinks to excess, the plantar reflexes are increased, light tickling causing movement, while slight stroking of the knees, legs, or abdomen causes pain severe enough to cause the patient to complain.

“Similar results, although less marked, are to be observed in the upper extremities. In wine drinkers, this sensitiveness of the skin is much less in the lower extremities; above there may be a zone of hyperaesthesia, while still higher in the body normal skin sensation is the rule. Psychological symptoms by absinthe drinkers are stated to be fewer than is generally supposed and taught in the ordinary text-books. Wine and alcohol drinkers are prone to attacks of acute delirium, while in those that drink alcoholic essences, forms of dementia are more liable to follow.”

## THE EFFECTS OF NICOTINE.

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BY J. W. SEAVER, A.M., M.D.

*Director Physical Laboratory, Yale College, New Haven, Conn.*

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The tobacco plant is well known by botanists as one of a large family, the Solanaceae, and a peculiarity of them all is the production, in larger or smaller quantities, of some narcotic drug, nicotine being the principal one of the group. This drug is found in the plant to the extent of from three to nine per cent., the latter being an excessively large amount. The larger part of the product put upon the market contains from three to five per cent. The last census report shows that the export to foreign nations is about \$40,000,000 worth, and that we produce 500,000,000 pounds per year. It becomes as important a subject with us as that of bread and butter, for our community spends about as much for tobacco as for flour. But its greatest importance relates to the possible physical effects it may have, especially as used by the young people in the community. Somebody has said that in the combustion of tobacco in smoking the nicotine is entirely destroyed, broken up into oils and acids, and that the nicotine itself is not taken into the system. The combustion of tobacco, under ordinary conditions, does not destroy the drug. Kissling recovered 52 per cent. of it from the smoke of a sample containing 3.75 per cent. of nicotine, and from a lower sample 84 per cent.

I speak of nicotine as a drug because, if you take up any book on materia medica, you will find that tobacco is discussed in the same way as opium, quinine, or any of the drugs that are in common use by physicians, and that its physiological

effects are stated there without prejudice. The amount of nicotine derived from a cigar in smoking is somewhere in the neighborhood of one per cent., if we presume that one-half is destroyed by the process of combustion and the other half drawn in with the smoke; and this is especially true in the use of a pipe, where the tobacco is completely burned out. As to absorption, it is a very volatile oil-like material, soluble in water, glycerine, oils, alcohol, etc., so that that part which touches upon the mucous surfaces passes into solution and is pretty largely picked up. White tells us that a dose of one-thirtieth of a grain will produce toxic symptoms in the body, so that we need absorb only a small proportion of the amount actually taken in during the process of smoking of a cigar or a pipeful of tobacco to reach the limit of easy toleration by the system. Looking upon the matter from this standpoint, we can appreciate the fact that there is an immense amount of drug-taking in the community, and we might expect that there would be such physical effects as could be readily determined and stated.

All through the history of the use of tobacco, which goes back some 300 years, different writers have abused it and praised it, until one who might attempt to gain information would be at a loss to come to a definite conclusion as to its merits or demerits. Burton, in the "Anatomy of Melancholy," probably gives it its due when he says: "Tobacco, divine, rare, super-excellent tobacco! which goes far beyond all the panaceas, potable gold, and philosophers' stones; is a sovereign remedy in all diseases; a good vomit, I confess; a virtuous herb if it be well qualified, opportunely taken, and medicinally used; but, as it is commonly abused by most men, which take it as tinkers do ale, 'tis a plague, a mischief, a violent purge of goods, lands, and health."

Now, this is one of the peculiar drugs — opium is another — which, while they are to a certain extent harmful, have certain influences that are favorable, consequently a balance

must be drawn between the good and bad influences. I wish to be fair in this matter, and say that the use of tobacco does not pass as entirely an evil, because we have plenty of people who are willing to bear witness to the fact that they get a certain amount of nervous comfort from it. Let us look upon it as it influences the human body, especially in the period of growth.

It has been my privilege to spend the active part of my life in working with young men, and I naturally am interested in that particular animal. The boy is always inclined to follow out those instincts to which we refer when we say that "he apes his elders." That is, if there is any act which he is in the habit of seeing a grown person do, the boy (or girl) wishes to imitate it, be it good or bad; and I fancy this is the reason why we find so many boys smoking, hoping thereby to gain a certain reputation for maturity among their mates. This desire to be mature is common to all of us. We did not lay aside the idea with our knickerbockers.

Among boys in secondary schools the tobacco habit has become very general. In these schools the boys are for the first time away from home, and they are allowed to mature somewhat too rapidly for their future keeping qualities. I have spoken to the principal of one of our largest preparatory schools within a year regarding the health of students who smoke, and, while he does not use tobacco himself, and says that "it is the bane of the school, and more boys break down in health and are sent home from its influence than from any other," yet there is no effort to control this use of the drug by the pupils. Unfortunately, in very many of these institutions there is an unpleasant condition of being dependent for financial income on the tuition of the students. In very few of these schools is there direct personal supervision of the health of the students, and the physical influences that have affected their growth or health are not recorded until the young men reach college, where it is possible, by comparing the measurements



and tests of large numbers of young men, to determine in a fairly exact manner what influences have tended toward physical deterioration, and what have tended toward growth and improvement.

A tabulation of the records of the students who entered Yale in nine years, when all of the young men were examined and measured, shows that the smokers averaged fifteen months older than the non-smokers, but that their size — except in weight, which was one and four-tenths kilograms more — was inferior in height to the extent of seven millimeters, and in lung-capacity to the extent of eighty cubic centimeters. The observed rate of growth at this age would lead us to expect that the smokers, from their greater age, would surpass the others by one kilogram in weight, two millimeters in height, and one hundred cubic centimeters in lung-capacity.

The difference in age in the two groups points to an age limit to parental restraint, and raises the inquiry as to what might supplement this influence. The wide variation in lung-capacity demonstrates an influence on lung tissue that is also illustrated below.

The study of drugs on the muscular and nervous systems has led to certain valuable conclusions. Dr. Foster, in his "Physiology," speaks of the influence of nicotine on the nervous tissues, especially on the vagi, as paralyzing their activity, thus allowing the heart muscle to wear itself out. With this information we can easily understand how, in the beginning of the habit of smoking, the influence of nicotine causes so much disturbance to the circulation, for the vagus is the great controlling nerve of the heart, and that organ first gives obvious response to the poison. The influence of nicotine may be counteracted by the administration of powerful heart stimulants, like strychnine, caffeine, alcohol, etc. The whole nervous system is affected to some extent by even moderate doses of nicotine. This may be seen by its effect upon the pupil of the eye, where there is temporary dilation; followed

by prolonged contraction of the pupil, which behaves very much as it would under the local influence of pilocarpine, or under the systemic influence of full doses of morphine. Where there is prolonged use of the drug the bad effects are disclosed in the optic disk, which is the end of the optic nerve, readily seen in an examination of the fundus of the eye, and which is the only large nerve that is laid bare to ocular observation. There appears to be less irritation of the brain structure and the efferent (motor) nerves than of the afferent (sensory) nerves, but the power of fine coördination is decidedly lowered by the drug. The muscle cells are also apparently only slightly affected by it, but, the nerve supply to the muscles being affected, the practical motor ability is greatly impaired. This has been thoroughly demonstrated by experiments carried out by Dr. W. P. Lombard of the University of Michigan, who has shown that the administration of even moderate amounts of tobacco in the form of smoke lowers the working power of the human muscle by a high percentage, and there seemed to be no compensation for lowered temporary ability in increased duration of it. His experiments were made with Mosso's ergograph, and his results may be crudely summarized as follows: In from five to ten minutes after beginning to smoke an ordinary cigar muscular power began to diminish, and in an hour, when the cigar was burnt, it had fallen to about 25 per cent. of its initial value. The total work of the time of depression, compared with a similar normal period, was 24.2 to 44.8.

So far as the alimentary tract is concerned, there is a decided stimulation of the flow of peptic fluids. For this reason tobacco has been recommended as a sort of gastric stimulant after eating, and it undoubtedly acts in this particular way. If this be true, however, the ordinary use of the drug must be extremely destructive to the digestive process. We have all chewed gum before dinner until, when we came to eat and tried to chew dry food, there was no saliva to mix with it, and

we ate with discomfort. In this case exactly the same thing happened to the salivary glands that would happen to the peptic glands if one were to smoke before meals during the period of rest for the stomach, for the gastric glands would be depleted, the fluids poured forth into the stomach under the stimulation, not being retained in that organ by food to be digested, would pass on into the intestinal tract, and when food was finally taken the peptic cells would be unable to pour forth adequate solvents for the proteid mass, and digestion would be delayed until such solvents could be formed by cellular metabolism. Meanwhile, the food would be retained in the stomach in a warm and moist condition, favorable for the development of decomposition germs, which must always be present in the food we eat. The result of the decomposition process is the production of acids that are extremely irritating and cause the discomforts that are so familiar to the dyspeptic. Not only has the food been manufactured into chemicals hostile to the organism, but, so far as future nutrition is concerned, it is actually lost, for the physiological cost of reducing these decomposition products to available forms for absorption and use is more than the available heat that can finally be produced in their oxidation.

Regarding glandular activity, it may be said that nicotine stimulates secretion in general, as is illustrated by the influence upon the mucous glands of the mouth and general alimentary tract. This over-stimulation of the mucous area would naturally lead to the development of catarrhal affections, and it would seem that this drug was contra-indicated in all forms of tendency to catarrhal diseases. This must mean, if the popular estimate of the condition of the New England nose is correct, that few Yankees, at least, should use tobacco.

Now I ought to speak of one quality of tobacco smoke that seems to be sanitary to a certain extent, and that is, that it has a considerable antiseptic value. If a person is so slovenly

that he does not care for his teeth as he ought, it may be a preservative of them; and in certain catarrhal conditions one could almost be pardoned for the offensive fumigation on this same ground. I speak of this because I wish to give whatever credit is due, and this seems a fair statement of the result of experiments in the matter.

What is known of the influence of nicotine upon the blood may be briefly summarized. Some physiologists have claimed that the blood corpuscles seemed to assume a notched appearance; but this is believed now to have been due to the handling of the corpuscles while on the microscopic slide, and the influence of nicotine upon the blood corpuscles is believed to-day to be comparatively slight, although the spectrum of the blood is altered, showing that they are affected in some way. It is true that anaemia is a constant accompaniment of chronic nicotine poisoning, but this is due to the disastrous results of the poison upon the digestive system, which does not prepare abundant nutriment for the blood current, and the anaemia should therefore be referred to starvation rather than to corpuscular degeneration.

Another proof of the physical deterioration produced by chronic nicotine poisoning is found in a report by R. L. McDonnell, regarding the family life of cigar-makers in New York city. He reports that in 337 families there was an average of but 1.63 children to a family. The conclusions to be drawn from this need not be pointed out.

The effect of nicotine on growth is very measurable, and the following figures are presented as a fairly satisfactory demonstration of the extent of the interference with growth that may be expected in boys from 16 to 25 years of age, when they are believed to have reached full maturity.

For purposes of comparison the men composing a class in Yale have been divided into three groups. The first is made up of those who do not use tobacco in any form; the second consists of those who have used it regularly for at least a year

of the college course; the third group includes the irregular users. A compilation of the anthropometric data on this basis shows that during the period of undergraduate life, which is essentially  $3\frac{1}{2}$  years, the first group grows in weight 10.4 per cent. more than the second, and 6.6 per cent. more than the third. In height the first group grows 24 per cent. more than the second, and 11 per cent. more than the third; in girth of chest the first group grows 26.7 per cent. more than the second, and 22 more than the third; in capacity of lungs the first group gains 77 per cent. more than the second, and 49.5 per cent. more than the third.

These results are essentially the same as those obtained by Dr. E. Hitchcock of Amherst College, who observed a similar group of young men in a manner entirely independent. He says: "In separating the smokers from the non-smokers, it appears that in the item of weight the non-smokers have increased 24 per cent. more than the smokers; in growth in height they have surpassed them 37 per cent., and in chest girth 42 per cent. And in lung capacity there is a difference of 8.36 cubic inches [this is about 75 per cent.] in favor of the non-smokers, which is three per cent. of the total average lung capacity of the class."

The widely differing growth in capacity of lungs points to the influence of tobacco on respiration. Inspiration is essentially a muscular act, and as such would be seriously impeded by nicotine. But even farther than this must act the irritating substances of a smoke which readily causes inflammation and soreness of any mucous membrane. Now, to fully expand the lungs under such conditions is uncomfortable, if not impossible, and respiration degenerates into an incomplete act.

I do not know how we can compare the work of the users of tobacco with that of the non-users in mental lines as we can in physical lines. I can tell you absolutely whether a man has gained a pound in weight during the year, but I cannot tell you by any such definite means the mental progress that has

gone on in that time. We must always be exceedingly careful in handling statistics of the mental process. Out of our highest scholarship men only a very small percentage (about five) use tobacco, while of the men who do not get appointments over 60 per cent. are tobacco-users. But this does not mean that mental decrepitude follows the use of tobacco, for we may read the results in another way, viz.: the kind of mind that permits its possessor to become addicted to a habit that is primarily offensive and deteriorating is the kind of mind that will be graded low on general intellectual tests.

If the whole period of physical growth be divided into seven or eight year periods, according to the physiological phases of our development, we should have the third period, devoted to the rounding-out processes, begin at about the time when the most strenuous mental application is begun, and when the opportunities for outdoor recreation are decidedly curtailed. It is at this period that the tobacco habit usually is begun, if it is begun at all. This is the period of the development of high muscular coördination, and it is well to note that in mental processes it is the period of the development of the logical faculties. Whether we believe, with some psychologists, that there is a direct relation between muscular ability and mental power, or not, we must believe that any curtailment of the activity of the great blood-containing and heat-producing tissue (the muscles) must react unfavorably upon the nerve structure, which depends so largely upon outside sources for its material for work, if not for its method of work. Furthermore, the young animal seems to be especially susceptible to this poison, but the system can adjust itself so as to counteract the ordinary influence of it, and go on with comparatively little interference. As a machine that is obstructed to a certain extent can nevertheless apply a part of its energy to the sweeping away of the obstruction, so the organic machine can divert a certain amount of its energy to the elimination of this poisonous element, but only the residuum is available for normal processes of growth and functional activity.

Whenever it is desired to secure the highest possible working ability by the organism, as in athletic contests, where the maximum of effort is demanded, all motor-depressant influences are removed as far as possible, tobacco being one of the first substances forbidden. As a large part of the functional activity during the rounding-out period pertains to growth, would it not seem logical to remove from the system all motor depressants, in order that this line of activity may find its highest resultant in increased size and improved activity? This position has been taken by the directors of government schools, not only in this country, but in Europe, where the highest efficiency of the pupils is made the object of the schools, and where efficiently trained inspection, freed from personal appeals and special considerations, leaves the directors at liberty to manage the pupils upon the most approved scientific principles. It is satisfactory to note also that many private schools have taken this advanced position within the last ten years. May we not believe that, with a higher grade of intelligence among the patrons of schools, the same higher standard will be demanded soon in all similar institutions?

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A case of some interest to physicians and chemists was recently tried in the United States Superior Court at Dedham, Mass. The charge was against a druggist in Quincy of maintaining a common nuisance by the sale of malt extract. The district attorney prosecuted, and the trial lasted three hours. The sale was admitted. Analysis showed that the extract contained over 5 per cent. of alcohol. Professor Sharples called it "porter" and a "beverage." The defense was that it was a medicine and not a beverage. A verdict of guilty was returned. Mr. H. H. Fayon, on whose complaint the government took action, states that he has the analysis of 17 samples of malt extracts containing from 3.35 to 8.88 per cent. alcohol, and 11 others showing from 3 to 9.86 per cent.

## THE PRISON TREATMENT OF INEBRIATES.\*

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BY J. J. PITCAIRN, L.R.C.P., M.R.C.S.

*Assistant Surgeon, H. M. Prisons, Holloway and Newgate.*

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The statement that summary convictions for drunkenness, especially amongst females, have not shared in anything like a proportionate ratio in the general shrinkage of crime that has marked the last two decades, would to a society such as this contain little of novelty; but having had nearly ten years' experience of the question as a prison surgeon, I propose to discuss it from the point of view of the prison officials — especially the medical ones.

Large as is the number of drunkards of both sexes in our prisons, the proportion in the case of the females is simply appalling. Female crime, if by "crime" we understand offenses against the persons and property of others, does not account for much more than ten per cent. of the gross female prison population. It follows then that our prisons are swollen to repletion by the slaves of the most imperious and degrading vice known to mankind. Personally, I cannot remember to have met more than ten or a dozen male drunkards whose convictions exceeded or even reached a score; but the records of the police courts conclusively show that "once a drunkard always a drunkard" is almost an axiom in the case of females.

The greater number of women whom I have questioned have told me that they began to drink in comparative youth, the majority having first made the acquaintance of prison before the age of twenty. It is obvious that such an early familiarity with prison must be objectionable on every ground. To

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\* Read before the English Society for the Study of Inebriety January 14, 1897.



the young at least a prison should wear an air of severe mystery. To many its idea is usually associated with darkness, chains, and such physical discomforts as Dante pictured in the *Inferno*. But how different is the reality ! The prisoner finds herself treated with kindness, is warmly clad, fed amply if plainly, works to a considerably less degree than when at liberty, and sleeps amid good and sufficient bedding in a warmed and ventilated chamber. As the late Sir B. W. Richardson put it : — “ Epidemic disease is shut out from our prisons, drink shut out, exposure to cold and wet shut out, the destructive kinds of mental worry shut out, the hungry strain for to-morrow’s bed and board shut out.” When we remember the class from which the drunkard as seen in our prisons is usually drawn, their precarious food, their insanitary homes, their scanty clothing, and their frequent exposure to the weather, can it be wondered at that in a couple of visits prison is deprived of all its deterrent terrors? I have watched a previously healthy girl gradually lose all her youthful freshness and attraction, and become in the course of a few convictions a confirmed inebriate with the air of a drink-sodden virago.

It is notorious to every intelligent prison official that the most troublesome of all female prisoners, and those least amenable to discipline, are the drunkards. While the felons are perfectly contented so long as they receive what they consider to be their rights, the drunkards would appear to pride themselves on the fact that although technically criminals they are not actually felons, and to expect a leniency of treatment which the law does not prescribe, and which its administrators have not the power to concede.

Committed to prison in a large proportion of cases in a condition of latent alcoholism if not one of actual *delirium tremens*, as is by no means rare, they are perforce treated as invalids throughout their entire sentence of so-called “hard labor.” The prison is thus in great part an infirmary or asylum, for neither of which purposes was it ever intended,

however well it may serve them. Similar treatment could not be obtained by the drunkard when at liberty, since no hospital would admit a patient to its wards who was recovering from such an event as a drinking bout. In prison, on the other hand, they are treated medically and dietetically, and in a short sentence such as seven days are scarcely recovered before the time comes for their discharge. Having been non-effective for all purposes of prison employment, the expenses of their maintenance and treatment cannot be debited against the value of that productive labor which all prisoners are expected to perform. Not only are they in this manner an expense to the imperial taxpayer during their imprisonment, but the costs of their prosecution and conveyance to prison being, except in London, a local charge, fall similarly upon the local ratepayer.

As a result of their treatment the prisoners are discharged in a sanitary condition of mind and body, fit and craving for further excess, to be in its turn followed by a further committal to prison.

This cycle of events is neither an exceptional nor an imaginary one. It is repeated daily throughout the kingdom unnoticed except when the recital of some hundreds of previous convictions revives the public interest in what is simply a nuisance and a scandal. As a typical case here is a list of summary convictions, of a woman: — 1895, Sept. 2d to 6th, 8th to 21st, 24th to 30th, Oct. 1st to 21st, 25th to 31st, Nov. 4th to Dec. 3d, Dec. 4th to 10th, Dec. 12th to March 11th, March 15th to April 21st, May 14th to 27th, May 28th to June 27th, June 29th to July 11th, July 29th to Aug. 28th. Thus during the 365 days ending Aug. 31, 1896, this woman has barely spent forty-eight out of custody.

Another woman I have heard of, whose state of bodily health necessitates treatment in the prison hospital, is such an incorrigible drunkard that it is the custom to preserve a bed for her accommodation even after her release, as it is considered inevitable that she will return after the lapse of a few

days, or even hours, to the only home which she possesses. The case of the notorious Jane Cakebread called forth as much comment as if she had been the rarest production of the century; but in truth she belonged to a type the most common. There are hundreds, nay thousands, of Jane Cakebreads in existence, who only differ from the original in the absence of an eccentricity which was really due to senile dementia.

Homeless and usually destitute, it is only natural that the outcast class from whose ranks the habitual drunkard is largely recruited, should regard the prison as a species of infirmary, supported by the taxpayer for the benefit of the thriftless and dissipated. On remonstrating with several whose miserably slender earnings as hawkers or flower-girls would scarcely suffice to buy food, let alone drink, I have been repeatedly met with the reply: — “People will always stand you a drink when they won’t give you food,” which no doubt accounts for the ease with which many of the most abjectly destitute become drunk.

I cannot imagine a more pitiable spectacle than that which may be seen before nine a. m., outside the gates of any large prison. At that hour the females whose sentences have expired are discharged. The average number is about thirty, and they are of all ages, ranging from girls “in their teens” to quite old women, who can scarcely totter from the gate on their way to the breakfasts provided by the Prisoners’ Aid Societies. Their clothes, restored to them on their discharge, are dilapidated and filthy to a degree, and the neighboring thoroughfares are usually strewn with the rags and tatters they tear from them in the endeavor to conform to the not very exacting standard of decency of their native haunts, and to obliterate the evidences of their drunken struggles in the hands of the police. The majority of them know the road to the mission house only too well, but there is one peculiarity to which there are no exceptions. Shameless and brazen-fronted they walk from the prison gates, drink having de-

stroyed all sense of self-respect or of womanly modesty. The majority of these social pariahs have, time and again, been assisted by one or other of the numerous philanthropic institutions for the benefit of discharged prisoners, until the hopelessness of effecting any reformation in them has dried up the fount of charity, and they have no prospect but to return again and yet again until death closes the scene in the prison hospital.

These women are persons of almost no education at all, those young enough to share in its benefits having apparently escaped the operation of the Elementary Education Act. Few know any trade except coarse laundry-work, and it is rarely that they can even be got to perform the ordinary rough duties of a char-woman with any degree of thoroughness, so slipshod and careless have they become as a result of the sordid surroundings among which they live.

On the other hand, the prison authorities have always been handicapped in their efforts to provide prisoners with any employment, except oakum-picking, by the strenuous opposition of the various trades unions. These bodies, apparently, cannot see that prisoners when at liberty are apt to compete with other members of the working-classes in the struggle for existence to a much greater degree than can possibly be the case under the comparatively low standard of industry which is exacted from them while in custody. Under these circumstances, it is clear that any length of confinement in prison is useless, in so far as it is intended to increase the self-respect and elevate the moral sense of a woman lacking these qualities by concentrating her thoughts on an occupation, which shall demand some exercise of intelligence, or degree of responsibility on her part. Tentative experiments would seem in some measure to have solved this problem, as simple but congenial employment is stated to have been attended so far with the most gratifying results.

The eloquent eulogy of the prison system which I have already quoted from Sir B. W. Richardson, would appear to

weigh largely with some who continue to support the prison treatment of inebriates. Sir John Bridge is, I believe, in favor of long terms of imprisonment, in default of finding sureties for good behavior, which sureties, in the case of the class of persons I am considering, are seldom forthcoming. Although the opinion on such a matter of the senior police-magistrate of the metropolis must naturally command the greatest respect, I feel bound to say that practical experience of the working of this plan directly negatives its success. Over and over again have I seen habitual drunkards undergo a sentence technically known as "six months' surety," and immediately after their release resume their dissipated habits with increased vigor. It is the commonest occurrence for such a prisoner to be discharged, say on a Saturday morning, only to return to prison on the Monday, having been out of custody for but a few hours.

But the paramount objection to this system lies in the fact that persons imprisoned, in default of finding sureties, enjoy special privileges over other prisoners. They are required to perform no task of labor, they do not wear the criminal uniform, they are fed on a superior class of diet, and can receive visits and correspond with their friends at frequent intervals. Hence the most troublesome and refractory women, who are the very ones usually selected by the magistrates for this system of sureties, receive the most lenient treatment, while the less aggressive but equally incorrigible drunkards undergo the full measure of prison discipline.

It has been repeatedly shown that a period of six months' forcible abstinence is inadequate to overcome the morbid craving for alcohol, while on the other hand it is well known among prison officials that female convicts, that is to say women undergoing sentences of three years and upwards, notwithstanding previous habits of intemperance, are as a rule completely cured of the morbid propensity. It will be observed that I say "as a rule," and that brings me to the pith of my argument, which is that prison is the very last place

where such cases should be treated. The necessary restrictions and discipline are apt to press unduly on many persons of this unfortunate class, whose mental stability has been impaired by the abuse of alcohol, and earlier in this paper, I dwelt on the contempt for prison developed in the drunkard by the familiarity bred of scores of previous convictions.

The treatment of our criminals is far more logical than that of our drunkards. If a man by repeated convictions affords evidence that he has definitely chosen the career of a criminal, or in other words, has declared war upon society, the law protects us from his depredations by longer, and still longer, terms of imprisonment, for the same reason that we deprive an escaped lion or tiger of the opportunity for further ravages. In the same manner the advocates of imprisonment for drunkards to be strictly logical should progressively increase their sentences. But were this done, so great would be the accumulation of drunkards, among the women at any rate, that at least half a dozen extra prisons, that is to say, half a dozen special establishments for their treatment, would be required. But surely there is very little difference between this course and the result which we all wish to attain.

When it is remembered that quite nine-tenths of habitual inebriates have never placed themselves within the reach of the criminal law for other offenses, it must be clear to the most unjudicial mind that the present system of punishment is a failure. If we accept Crabb's definition that "crime" is injurious to others, while "vice" is injurious to one's self, drunkenness, though far-reaching in its results and baneful enough when its effect on the relations of the drunkard to society at large is considered, must be regarded as a *vice*, and not as a *crime*. Even were the present mode of dealing with it less futile than it is admitted to be, the application of the machinery of the criminal law to such a fault is very much like using a Nasmyth steam hammer to crack a nut. Were it desired to bring the administration of the law into contempt, it would be difficult to conceive a more effectual means of doing so. Again,

to argue from the point of view of the drunkard, whose ultimate welfare I judge to be the main object of this Society, is it just to the victims of a vice to treat them as criminals and to house them with the burglar, the coiner, and the footpad — those avowed enemies of civilization?

When, in 1895, the turning point in the history of the question was reached by the introduction of the government bill for the establishment of compulsory inebriate retreats, the chief opposition to the measure was aroused by its alleged interference with the *Habeas Corpus* Act. But, as I have endeavored to show, the dipsomaniac is himself the suspender of the act, in so far as it applies to his own drink-sodden personality.

I have already told the prison history of the woman who was only forty-eight days out of custody during one entire year. Now to talk of civil rights or the liberty of the subject in the case of such a persistent recidivist is simply ridiculous. Moreover, can it be seriously contended that a single prolonged detention under the mitigated discipline of the proposed act would have a more baneful effect upon body and mind than these repeated short imprisonments, punctuated as they are by debauches?

It is difficult to exaggerate the responsibility which must attach to the legislators who continue to oppose this salutary reform. There can be no question that, apart from its other drawbacks, the existing system tends to induce insanity. Dipsomaniacs, being generally persons of unstable mental balance, and being accustomed to drink immoderately the moment they are released from prison, cases of dementia or mania are often seen with little or no warning after a series of sentences for drunkenness. It is customary with a certain class of writers to credit the prison system itself with the production of this insanity. As a matter of fact, it is really due to the repeated attacks of acute alcoholic poisoning, which the dipsomaniacs are at present allowed to sandwich between their short sentences.

In the words of the great French authority, Legrain: — “The question of the radical sequestration of inveterate drinkers is forced upon us. It will be useless for the medical profession to struggle against drunkards who enjoy their freedom. Social, anthropological, and humanitarian considerations plead for the suppression of a freedom which is abused.” These premises are incontrovertible. None but the most superficial observer can deny that the habitual inebriate is one whose loss of self-respect and impaired moral sense have lessened his responsibility to the law, necessitating the regimen of an asylum, not the discipline of a gaol.

#### DISCUSSION.

Mr. Aydon Smith said his experience had led him to believe that women drank mostly spirits, and men mostly beer.

Surgeon-Major Dr. G. K. Poole was of opinion that the present system of treating inebriate male prisoners was totally inadequate. There were thousands of such prisoners who spent more time in than out of prison. Compulsory curative treatment for a long enough time, was the proper treatment of these criminals, not punitive imprisonment for a moral crime. To agitate for amended legislation was the work of the Society. They must urge on all that inebriety was a disease demanding appropriate treatment and care.

Mr. A. J. Madison said they were hoping for something being done in the Houses of Parliament during the coming session, and they ought to be unanimous in the length of the period for which inebriate prisoners should be treated. Six months appeared to be too short. Should it be one or two years? If only inebriate prisoners were to be legislated for at present, the results might be so good as to lead to the application of curative treatment to non-criminal inebriates.

Mr. H. M. Riley was of opinion that a short term was of no use. Hardly any were cured in six months, and a few in a year.

Mr. Brock thought less than a year was useless. Two years was better.



Dr. Longhurst said that to commit inebriate offenders over and over again was an absurdity. They must keep at the government for better laws.

Dr. Paramore spoke of a notorious police-court female inebriate as having been a Band of Hope girl; and of another case, whose husband, after 47 years of misery, expressed himself as the grandest thing having happened to him when she died. Another case, the child of abstaining parents, remained abstinent for twelve years, and then relapsed.

Mr. Clark gave an instance of a habitually drunken son, whose father had been a teetotaler of long standing. He asked if there was any difference in the treatment of inebriate prisoners.

Mr. Gandy asked if Dr. Pitcairn had found any harm arise from sudden withdrawal of intoxicants.

The President said that no less than five official inquiries (the Parliamentary Committee of 1872, the English and Scottish Departmental Committees on Inebriety, the Departmental Prisons Committee, and the Royal Canadian Commissions on Intoxicants) had reported in favor of the special therapeutic treatment of habitually drunken prisoners. One of the most remarkable delusions current among the British was that the European Continent was as sober as Britain was drunken. The baseness of this erroneous belief was gradually being detected. Only the other day a Parisian hospital physician had practically a third of all his female patients habitual drunkards. In his opinion, the period of detention under special curative seclusion should be from one to three years. Dr. Kerr concluded by proposing a resolution thanking Mr. Pitcairn for his most valuable and suggestive paper, which was passed by acclamation.

Mr. Pitcairn, in replying, agreed that women generally drank spirits and men beers. He had seen no injury from the sudden cessation of alcohol. There was, at present, no difference in the treatment of inebriate prisoners as such. All were treated alike dependent on their condition, apart from drinking.

MORAL CHARACTERISTICS AND TYPES OF THE  
INEBRIATES.

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BY CHARLES F. PALMER, M.D.

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It may seem odd to many persons to speak of the difference in the moral status of inebriates.

With these a drunkard is nothing but a drunkard, and there is no good in him. But the moral habits and characteristics of the individual, outside of drink, vary in accordance with his constitutional tendencies and the character of his previous education, training, and situation in life. Until the moment of intoxication he may be either a weak good man or a thoroughly vicious one.

Subsequently when he emerges from it, he returns to what he was previous to his debauch, but always with a declension in point of resistance not only to drink, but to every vice which his surrounding and distempered mind incline him to.

Fortunate is the man who can then return to a moral-intellectual environment; not so much for what it will do to cure his intemperance, but what it does accomplish in preserving him from the worst feature of it, the acquisitions of vices, with the ultimate possibilities of crime. In the foreground we have the blackguard drunkard of our streets, big of limb, broad of chest, low of brow, and black of visage; born of the gutters; the braggart and bully of his less offensive neighbors, evil triumph in his eyes; with strong assumption of physical power, but cowardly by instinct; thief and murderer by inherent qualities, and only needing an accident to make him either or both; at times politic with the lowest form of animal cunning; the woman-bruiser by nature and nurture; his lan-

guage as polluted as his mind, which reverences nothing but the brute force which overcomes him; always the concentrated living spawn of the accumulating growth of generations of depravity. The accidents of life sometimes make him the successful politician and the petty magistrate or alderman of our cosmopolitan cities, where he carries on his debauchery with immunity from the laws which he himself dispenses in unjust, arbitrary, and cruel decisions and sentences against his less fortunate contemporaries in vice.

In another class of inebriates we recognize the spoiled boy that is born of those social upheavals in which men without education, excepting that which business life develops, become suddenly well-to-do and are inspired with an ambition to elevate their sons into a more refined and cultivated social positions than they themselves can hope to occupy.

With an active mind born of the parent who has, perhaps, enriched himself without much scrupulous regard for the rights of others, with inherent tendencies in the direction of animal indulgences, an ill-regulated mind, ample means, and favoring environment, he very early absorbs the genius of the street more readily than that of the intellectual schools of life.

His later education is of billiard halls, concert saloons, dance houses, gambling dens, and brothels, his conversation is altogether of these, and nothing in life is worth the living unless spent "as a tale that is told," amid pleasures which appeal directly to the largely developed animal side of his brain. Although not devoid of a thin veneering of refinement and polish, it is not unlike that attributed to the Russian: "Scratch him and the Tartar appears." He is an imperfect development, imperfect at birth and made so by the character of his after training and surroundings. Spurred on by the necessity which impelled his father, he might not have differed greatly from him in the character of his success.

In the third marked type of intemperate men we find the

educated man of refined and intellectual instincts and habits, who obtains no gratification from the past times of the brutish or ignorant, does not indulge in profanity, card-playing, gambling, etc., because the bent of his mind from the beginning, predetermined by the organic superiority of the intellectual qualities over the physical, possibly through a long line of cultured progenitors, is not in the direction of such enjoyments, and his surroundings have not inspired him with a habit of mind that can obtain even surcease of suffering from such practices. He has no great vices outside of his indulgence in drink, because of the weakness of his desires, and he exercises no moral strength in resisting these, although he is apt to affect a reputation for his exemption from the common vices of ordinary drinking men. In his alcoholic inebriation he indulges in the intellectual form of pleasure rather than the animal, and often feels more moral when drunk than when sober. He is known frequently during his drinking-bouts to have been intellectually at his best, up to the time that his excessively stimulated brain gave way, by increasing intoxication, to the impossibility of putting his thoughts into an intelligible and coherent shape. At such times, if he happens to be of a classical or moral bent of mind, he will express himself with a purity and correctness that almost equal a Cicero, a Marcus Aurelius, or a Tacitus; if he is idealistic and sentimental, in poetry that makes Homer, Dante, or Dryden seem closer to us than ever before; if humorous and witty, the brilliant sallies and bonsmots which his highly stimulated imagination conjures up to transport us into an atmosphere breathing of a Sheridan, or a Curran; and if patriotic, the fire and vehemence of dead orators and eloquent statesmen become renewed and living under the stimulated forces of the intoxicated brain of the nervous intellectual man. This type, as well as the succeeding one, is the product of hereditary disease.

Then, again, we have the quiet, domestic youth, who has

been brought up among virtuous women, who loves reading and the refined pleasures of home life. He is reserved, modest, and cleanly in his habits, has little, if any, ambition, but has the character of mind and nervous organization which would make life sweet to him as a village curé or a country parson, where his small egoism would receive its necessary aliment through the sense of being useful to his fellow-men in a quiet, non-exciting field of labor, rather than in a world of competitive ambitions, struggles, and cares. He has an appreciative sense of honor and probity, qualities which he has inherited along with his liability to indulge in stimulation. To him periodical attacks of intoxicative mania seem to come as a resultant of his quiet, non-combative existence, his soft and yielding nature, and disturbing influences of uncongenial living, and as a corrective medicine for his mental and physical weakness. He is a congenital neurotic.

**THE INEBRIATE CRIMINAL IN JAILS AND PENITENTIARIES.**

These are the types that stand out more boldly than others, which are simply modifications of the foregoing specimens. With the first class referred to, where the brutal instincts are encouraged by street training and education, and are accompanied by a love for and faith in depravity as a material basis of human existence, it would seem as if nothing short of being made all over again would be of any benefit in converting these into decent members of society. What we have to do in their case is not the reformation and restoration of men who have at one time led respectable and socially correct lives, but the working up of the polluted raw material into a shape resembling humanity, with some sense of utilitarian morality. They require new minds and new bodies to begin with, before the ordinary processes of secular and moral education can be made available. The discipline and teachings of the church cannot be made effective through her customary methods, for the brains of these defective specimens of humanity are

so structurally disorganized, through many succeeding generations of ignorance, degradation, and wrong-doing, that even the sensations of pleasure or pain are in them as quiescent as in a rhinoceros, and are excited only through the stomach. There is nothing for religion to take hold of, and it is only by remedying the morbid organic conditions within their brains that they can be reached through the perceptive faculty. There is a constitutional restraint of the intellectual faculties and a mental hygienic discipline and training is required to do away with this, and allow of a partial development at any rate. As this would have to be done through compulsion, and by the state, the jails and workhouses might be diverted from their present position as iniquitous, legalized schools of vice and crime into a useful purpose, the conversion of the bad stock of animal men into human men. But this will never be done until the ridiculous fallacy that criminality or viciousness is a moral infraction, a voluntary transgression, rather than a mental deformity, is laid aside, along with the other old moral lumber of past civilizations. It is no new theory to believe that all wickedness and weaknesses arise from organic perversion of the brain, to begin with, and from this being continually stimulated and encouraged by a wrong education and training all through life; but we have also convincing proofs that these constitutional tendencies toward evil have been subverted, and the innate degeneracy corrected, from the fact that a large number of our morally healthy citizens of to-day started life with everything against them in this respect, and, undoubtedly, owe their conversion to a rightful and proper training.

The economic principle involved in turning our prisons and jails into schools of mental hygiene for the building up of moral manhood on a stern and rigid mental discipline, however appreciable, would, undoubtedly, call out the usual protests of the moral school of gadgrinds, who would see nothing in it but awards and encouragements of crime where there

should be nothing but punishment; who, in the same spirit that burned Protestant reformers as a prevention to the further spread of the crime of Apostasy, would deal out blows rather than specifics. But there is little fear that this sort of discipline would ever be regarded by the prisoner as a pleasure, or that persons would commit crimes in order to avail themselves of the prison education. No one will ever go to jail to accomplish his healthful education in life. Schools and hygiene are not popular with criminals; they have too decided a preference for the old ways.

The entire economy of prison organization is worked on the principle of fear as a ruling motive in conduct, and the sound of the gong carries with it the instant obedience of every inmate. Its rules are as immutable as the laws of the Medes and Persians are said to have been. In no other way can such material be handled with safety, for kindness and indulgence are largely thrown away on these undisciplined men; but if prison life fails to accomplish any good but that of ready obedience to discipline, harsh, cruel, and oppressive as it is, and as, under any change of beliefs, it will always remain, it performs that which is of appreciable value to them and to the state. Unfortunately, however, the worth of this to the prisoner is more than counterbalanced by the poisonous influences unceasingly at work, through the admixture of perverted minds in various stages of cunning, evil ingenuity, and wrong-doing. The contagious example through this compulsory association is the immoral education the prisoner is now receiving, and this always affords the stimulus to make weak men more vicious and criminal and stronger in evil continually, while the hardened criminal, through the improvement in his physical, although not in his mental and moral, health, is becoming more dangerous to the future safety and security of society, and continually depreciating in possible value as an economic factor in civilization.

The value of such a system of correction to society, if it

could be successfully put into operation, would be almost incalculable. It is open to doubt if even the trade schools of our country could turn out, when their period of education terminates, more serviceable men than these rigidly disciplined, experienced, and systematically-worked inmates of our prisons, if their perverted mental organizations were prepared by rightful training and treatment during incarceration to work healthfully, to the best advantage for themselves and for the state.

In closing this little treatise, it seems imperative upon us to call attention to the mischief wrought by the use of intoxicating liquors upon the hidden spiritual sources of man, and we cannot do this better than by quoting an article which appeared some years ago in "Harper's Monthly Magazine," on that subject:

"The curse of drunkenness on the side of its physical devastations has been abundantly depicted by the advocates of the temperance reform. The amount of grain consumed in the manufacture of intoxicating liquors; the number of men whose labor is worse than wasted in producing and in vending them; the number of lives destroyed by them; the number of paupers and insane persons whose woes are traceable to this source; the effects upon the healths of individuals—all of these things are frequently set forth with sufficient fullness in impressive rhetoric. Some allowances must be made for the overstatements of zealous advocates, but there are facts enough of an appalling nature in these representations to call for the most serious thought.

"But the worst side of drunkenness is not that which appears in these familiar figures. The most frightful effects of the drink habit are not those which can be tabulated in statistics and reported in the census. It is not the waste of corn, nor the destruction of property, nor the increase of taxes, nor even the ruin of physical health, nor the loss of life, which most impresses the mind of the thoughtful observer of in-



briety. It is the effect of this vice upon the characters of men as it is exhibited to him, day by day, in his ordinary intercourse with them. It is in the spiritual realm that the ravages of strong drink are most terrible.

“Body and mind are so closely related that when the one suffers the other must share the suffering, and the injury to the physical health resulting from intemperate drinking must, therefore, be accompanied by similar injury of the mental and moral powers. But the inclination of the popular thought is so strongly toward the investigation of the physical phenomena that the spiritual consequences of drunkenness are often overlooked. Degeneration of tissues is more palpable than degeneracy of spirit, a lesion of the brain more startling than a breach of faith; but the deeper fact, of which the senses take no note, is the more important fact, and it would be well if the attention of men could be fixed upon it.

“The phenomena to which we have referred often report themselves to the quickened perceptions of those who stand nearest to the habitual drinker. Many a mother observes, with a heart that grows heavier day by day, the signs of moral decay in the character of her son. It is not the flushed face and the heavy eyes that trouble her most, it is the evidence that his mind is becoming duller and fouler, his sensibilities less acute, his sense of honor less commanding. She discovers that his loyalty to truth is somewhat impaired, that he deceives her frequently and without compunction. This effect is often observed in the character of the inebriate. Truthfulness is the fundamental virtue; when it is impaired the character is undermined, and strong drink makes a deadly assault upon it. Coupled with this loss of truthfulness is that weakening of the will which always accompanies chronic alcoholism. The man loses, little by little, the mastery over himself; the regal faculties are in chains. How many of his broken promises are due to a debilitated will, and how many to a decay of his veraciousness, it would be impossible for the

victim himself to determine. Doubtless, his intention to break off his evil habit is sometimes honest, and the failure is due to the paralysis of his will. The loss of self-respect, the lowering of ambition, and the fading out of hope are signs of the progress of this disease in the character. It is a mournful spectacle, that of the brave, ingenious, high-spirited man, sinking steadily down into the degradation of inebriety; but how many such spectacles are visible all over the land! And it is not in the character of those alone who are notorious drunkards that such tendencies appear; they are often distinctly seen in the lives of men who are never drunk. Sir Henry Thompson's testimony is emphatic to the effect that the habitual use of fermented liquors taken to an extent far short of what is necessary to produce intoxication injures the body and diminishes the mental power.

"If, as he testifies, a large proportion of the most painful and dangerous maladies of the body are due to the use of fermented liquors taken in quantities which are conventionally deemed moderate, then it is certain that such use of them must result also in serious injuries to the mental and moral nature. Who does not know reputable gentlemen — physicians, artists, clergymen even — who were never drunk in their lives, and never will be, but who reveal in conversation and in conduct certain melancholy effects of the drinking habit? The brain is so often inflamed with alcohol that its functions are imperfectly performed, and there is a perceptible loss of mental power and of moral control.

"The drinker is not conscious of this loss; but those who know him best are painfully aware that his perceptions are less keen, his judgments less sound, his temper less serene, his spiritual vision less clear, because he carries every day a little too long at the wine. Even those who refuse to entertain ascetic theories respecting these beverages may be able to see that there are uses of them that stop short of drunkenness, which are still hurtful to the mind and heart, as well as the body.

That conventional idea of moderation to which Sir Henry Thompson refers is quite elastic; the term is stretched to cover habits that are steadily despoiling the life of its rarest fruits. The drinking habit is often defended by reputable gentlemen, to whom the very thought of a debauch would be shocking, but to whom, if it were only lawful, in the tender and just solicitude of friendship, such words as these might be spoken: It is true that you are not drunkards, and may never be; but if you could know what is too evident to those who love you best, how your character is slowly losing the fineness of its texture, firmness of its outline, how your art deteriorates in the delicacy of its touch, how the atmosphere of your life seems to grow murky, and the sky lowers gloomily above you, you would not think your daily indulgence harmless in its measure. It is in just such lives as these that drink exhibits some of its most wonderful tragedies."

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#### COCAINE POISONING; MAGNAN'S SYMPTOM.

Rybakoff of Moscow insists on the diagnostic value of the symptom of chronic cocaine poisoning described by Magnan,—*i. e.*, an hallucination of common sensation. The patient complains of feeling some foreign body under the skin. In some cases the foreign bodies felt were like grains of sand, in others slightly larger; generally they were described as more or less rounded, and gave rise to complaints of microbes, worms, crystals, etc., situated just under the skin. While other symptoms of chronic cocaine poisoning occur also in alcoholism and with other poisons, Magnan's symptom seems to occur only with cocaine. It has, therefore, a real diagnostic value, especially in cases in which the patient is unwilling to admit having used cocaine. Where cocaine is extensively used in surgery and dentistry, the appearance of Magnan's symptom is a valuable indication for the immediate cessation of the drug. Korsakoff reported a case in which a woman, suffering from multiple neuritis complained of "worms in the skin." On inquiry it was found that vaginal tampons containing cocaine had been freely used. The omission of these was followed by amelioration of the symptoms.

## SOME CONSIDERATIONS OF ALCOHOLISM AND ITS TREATMENT.\*

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BY N. S. DAVIS, M.D., Chicago, Ill.

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*Dipsomania, Methomania, Oinomania.* — These are names that have been applied to a large class of cases of chronic alcoholism, characterized, not so much by ordinary symptoms of mental derangement, as by persistently returning periods of uncontrollable drunkenness, varying in length from one to four or six weeks, with intervals of sobriety lasting from one to six months.

During their periods of drinking most of this class of patients give themselves up to unrestrained debauchery and vice, until either their money is exhausted, or their stomachs refuse longer to tolerate the alcoholic drinks, when they stop as suddenly as the paroxysms commenced, and in two or three days return to their customary work with as much correctness and diligence through the usual interval as any other citizens.

As the years pass by, in nearly all of these cases the intervals of sobriety become shorter, the periods of debauch recur more frequently, and are more liable to end in delirium tremens, or permanent gastric, hepatic, or renal disease; or, escaping these, in the final development of alcoholic dementia. The most singular features presented in the early history of these periodical drinkers, are the recklessness of the periods of drinking while they last, and, for the most part, the practice of total abstinence during the intervals. During the former their mental emotions and illusions are such as prompt strongly to acts of licentiousness, and the indulgence of unpro-

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\*The following is an extract from a lecture by Dr. Davis.

voked jealousies, while in the interval the larger proportion of them, at least, are chaste, upright, affectionate, and deeply humiliated by their previous conduct. And yet, despite their earnest resolutions and pledges, when the time comes round, the most trifling circumstance, often without the slightest apparent reason, will cause them to plunge into another debauch. Members of this class are to be found in all ranks of society; and it has long been a mystery, not only to their friends, but to physicians and moralists as well, why men of this class — intelligent, refined, and eminently respectable as many of them are, at least in their early years — can continue to repeat such apparently causeless periods of revelry and disgrace, of the consequences of which they are so fully conscious during the interval.

The strictly periodical return of active phenomena, the tendency to gradually shorten the intervals as the years pass, and the observance in many cases of the fact that each returning debauch was immediately preceded by certain mental conditions, have led to the conclusion that these patients were laboring under some obscure disease in the cerebral nervous center analogous to that of epilepsy and other recurring neuroses. It is alleged by many writers that a large majority of this class derive their persistent tendency to periodical drinking from hereditary influences. While the facts adduced in regard to such influences are sufficient to render it probable that they had been potent in some cases, they are wholly inadequate to explain the origin of many others. It was the increasing conviction in the minds of psychologists and philanthropists that the phenomena of this class of inebriates were founded on actual morbid conditions of the nervous structures, aided by hereditary predispositions, that caused it to be separated from ordinary cases of habitual intoxication, and ranked as a form of mental alienation under the name of dipsomania or methomania.

*Prognosis.*— Abundant clinical observation has shown that a very large proportion of these so-called dipsomaniacs

have resisted every means devised for their permanent cure, but a smaller ratio have recovered, and doubtless the same result could be obtained in a much larger number if they could be placed under the most favorable influences in the early part of their career.

*Treatment.*—From a careful study of the many cases that have come under my observation, I have been led to regard it necessary to give the most careful and persevering attention to three things if we would achieve the greatest degree of success in the management of this class of cases.

1. The patient must be so fully instructed in regard to the deceptive and injurious influences of alcoholic drinks in the human system that he is actually convinced their use is unnecessary in any of the relations of life, either ordinary or extraordinary. Unless this is done, hardly the length of an ordinary interval will pass without the occurrence of one of the thousand mishaps or emergencies, such as getting wet, or cold, or exhausted, etc., for which the popular mind says just a glass of wine or punch or toddy is the sovereign remedy, and he will take it. And in nineteen times out of twenty that glass will initiate a full period of characteristic debauchery. In conversing with many of this class of men, I have found few who did not mention some circumstance of supposed necessity, or, at least, benefit which had been the occasion of commencing each paroxysm. Consequently it is an important step gained if the patient and his family can be so thoroughly instructed that they will not only regard the use of alcoholics as unnecessary, but will not keep them anywhere within convenient reach.

2. The second object in the management is to acquire as complete knowledge as possible of the mental characteristics, business habits, and tone of physical health of the patient, that we may the more accurately adjust all those influences capable of acting favorably upon him during his intervals of sobriety.

So far as possible all sources of petty annoyance in either the family or social circle should be avoided, and also all specu-

lative enterprises involving large risks and consequently alternate emotions of elation and despondency; and if the digestive functions are impaired, the nervous system irritable or sleep disturbed, a proper use of remedies should be continued until such infirmities are removed. I have seen excellent effects result in these latter cases from the use of one milligram (gr. 1-60) of digitaline, and two milligrams (1-30) of strychnia at each mealtime, and from twenty to thirty minims of dilute hydrobromic acid at bedtime. In cases accompanied by costiveness I have added from ten to thirty minims of the fluid extract of cascara sagrada to each dose of the hydrobromic acid. Instead of the digitaline and strychnia I have given, with good effects upon the digestive and nervous functions, a pill or gelatin capsule containing extract of hyoscyamus, six centigrams (gr. j.), and oxalate of cerium, two decigrams (grs. iij.), at each mealtime. If it has been ascertained in any given case that the periods of dissipation occur at nearly regular intervals the patient should be induced, if possible, to commence a week before the usual time of recurrence to take at each mealtime a pill containing sulphate of quinia, thirteen centigrams (grs. ij); extract of eucalyptus globulus, thirteen centigrams (grs. ij.); and extract of cannabis indica, two centigrams (gr. 1-3); and to continue the same two weeks or more.

3. The third item that requires attention in the management of this important class of patients relates to their occupations and personal associations. All experience has shown that little or no progress can be made towards the permanent recovery of a dipsomaniac so long as his business places him in more or less contact with alcoholic drinks or in frequent association with drinking comrades. Consequently, both physician and friends should combine all their influence to separate, as far as possible, the patient from such associations. And if it cannot be done in any other way, let him be induced to take a residence for six or twelve months in a well-regulated asylum for inebriates, until the usual paroxysmal tendencies have been broken.

By a patient, judicious, and persevering application of the system of management I have briefly sketched, I have had the pleasure of seeing a considerable number of this class of sufferers permanently restored to mental, moral, and physical health. But when a fair trial of such measures finally fails, as it will with many, and the periods of uncontrollable debauchery become more and more frequent, nothing short of an enforced seclusion in a proper asylum, with no possibility of obtaining any kind of alcoholic drink, but where good air, good food, kind treatment, and some suitable occupation can be furnished, on the same principle that applies to the treatment of other insane persons, will save them from early destruction.

*Alcoholic Dementia.*—The long-continued use of alcoholic drinks is capable of inducing all grades of mental impairment, from simple weakness to complete dementia. Those who drink to such excess as to become either habitual or periodical drunkards, and are not cut off by delirium tremens, mania a potu, or visceral diseases, before the near approach of old age, pretty uniformly develop symptoms of progressive mental impairment, caused by pathological changes in the membrane and substance of the brain resulting from the long-continued contact with alcohol. These results, however, are not limited to those who drink enough to be recognized as inebriates, but there are many of both sexes who make liberal daily use of alcoholic liquors for many years without ever becoming grossly intoxicated, and yet later in life develop all the phenomena of alcoholic dementia.

*Symptoms.*—The early symptoms of alcoholic dementia vary much in different cases. In a large majority of the cases the first noticeable symptoms are weakness and unsteadiness of the voluntary muscles, giving a slight tottering motion in rising from a chair or walking, and some trembling of the hands, especially when weary. At the same time the memory is less reliable; it is more difficult to fix the attention; the emotions and passions are more easily disturbed; the facial expres-



sion more dull; sleep is often disturbed; and there are various annoying sensations, such as creeping, pricking, or numbness of the scalp, or other parts of the surface, and not infrequently noises in the head and momentary pulsating sensations. Sexual illusions and jealousies are peculiarly prominent in this class of subjects. These various symptoms once begun, usually steadily, though slowly, increase until the patient can neither walk nor even stand without being supported; the muscles of the face become relaxed, often letting the saliva dribble, and imparting a decidedly idiotic expression to the countenance; while the mental faculties continue to fail until the patient has neither memory, power of attention, nor ability to converse, and hardly gives heed either to his food or to his evacuations.

In other words the dementia becomes complete; and still the patient may live for months in utter helplessness, but fortunately without sufficient intelligence to realize the degree of his degradation. Many cases, instead of progressing through all the stages to the complete loss of nearly all functions, both mental and physical, become early subject to well-marked symptoms of pachymeningitis interna, such as sudden attacks of vertigo, partial paralysis, temporary suspension of consciousness, and finally fatal cerebral hemorrhage. In other instances, the earlier stages of mental failure are characterized by intercurrent periods of exciting hallucinations or illusions, constituting active outbursts of insanity, during which the patients are very liable to commit criminal acts directly prompted by the nature of their illusions. In these periods of more active derangement many of this class find their way into asylums for the insane, where they add to the great class of incurables, and ultimately to the number affected with general paralysis of the insane.

Nearly all the patients affected with alcoholic dementia present, even from an early period, an anaemic look, and are affected with more or less gastric and duodenal irritation, rendering digestion imperfect. The excretory functions of the skin, kidneys, and liver, are also frequently disordered.

*Pathology and Pathological Anatomy.*— All the essential phenomena of alcoholic dementia are traceable, not to the immediate presence of alcohol in the cerebral vessels or structure, but directly to those structural changes in the membranes and cerebral substance that I described as present in fatal cases of delirium tremens, and the still further progress of these changes in the same direction, which may continue, in some cases, long after the use of alcoholic liquids has ceased. In addition to the changes just alluded to, in nearly all the post mortems in cases of fatal alcoholic dementia there are found more thickening and opacity of the pia mater and arachnoid, with thrombi or varicosities in the vessels of the dura mater, and sometimes hemorrhagic spots, and more or less serum on the surface and in the lateral ventricles. The convolutions, especially over portions of the cerebral hemispheres, appear most frequently pale, shrunken, and harder than natural, though in some cases there are limited regions of increased redness and less density. These appearances are caused by more or less atrophy of the nerve cells of the gray matter, and either sclerotic or fatty changes in the connective tissue. Fatty or atheromatous change in the coats of the cerebral vessels are also present in most instances.

Numerous small cystic degenerations have also been described by some observers. It is to these various and extensive degenerative changes in the cerebral structures that the patient owes the loss of his mental faculties.

*Prognosis and Treatment.*— When well-marked symptoms of dementia have supervened upon chronic alcoholism the prognosis is decidedly unfavorable.

In the earlier stages something may be done to palliate symptoms and retard the progress of the morbid processes by rigidly abstaining from all alcoholic liquids, whether fermented or distilled, a proper regulation of the diet, the avoidance of excessive exercise, either mental or physical, and the use of such remedies as may be indicated for maintaining a healthy condition of the digestive and excretory functions. The only additional items of treatment relate to such measures of a legal and sanitary character as will best protect the patient from injuring himself or others, and secure for him the most faithful and humane attention until the end of his life.

THE PAUPER INEBRIATE — CASES VERSUS INDIVIDUALS — NECESSITY FOR LONG TERMS OF COMMITMENT.

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BY DR. L. D. MASON, Brooklyn, N. Y.

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The care and control of poor and indigent dipsomaniacs and inebriates is a question of vital importance to every community, and should command the attention of every student of our social economy. In the annual report for 1877 of the President of the Inebriates' Home for Kings County, to the legislature of the state, Dr. T. L. Mason thus writes, under the caption, " 'Cases' vs. Individuals:—

" It will be observed that in the presentation of our annual reports we have invariably drawn a distinction between the aggregate number of 'cases' treated in the institution and that of the individuals who go to make up these 'cases.'

This may be said to be a new departure, for it is the almost universal custom in the presentation of such reports by public and private corporations to speak of the number of 'cases' treated, leaving out of sight altogether the number of persons subjected to such treatment.

In some respects this last-named plan of presenting an annual report may appear to be necessary. For example, if ten individuals be the recipients of relief at the hands of some charitable institution on ten different occasions, those ten individuals swell up the record of 'cases' treated to one hundred. The very able and exhaustive report of the police and excise commissioners of the city of Brooklyn for the year 1876 fully illustrates the necessity for such a distinction, to a clear understanding of the valuable statistics presented.

" We do not quote from this admirably arranged exhibit of the work of the police and excise department, which, it may be remarked, in passing, bears evidence of careful compilation and abounds in comparative tables of criminal statistics

of considerable interest to the thoughtful citizen and philanthropist, in any spirit of hostile criticism, but as merely illustrating the point we desire to make in the presentation of our yearly record to your honorable body.

"It appears that during the year 1876 there were 1,463 arrests for vagrancy in the city of Brooklyn, 9,680 arrests for drunkenness, and that in 4,851 of these cases the accused were registered as having no occupation.

"It would also appear that in the previous year, 1875, 55,567 lodgings were provided for homeless wanderers at the various station-houses through the city.

"If we accept the cases of vagrancy, there is no record of the number of individuals which goes to make up this astounding number of arrests and of free lodgings provided in a single year.

"On referring to the tables of the occupations of those arrested, we find the actual number of individual vagrants taken into custody during the year to be 215; but these 215 turned up in court on 1,463 different occasions, occupied the time of the guardians of the peace to a considerable extent, in and out of court, necessitated 1,463 trials before a police magistrate, made the same number of trips to the jail in a public conveyance and at the public expense, entailed the payment of turnkey's fees from the county treasury in every case, and, finally, boarded at the county's expense for terms ranging from ten to twenty-nine days each.

"These are the chronic vagrant drunkards of our community; and this perpetual record of arrests and rearrests has been going on from ten to fourteen years, while some of these jailbirds could not, if questioned, compute with anything like accuracy the number of their rearrests and recommitments during the long years in which the prison has taken for them the place of home. Thus we see at a glance how important it is to rid the community of even a modicum of those whom jail officials aptly, if inelegantly, term 'rounders' and 'repeaters,' even from an economical standpoint; not to speak of the moral aspect of the question or to dwell upon the value of reformation in a single case. This class largely helps to increase the burden of the taxpayers, and its decrease is a matter of grave importance.

"The number of individuals arrested for drunkenness probably bears a less proportion to the number of recorded ar-

rests for this offense than does the number of individual vagrants taken into custody to the number of recorded vagrancy 'cases.' If the exact number of drunkards arrested during the year could be sifted out, rejecting aliases and coming down to individuals, it would be probably found that the actual total would fall short of one thousand, though 9,680 arrests for drunkenness were reported during the year.

"The same reasoning on the score of economy alone applies in the case of the chronic drunkard even more forcibly than it does in the case of the constitutional vagrant; for the latter, as a rule, has only himself to provide for, while our criminal statistics show that the large majority of drunkards have others depending on them who are more than likely to become a burthen on the community.

"The rescue of one such inebriate has a social significance, independent of morals altogether, which the casual observer is not apt to realize or take into account in estimating the value of the work of our purely reformatory institutions.

"One more point under this head. It is stated that 55,567 persons were accommodated with lodgings at the station-houses during the year 1875. We find that the population of the city, according to the census, was in that year 484,616. On the supposition that each of the 55,567 lodgers had a distinct individuality, it would follow that for every eight and three-quarters persons in the city of Brooklyn one slept in a station-house one night during the year.

"If we add to these 55,567 lodgers the 26,669 arrests by the police during the same year, and then proceed to figure up the tens of thousands of cases which have been cared for by our charity commissioners, by private charitable associations, at dispensaries, and in hospitals, orphan asylums, homes, and the whole family of charitable institutions, we find that, according to this mode of reasoning, Brooklyn was in that year one vast poorhouse and prison, and that we were all paupers and criminals living at the public expense.

"This *reductio ad absurdum* is the natural result of the prevailing tendency on the part of the commissioners and directors of public and private institutions in making their reports to place in the boldest relief the full extent of the work accomplished, and in the pursuit of this object to confound 'cases' with 'individuals.'

"Taxpayers and private benefactors have a right to the  
VOL. XIX.—26

fullest and most definite information under this head; and we believe that the community can be helped to a clearer understanding of the work of all our public institutions by a plain statement of the number of persons treated, the duration of the different terms in them, and by giving a separate record of the number of readmissions. And we prefer to do this, even at the risk of lacking in our report the amazing array of figures with which the community is frequently startled."

In the same annual report, deprecating the short term commitments for inebriates, the writer asserts the necessity of long terms of commitments as follows:

"NECESSITY FOR LONG TERMS.

"A great deal has recently been written and said concerning the expediency of utilizing the chronic drunkard by establishing workshops in connection with our prisons, in which he may be able to contribute something towards his own support while in custody, and even to lay up a little capital to start with when released at the expiration of his term.

"The experience of those thoroughly acquainted with the management of penal institutions is that it is utterly impossible to utilize the drunkard who is constantly being recommitted to the jail or the penitentiary unless, after repeated offenses, he be committed for a term of years. On this important subject we cannot do better than to quote from an annual report of Gen. Amos Pilsbury, the late warden of the Albany Penitentiary, and father of the present superintendent of state prisons — a gentleman who is acknowledged to have been one of the best prison officials we have had in this country, and who has been ably succeeded by his son, Captain Louis D. Pilsbury. In speaking of this subject he says:

"It is for the law-giver to determine whether imprisonment in the penitentiary is the best mode of punishment for intoxication in any case; but if it is designed to have any effect in curing the vice of intemperance, a term of six months should be imposed in all cases of second or further convictions.

"The truth is that nothing short of a direct interposition of Divine power can perform the miracle of suddenly converting and turning men from the error of their ways. Human agencies can only hope to accomplish the work of reform by

retaining the subject under their operation until the power of old evil habits shall have been weakened by disuse, and new and good habits of sobriety and industry shall have been firmly acquired.'

"In a recent report of the Board of State Prison Inspectors (whose offices have been abolished under the new constitution), we find the following language on this subject:

" 'For the large class of convicts having sixty or less days to serve, the superintendent can obtain little or no remunerative employment, so much time being required in these cases for the necessary instruction as to leave an employer small prospect of a compensating gain. It follows, as your honorable body will readily perceive, that convicts of this class not only fail to indemnify the penitentiary against the cost of their own support, but become, for the most part, a constant drain upon the productive labor.

" 'But it must be remembered, moreover, that many of those short-time men are committed to the penitentiary during the year over and over again, deriving themselves nothing whatever from the transient suspensions of their liberty, while inflicting upon the resources of the institution a steadily growing pecuniary loss.

" 'Besides, this class of subjects make heavy demands on the time and the attentions of our physician, and convert our hospital in too many cases into a place of recovery from attacks of delirium tremens or other consequences of habitual intemperance and evil habits.'

" 'In a comparatively recent address of the English Howard Association,' on the treatment and prevention of crime, they say that the system of repeated short sentences 'is intolerable.' They continue:

" 'Repeated sentences of fortnight upon fortnight, and month upon month, add to the difficulties of prison management, and greatly demoralize the delinquents and their companions as a class.

" 'Where a single short sentence fails to deter, it is a proof that public morality and economy alike require the infliction of a longer reformatory discipline, protracted until criminal habits are effectually subdued.'

" 'An eminent authority has recently remarked that 'magistrates who repeatedly pass demoralizing short sentences are themselves promoters of crime.'

“ From the foregoing statements three conclusions are forced upon us:

“ First, that the penitentiary and the jail are not the proper places for the reformation of habitual drunkards.

“ Second, that it is impossible to make the drunkard contribute towards his own support under the system of repeated short sentences.

“ Third, that, to accomplish reformation effectually, long sentences must be inflicted after repeated convictions.

“ Surrounded by the demoralizing influences of a prison the work of reformation of the habitual drunkard becomes most difficult, be the superintendent of a purely penal institution ever so able or ever so well inclined.

“ A sentence for a long term, say two or three years, after repeated transgressions, to a proper institution, would, in all probability, not only accomplish the complete reformation of the inebriate, but would enable the officials to make him contribute to his own support by the establishment of workshops; while a law investing the directors of the institution with power to exercise their discretion in the granting of leave of absence in certain cases would undoubtedly have a salutary effect. We respectfully suggest to your honorable body the necessity for some revision of the criminal law in this regard.”

In further confirmation of these facts I desire to present portion of an article on the care and treatment of inebriates, by Rev. J. Willett, superintendent of the Inebriates' Home for Kings County, and published in 1881. He thus writes concerning the “vagrant drunkard” or “rounder,” or “prison class” of inebriates:

“ I only wish we had the means and the machinery at our disposal to take hold of the prison class. I refer more particularly here to those who have been committed and recommitted to prison from one to one hundred times, in order to save them from spending the balance of their lives in revolving from the bar-room to the bar of justice, and from thence to the prison cell. When discharged from jail, ragged and forlorn, they find themselves friendless wanderers in the streets, shunned by every passing stranger. I am aware that the popular cry is ‘Let them go to work!’ but who will employ them, when they are everywhere shunned as if stricken by



pestilence? Besides all this, they are physically broken down through the effects of bad liquor and starvation prison diet. The majority of their number are mere wrecks of humanity, and are regarded as fair game for the policeman to hunt up and chase down for the purpose of swelling the annual return of the arrests made by him, with a view to promotion to a higher grade. On each succeeding recommitment of the vagrant drunkard to the jail, the daily charge for his subsistence goes to swell up the sheriff's board bill, the profits on which in some counties may be safely estimated at more than one hundred per cent. Thus the vagrant drunkard is practically reduced to a mere chattel, the legally recognized stock in trade of the police force and his jailors.

"For these inebriate prison-birds I would purchase either a large farm or tract of waste land and erect inexpensive buildings thereon, and make the place a strictly remedial and reformatory institution. Let each commitment be for a term of not less than three years, modified by authorizing the managers to grant 'tickets of leave' for the purpose of practically testing the moral and physical condition of apparently hopeful patients, — always making subject to rearrest if they return to their former drinking habits. When committed to the reformatory, the first requirement is repose and hospital treatment, including an abundant supply of nourishing food, in each case to be regulated by the physician in charge. When built up, those who are physically competent should be trained to field labor, and the weak and debilitated should be taught to work at some light trade, with a view to preparing them to earn a living when their time expires.

"Practically, it is very difficult, indeed, almost impossible, for book-keepers, clerks, and others who have formerly held responsible situations, to regain the confidence of their late employers; on the other hand, when builders, cabinet makers, tailors, etc., require the help of additional mechanics, good workmen are asked few, if any, questions, as all that is required is the performance of a day's work for a day's wages. I would compel this class of men to learn a suitable trade, and then aid them to find employment, so as to have work to go to when leaving the reformatory.

"The annual arrests for drunkenness in the city of Brooklyn range from nine to ten thousand, but I dare venture to say that they never include one thousand distinct persons

arrested during any given year. With few exceptions, they are the same unfortunate victims of rum who have been arrested and rearrested every few weeks, many of whom could not begin to compute the number of times they have been committed to prison. I have met with some of this unfortunate class who have kept count in some cases up to fifty, sixty, seventy, eighty, ninety, and one hundred times, and then given up the record.

“Ten thousand annual arrests represent ten thousand instances (or more, for in many cases the work cannot be performed single-handed), where the arresting policemen are called off their beats most frequently during the night; ten thousand registrations of charges at the police stations; ten thousand attendances of arresting officers at the police courts on the following day to give evidence, and, in addition, the enormous cost to the county for maintenance in jail of those who are convicted.

“On the other hand, by reducing these ten thousand arrests to the number of individuals actually arrested, and disposing of the vagrant drunkards for three years, we would not only benefit and probably reform at least from thirty to forty per cent. of their number, — which should be the first great object, — but we would at the same time relieve the police force, police stations, and police courts of four-fifths of their onerous duties in this direction.

“More recently our aim has been to stop the inebriate while pursuing his downward course to the prison, and every one thus rescued prevents from five to twenty arrests in the ensuing year. For a long time we met with great opposition and sometimes with bitter persecution, and this has stood in the way of attempting to extend our work. If we could only establish a reformatory on the plan which I have suggested, the occupation of at least one-third of our stipendiary justices of the peace and the same proportion of our police force would be gone, and the liquor traffic be more than proportionately reduced. Beginning with the lowest consideration, our taxation would be greatly reduced; and, rising from thence to the grandest motives, we should restore numerous useful men and women to society, save precious souls from death, and greatly decrease crime.”

The whole tenor of these two articles, written nearly twenty years ago, is fully in accord with advanced scientific

thought on this subject, and the highest considerations from a humane standpoint. Legislation in harmony with the suggestions contained in these two reports would relieve the police force and the police justices of much extra duty, and prevent the overcrowded condition of the station-houses, jails, and penitentiaries, by largely doing away with the "vagrant drunkard," or, in police language, the so-called "rounder." Moreover, prompt and direct committal to remedial and reformatory institutions for inebriates would prevent a large proportion of the insanity of which repeated alcoholic excesses are the direct factors. I do not hesitate to assert, that well-established state institutions for the care of inebriates would greatly reduce the number of insane annually treated in the various insane asylums of the state.

As a matter of economy, and outside of any humanitarian view of the question, it will be found cheaper in the end to treat the pauper inebriate as a distinct class, and adopt special methods of treatment, restraint, and occupation for his relief, than to continue in the present methods, which are expensive and ineffectual, and, therefore, extremely unsatisfactory. To this end, the short-term imprisonment and fines in cases of habitual drunkards must be done away with, and he must be placed under restraint for a sufficiently lengthy period of time, and surrounded by proper influences and placed under proper treatment. At present about one-third of the inmates of the Kings County Penitentiary are under commitment for "habitual drunkenness," independent of any crime. The state insane asylums also contain always a certain class of inebriates or dipsomaniacs, those suffering from or convalescing from attacks of acute alcoholic delirium, or who are the subjects of alcoholic dementia; a certain proportion of these would be proper subjects for a "State Hospital for Dipsomaniacs and Inebriates."

In other words, the congested and overcrowded condition of our penal and charitable institutions would not only be greatly relieved, but the dipsomaniacs and inebriates would be

placed under a system that offers a reasonable chance at least of recovery from their lamentable condition, which is exceptional, if not impossible, under present conditions. In every instance where the inebriate has been treated as a special class, under special conditions adopted for his care and control, the result of such treatment has demonstrated that in every inebriate asylum, both in the United States and abroad, where such institutions have been founded and conducted on correct principles, that from thirty to forty per cent. of those whose history is carefully followed, are reported at sufficiently lengthy periods as "doing well and abstinent." Improved methods of dealing with the inebriate will give improved results, and a larger and more gratifying percentage of cures will be effected. But, looking at the pauper inebriate in the worst possible light, and even granting that he is incurable in a certain proportion of cases, nevertheless, he still comes under municipal, county, or state care, as much as the chronic or incurable insane, and when we come down to facts and figures, the economy of his care under proper conditions is no less apparent.

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The morphine taker becomes practically an incurable in five years. The alcoholic user of spirits may continue eight or ten years, before he reaches incurable stages. This will depend on the free intervals between the time of using spirits. When he becomes incurable he may abstain, but the injured brain and nervous system never recover.

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We believe the *Worcester Fire Pail Co.*, have the most practical appliance for extinguishing fires on the market. It consists of pails of chemicals which can be used at any moment, and are always available and never out of order. Every hospital and home should be equipped with these pails.

ANNUAL REPORT OF WALNUT LODGE HOSPITAL,  
Hartford, Conn.

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Seventy-two cases have been under treatment during the year. Sixty-one were discharged and left, and one died. The following is a general clinical grouping of these cases, and describes the most prominent symptoms:

Periodical inebriates, 26; continuous inebriates, 19; dipsomaniacs, 5; opium inebriety, 13; cocaine inebriety, 2; complex cases using chloral and other narcotics, 4; cases associated with exhaustion, 2; alcoholic hysteria, 1.

Most of the alcoholic cases had an early period of continuous drinking, or used opium and chloral, then became periodical drinkers with distinct free intervals of sobriety. Some of these strange periodical drink paroxysms resemble epilepsy in their onset, duration, and ending. Treatment directed to anticipate the paroxysm and prevent its occurrence is often very effectual. The tendency in all these periodical cases is to epilepsy and dementia. All disturbances of the nervous system which explode in intense depressions and morbid impulses for relief, as in a craving for spirits or any narcotic drugs, are to be regarded as evidence of very profound disturbance of the brain centers. The complex cases which have used spirits and various drugs, and are continually changing from one to the other, are often made to appear as examples of cure by certain remedies used by credulous advertising physicians. In reality, they have simply turned to some other drug which is being used in secret. Two cases appeared in which physical and psychological exhaustion were the real causes. The removal of these were followed by rapid recovery. One case of alcoholic hysteria, which seemed to be uncomplicated, never used spirits until the hysteric attack reached its crisis, then a small quan-

tity of spirits brought on stupor and recovery. Spirits was taken to prevent the hysteria until finally it was used steadily. Several cases had taken to excess patent drugs, then turned to alcohol and opium.

In a study of these cases, the early causes and predisposing conditions bring out the following table:

Heredity direct, 26; heredity indirect, 18; hereditary collateral, 10; traumatism, 8; exhaustion, 2; environment and contagion, 8.

The fact that fifty-four of these cases were traceable to defects of the ancestors is additional evidence of the power of heredity, and the certainty of the transmission of special and general nerve degenerations to the next generation. Another very prominent fact is that many of these persons received from their parents a special predisposition to use spirits, with a marked physiological pleasure from the effects. In some of these persons this heredity might have been undeveloped, and they would have been abstainers all their lives by intelligent care and training. Others, after the development of the heredity, may by physical culture, medical help, and surroundings restrain this tendency and live temperately.

The mental contagion of surroundings, with strain and exhaustion, and states of general debility are common exciting causes of inebriety. Spirits in these cases are always most grateful narcotics by the relief and change they bring.

Another cause not mentioned in these tables may be turned racial. Thus some families are obviously dying out, and inebriety is only a form of degeneration. Others are evolving and growing stronger, and inebriety is only an accidental infection, in which there is a strong tendency to overcome. Such cases recover quickly, while others continually relapse, despite all treatment.

The following are some of the general statistical facts of these cases for the year:

Occupations.— Physicians, 8; manufacturers, 8; farmers, 2; merchants, 5; builder, 1; clerks, 10; engineers, 2; bankers,

3; leather dealer, 1; spirit dealers, 2; editors, 3; mechanics, 5; gardeners, 2; inventors, 2; professor, 1; drummers, 2; florists, 2; miners, 2; dyer, 1; architect, 1; miller, 1; speculators, 2; no occupation, 3.

Women.— Housewives, 2; teachers, 1; no occupation, 1.

Age of Persons under Treatment.— From 20 to 30 years of age, 3; from 30 to 40 years of age, 17; from 40 to 50 years of age, 42; from 50 to 60 years of age, 8; from 60 to 65 years of age, 2.

Social Condition.— Married and living with wife, 21; married and separated from wife, 3; widowers, 4; single, 44.

Duration of the Inebriety.— From 5 to 10 years, 15; from 10 to 15 years, 34; from 15 to 20 years, 14; over 20 years, 9;

Education.— Collegiate, 13; university, 14; academic, 26; common school, 19.

Former Treatment in Other Hospitals.— Been treated at Keeley Gold Cures, 37; treated at other gold cure places, 19; treated at other hospitals, 6; never treated before, 10.

It is unfortunate that so many persons neglect all treatment until their disorder has become chronic and practically incurable. Then, still more unfortunately, they seek relief from charlatans, who promise cures in brief periods of time.

Failing in this, they come to asylums where rational scientific treatment is used, and realize in some measure their real condition.

All such cases are more prostrated, and suffer from greater mental instability. That is to say, are more irritable, notional, egotistical, and delusional. The mental impression of having lost all desire for spirits, and the confident expectation of being unable to use alcohol again, contradicted by bitter experience, is a shock to the brain, which is hard to overcome. Such cases need long periods of treatment in the best possible surroundings and conditions of living.

The use of unknown drugs for unknown conditions, of which the desire for drink is only a symptom, is a fatal mistake, to which the exceptions only prove the rule.

The Results of Treatment.—Recovered, 27; improved, 38; unimproved, 7.

This table expresses only in a general way the condition of persons who have been under treatment, and the strong probabilities of the results of such treatment.

The present condition of one hundred and sixty-two cases who were under treatment from two to six years ago, brings out the very gratifying fact that fifty-six persons are temperate and well up to this time. Many instances of cure in persons thought to be beyond all hope of recovery are constantly noted. The quiet and comfort with exact conditions and surroundings of the hospital, and the medical and hygienic care, often are followed by the most unexpected and gratifying restorations. The unimproved are persons, who, while abstaining from spirits during the treatment, are always dominated by the craze for drink, either concealed or openly expressed. Every disordered condition of the system, every adverse surroundings and change of circumstances provokes a desire for spirits. These cases always rebel against rules and regulations, and claim to suffer from restraint, demanding confidence and trust, and always abuse it. They relapse with every opportunity, and become bitter detractors and dangerous critics of asylums and methods of treatment. The use of narcotics in these cases is always dangerous, because of the predisposition to substitute other drugs for the alcohol, and become drug takers. Many of the very intractable opium, cocaine, and chloral inebriates begin in this way.

The restoration and curability of the inebriate depends entirely on the conditions and causes of his peculiar addiction. A knowledge of these facts suggest the remedies and means essential to break up and restore the mind and body to its former health. In many cases it requires long periods of observation to fully understand the conditions and needs of the case. The first essential the removal of spirits or drugs, and placing the patient in exact hygienic surroundings for healthy normal living, gives an opportunity to study the case, and to



know what measures are essential for cure. The persistent use of spirits or drugs is not the disease, but only a symptom and sign of some condition of the brain and body which calls for these drugs.

The scientific treatment consists in finding out what this source of irritation is, and not alone in breaking up the craze for drugs or spirits. To check this craze by drugs is like giving opium to stop pain, when the cause of the pain is not removed. The causes must be found and the treatment directed to their removal before any curative results can be expected. The absence of all desire for spirits or drugs after a brief treatment is no evidence of cure. The use of spirits and drugs always produces changes of the brain and nervous system, which are not healed by will power or drugs, in a short time. It may be said that all inebriates suffer from profound degenerations of the brain and nervous system, which require a great variety of means and remedies, applied along lines of exact rational treatment, extending over long periods of time. The work in this hospital, as in other institutions, is crippled and made less efficient by the failure to keep patients long enough to bring about permanent restoration. The "gold cure delusion" of rapid cure by drugs is a serious error, followed by an ever increasing army of incurables, more and more difficult to treat.

The work of this hospital in combining special personal study and treatment suitable to the needs of each case, proves to be more practical, with better results every year. The same progressive studies have been pursued, and the accumulation of facts have been equally marked and suggestive.

Like picket guards far in advance of the main army of progress, we can only point out some of the roads and frontier lines along which this subject must be studied. Walnut Lodge may be called an outlying station, not only for the restoration and cure of the inebriate, but to indicate the direction of the efforts of scientific progress, to understand the inebriate neurotics, and the means of prevention and cure.

## Abstracts and Reviews.

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### FOXBORO, MASS., INEBRIATE ASYLUM.

By M. HUTCHINSON, M.D., Superintendent.

The establishment of the hospital was authorized by a law enacted in the year 1889. It is located in the town of Foxboro, which is on the same range of hills with and adjoining the town of Sharon, and was declared open for the reception of patients early in February, 1893, since when more than seven hundred have been received.

In securing a commitment the whole course of proceedings is identical with that followed in securing the commitment of an insane person to a hospital for the insane. The only variance is that the certificate given by the examining physicians alleges that the person to be committed is an inebriate and not that he is insane. Under the law men alone can be committed to the hospital, and of them it intends that only those who still preserve the general good-will and respect of their acquaintances and friends shall be eligible, not those of well-known bad character and reputation.

When issued the order of commitment is valid for two years from the date of the admission of the patient to the hospital, but provision is made that the trustees at their discretion may conditionally release him at any time before the expiration of that time and under such conditions as they may deem best. It is also provided that when the patient violates the conditions of his permit to be at liberty, the permit becomes void and the trustees may issue an order for his arrest and return to the hospital. When so returned he becomes subject to all the conditions of his original commitment. Further provision is made

that an individual, if he relapses, may return to the hospital at any time before the expiration of the two-year limit and surrender himself, thus becoming again subject to all the conditions of his original commitment. It has been found that this power of recall, as exercised by the trustees, has been beneficial in its effects and is so felt to be by the patients themselves as well as by the relatives and friends. It acts as a restraint over the patients, helping them to resist the temptation to drink, and, what is not less important, allows them to be conditionally discharged, or placed on trial, earlier than would otherwise be thought advisable. Believing that we are dealing with a disease closely related to insanity, in which nearly every tissue of the body is affected, that the chief and most disastrous changes are seated in the tissues of the nervous system, manifesting themselves by obvious changes in the habit, thought, and action of the individual, our aim is to upbuild our patients morally and physically, knowing that only when a normal or approximately normal physical condition is arrived at can we expect the nerves to be at rest, and their craving for the narcotic action of alcohol to cease, and the power of resistance, the ability to withstand temptation be restored. We believe that the treatment of the disease requires time, and it is our custom to require each patient to remain under treatment for six consecutive months, the shortest time that in our experience and that of others who have carefully studied the subject seems likely to be of lasting benefit.

Our first aim is to protect the patient against himself in his state of weakened and diminished will-power, to prevent a further aggravation of his condition by the continued use of the narcotic poison alcohol in any form. We then seek to restore him to an approximately normal physical condition by the use of appropriate medicines, healthful surroundings, sunny and well-ventilated rooms, abundant, simple, and nourishing food, regularity in habits of sleep, rest, and exercise, as well as occupation and recreation. As soon as seems expedient each patient is put on parole within the limits of the hospital grounds

in the hope of improving his general health through the influence of pure air and sunshine, and, what is not less important, of reviving and strengthening his probity, self-respect, and tenacity of purpose by inducing him to live up to the conditions of his parole.

Definite exercise adapted to the peculiar needs of the individual is given under the direction of a competent teacher of physical training, and these exercises are followed by the use of a tempered spray-bath. The mental and physical improvement following the continued use of the baths and exercises is apparent to the patients as well as to the physicians. Occupation is found in the care of the stock, in the cultivation of vegetables and other farmwork, in the care of the dining-rooms, in the kitchen and laundry work, in the making of general repairs, and in the manufacture of brooms, which in its different steps affords light, clean work adapted to the varying ability of the men.

Recreation is found in the bowling-alley, baseball, library-books, magazines, and games. From time to time the patients have arranged and conducted entertainments, employing such talent as was to be found among themselves, while the hospital authorities have provided a series of talks upon the ethics of daily life and also various lectures upon travel and science, some of which have been illustrated by the stereopticon.

Each year an inquiry is made as to the result of treatment in the cases of those who have been discharged. This inquiry is made by an officer of the hospital, who personally interviews probation officers, police and town officials, friends and relatives, as well as the patient himself. We believe that favorable results have been obtained thus far, and that they will be still better in the future.

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In 1895 something like seventy million fewer cigars were made than the previous year. It is said that the wheel has done much to diminish the demand for cigars.

## INEBRIETY CURED BY HYPNOTIC SUGGESTION.

Dr. Osgood Mason, in his excellent work on telepathy and the subliminal self, noticed elsewhere, gives the following case:

"B. X., twenty-four years of age, a sporting man; obstinate, independent, self-willed, a leader in his circle. He had been a hard drinker from boyhood. He had been injured by a fall three years before, and had been subject to severe attacks of haematemesis. I had known him previous to June, 1891. At that time he came into my office one evening somewhat under the influence of alcoholic stimulants. After talking a few moments, I advised him to lie down on the lounge. I made no remarks about his drinking, nor about sleep. I simply took his two thumbs in my hands, and sat quietly beside him. Presently I made long passes from head to feet, and in five minutes he was asleep.

His hands and arms outstretched and raised high up, remained exactly as they were placed. Severe pinching elicited no sign of sensation. He was in a deep hypnotic sleep. I then spoke to him in a distinct and decided manner. I told him he was ruining his life, and making his family very unhappy by his habit of intemperance. I then told him very decidedly, that when he awoke he would have no more desire for alcoholic stimulants of any kind; that he would look upon them all as his enemies, and he would refuse them under all circumstances; that even the smell of them would be disagreeable to him. I repeated the suggestions, and then awoke him by making a few passes over his face. I did not inform him that I had hypnotized him, nor speak to him at all about his habit of drinking. I prescribed for some ailment for which he had visited me, and he went away.

I neither saw nor heard from him again for three months, when I received a letter from him from a distant city, informing me that he had not drunk a drop of spirituous liquor since he was in my office that night. His health was perfect and he had no more vomiting of blood. June, 1892, one year from

the time I had hypnotized him, he came into my office in splendid condition. He had drunk nothing during the year, and I have not heard from him since.

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TELEPATHY AND THE SUBLIMINAL SELF.— An account of recent investigations regarding Hypnotism, Automatism, Dreams, Fanaticisms, and related Phenomena. By R. Osgood Mason, A.M., M.D., pages 343, New York, Henry Holt & Co., Publisher, 1897.

Dr. Mason gives in the first chapter a clear idea of this book in the following:

“The object of these papers will be briefly to tell, in connection with my own observations, what is known and what is thought by others who have studied the subject carefully, and especially what has been done by the English Society for Psychical Research and kindred societies.” Whatever opinion the reader may form of the subjects presented, he will be forced to conclude that the author has given a clear, candid review of one of the most difficult topics in modern psychology. This is so broad and rational that it lifts the entire subject to a level where the reader may judge of the facts and their meaning, and follow the author with increasing pleasure and confidence. The explanation of much of this obscure phenomena (now almost altogether confined to the realm of quackery), by the subliminal sense and new psychical forces is thoroughly scientific and rational. There can be no doubt that the same laws and the uniform movement of forces will be found present in these obscure unexplainable phenomena as those seen everywhere in the physical world.

Dr. Mason is the first one who has gathered in a popular scientific work the leading facts in this occult sphere, and suggested some theories which are supported by a great variety of evidence.

These theories are in harmony with other facts of psychology, and are so reasonable and clear that we seem to have a

new field opened, with the possibility of each reader being an explorer for himself. The tone, style, candor, and fairness of the facts discussed disarms all criticism, and the reader puts down the book with profound awe and astonishment. The great world of the supernatural is giving up her secrets, and the mysterious and occult disappears in the light from a higher point of view.

This work takes the reader out into this new field, and tells him what has been done, and points out the possibilities of new facts from further research. Hence there can be nothing but praise for a book of this kind. No one can justly say the writer has gone too far, or not far enough. No one can question the facts or the conclusions, unless he has made a special study of the same or similar facts, and can point out clearer explanations.

Such works live as landmarks and starting points for new and wider studies, and we hope all our readers will procure a copy of this book, and become students of much of this wonderful phenomena that occurs in all our lives.

We shall give some extracts from this work in our future issues.

NATIONAL TEMPERANCE LEAGUE'S ANNUAL,  
for 1897. Edited by Robert Rae, Secretary, London,  
33 Paternoster Row, E. C.

This volume of over two hundred pages groups in a convenient form a great variety of facts and statistics of unusual interest. The first part of the book gives a very carefully edited review of temperance work in England and on the continent; with an excellent address by Archbishop Timple, a sketch of the late Dr. Richardson, and a retrospect of forty years' work.

The medical side of the temperance work, including the questions of heredity, and inebriate retreats, laws of control, and statistics, insurance of inebriates, and other allied topics are treated at some length. The last half of the work is de-

voted to statistics of all phases of the drink problem, together with a directory of the various temperance organizations, and their work during the year. Such a work is of inestimable value to all who are interested in reform movements along this line. The facts and statistics are put in an available form so they can be studied, and are carefully grouped and edited, by one who has been for years an authority, and who probably is more familiar with the temperance movement than any other person living.

**INEBRIETY, ITS SOURCE, PREVENTION, AND CURE.** By Charles F. Palmer, M.D. Fleming H. Revell Company, New York, 1896.

This little work of one hundred and ten pages is posthumous and issued as a monument to the author's memory.

It consists of five chapters, the first, on the nervous mental organization, treats of morbid conditions and perverted sensations; neuro-psychopathic constitution; inebriate diathesis, etc.

The second chapter treats of cure, the moral aspect, the will power, selfishness.

The third chapter discusses the preinebriate morbid conditions, and the strengthening of the bases of self-control.

The fourth chapter takes up the progress of building up moral manhood, and the last chapter we have presented entire in this issue. While the style is labored and obscure in some parts, the general analysis is good and suggestive. The philosophy of treatment is sound and worthy of a careful consideration. Altogether, this work is an important contribution to the subject, and is very helpful to both professional and lay readers. As a semi-popular discussion of the causes and treatment of inebriety it is to be highly commended, and will serve a very useful purpose of clearing away many of the mistaken notions of the day. A popular work along this line written in an attractive style will be in great demand. This work approaches this ideal, and had the author lived he would, no



doubt, have presented such a work in future editions of this work.

**SECRET NOSTRUMS AND SYSTEMS.**— A Book of Formulas, Compiled by C. W. Oleson, M.D. Sixth Edition. Oleson & Co., Publishers, Chicago, Ill., 1896.

The popularity of this volume gives a good idea of the value of its contents. Literally, it describes the formula of every popular patent nostrum, and gives the physicians some idea of the deleterious effects of many highly-vaunted drugs. In many cases where these quack remedies are used, it is important to know their nature so as to estimate their action in any case. Many of the so-called "gold cures" are given in full. We commend the book as of unusual value and interest to every physician. Dr. Bradner's paper in the next issue contains a list of some of these drugs.

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## THE DUXHURST INEBRIATE HOMES.

### AN INTERVIEW WITH LADY HENRY SOMERSET, THE FOUNDER.

I called on Lady Henry Somerset at the Reigate Priory to ask her about her Industrial Colony at Duxhurst. I had seen the first report that has just been issued on the working of the adventure, and was anxious to hear what in addition Lady Henry would have to say about them. First I asked what led her to embark on so very onerous an undertaking.

"Well," said Lady Henry, with a half smile, "we teetotalers had done so much talking that there seemed to be a danger we should be thought incapable of doing anything else. Women are essentially practical, and our women jumped at the idea of trying to do something to undo the work liquor had wrought on some of our sisters."

"So you determined to found an institution for reclaiming them?"

"Oh, please don't say 'institution' or 'reclaim,'" pro-

tested my hostess; "the word institution suggests rules and constraint. We have practically no rules, beyond the provision that for the first three months no visitor shall leave the village alone; and further, we don't 'reclaim,' but give our patients the opportunity and the means of recovering from what is nothing less than a disease."

"A disease and not a crime?"

"Exactly. It is a sort of paralysis of the will, partly mental, partly physical. Our experience leads us to the conclusion that not only is it a disease, but a perfectly curable one. It has been said again and again that a woman drunkard is incurable. I think it quite possible she is, if subjected to the purgatorial processes that are usually employed."

"What are they?" I asked in all ignorance.

"Confinement with hard labor for the most part. The laundry and the sewing-machine are the accepted panaceas. There seems to be a general idea abroad that, as far as women are concerned, all the ills that flesh is heir to can be expiated at the wash-tub and the sewing-machine. Of course, we believe in work, and in hard work, too. But the work should be varied; open air, if possible, and of a nature to amuse and interest the worker. At Duxhurst there is, of course, the laundry work of the village to be done, and some necessary sewing, but no other. We do not trust to these as specifically helping in the cure. What we have aimed at is to find work that will inspire hope and encouragement as it goes along."

"But what is the work that is so encouraging?"

"I said just now confirmed drunkenness is a disease; it is a disease of the mind and of the soul, and it afflicts the body cruelly, bringing it into that painful state in which a perpetual craving for further poison is the most marked and fatal symptom. Obviously, to effect a cure you must persuade the patient first to forego drink, and next eradicate the desire for it. The first can be mechanically secured by confinement, but it is useless as a remedy; on the contrary, from the cases I have observed, I should say that enforced abstinence by itself only

makes the mental desire stronger and less controllable. This is what makes terms of imprisonment so futile a device; and recognizing this we set ourselves to work on a different plan. First, not in order of time, but in order of importance, there is the moral side of the question; and by means of our bright and cheerful services twice a week in our village chapel, daily prayers, and occasional short and interesting Gospel and other lectures and discussions, we give the spiritual character opportunities of growth. But we also recognize that physical health and mental sanity are necessary antecedent conditions of making this moral upbuilding a success. And this is why we have tried to find work and occupation for our patients that is not only healthy and strengthening physically, but affords food for reflection and thought, and in its processes is at once encouraging and amusing. Nobody who has ever tried gardening can have failed in acknowledging its fascinations. Well, we have made a great point of this. We got a highly-qualified lady gardener from Swanley, the market garden of London, built glass-houses, and set her to work with the patients. The thing has worked like a charm. Most of our women are town bred — to them the growth of a green thing is an ever fresh mystery and wonder. Gardening is more like a perpetual game to them than the hard physical work it really is. Their pride in the results of their skillfully-directed labor is only equalled by its commercial success. It was hardly to be expected that we should make the place pay; but this gardening earns a good share of its expenses already. Then there is the farm. Already our women are doing a good deal there — and they will do more. Then beside the daily work and directly religious and intellectual training we have a little home for poor children — ‘The Nest.’ Here we entertain batches of the poorest slum children in summer and autumn, and the needs of these little ones afford a splendid opportunity for development of that motherly affection that is ingrained in every woman’s nature. The sight of these poor things revives feelings of sympathy and love in many a heart that has long been

too drink-sodden for any human passion, and in their awakened love for others their own self-respect finds a new life."

"In short, Lady Henry, instead of locking these poor creatures up in the sort of institution that most of us associate with the name of 'charity,' you really have organized a kind of 'model village,' where, amid plain living, high thinking, and pleasant and constant occupation, your guests may recover their proper and normal rectitude of mind and body."

"Yes, that is our aim; but I should add that although we aim at high ideals, and are guided first and last by a determination to make our cures genuine at all costs, we have also set ourselves to make the village as self-supporting as possible. Accurate labor books are kept, and each patient who earns more than the nominal cost of her maintenance has the surplus credited to her account. One patient had over £8 at her banker's at the end of her first year."

"And your cures?" I asked. "Are they lasting?"

"Absolutely so, so far as we can judge. So far we have in our work met with every encouragement from our doctors, patients, and all those who have visited the village. I only wish the public would encourage us a little more with subscriptions. Unfortunately, we have only accommodation for forty-three in the village, and we have had to refuse over 3,000 applications. It is almost incredible what a universal want has been shown by the establishment of our colony. Imagine our receiving ten applications a day during only the first year of our existence! Who is it that sends us patients? Why, mostly, of course, their relatives; but the most encouraging outside feature has been the extraordinary support we have met with from the magistrates, and it is they who are the real experts in this business."

"So, as a final question, Lady Henry, you are satisfied the colony is on right lines and is succeeding?" I put in, rising to go.

"Yes, if it does not sound conceited, we are," she replied; "so confident, indeed, that if we had £100,000 we know that

we could fill up the village faster than we could build it. Look here," Lady Henry added, thrusting a set of very pretty pictures into my hands, "these cottages can be built for £250 apiece, and each holds seven patients.—*Temperance Record.*

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### INCREASED EXPENDITURE ON ALCOHOL.

There has been a large and striking increase in the amount spent on alcoholic intoxicants during the year 1896. The increase in British spirits was £1,069,720; on beer, £4,425,724; and on wine, £1,103,114, amounting in all to £6,598,558; but a decrease on foreign spirits of £41,140 has to be deducted, leaving an actual increase in the cost of intoxicating liquors of £6,557,418. We are here presented with a year's alcoholic expenditure not only six millions and a half greater than in 1895, the preceding year, but larger by £1,683,471 than the amount similarly expended in the previously highest year, 1876. It ought, however, to be borne in mind that, as the population has varied the average amount consumed per head in 1896, namely, £3 15s. 6d., is not so high as it had been in some of the preceding years, having gone up in one year to £4 9s. With all allowances of this kind, it still remains a serious and alarming fact that the annual alcoholic expenditure was over a million more than it had ever been before. Whatever the cause or causes of this startling increase, it behoves the medical profession to exert the weight of its influence on the educational powers that be to follow the laudable example of the French Minister of Education, and order instruction on the composition and effects of alcohol to be given in every school.—From the *British Medical Journal.*

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*Atropine not a Respiratory Stimulant.*—Unverricht denies the generally-accepted doctrine that atropine stimulates the respiratory function, and asserts that his investigations

prove that morphine and atropine do not antagonize one another in their action upon respiration. Atropine can induce Cheyne-Stokes breathing, which is not regarded as an evidence of respiratory stimulation. His experiments show that the action of the drug on respiration is essentially depressing, and that in three cases of poisoning the only symptom which caused any anxiety was the profound disturbance of the mechanism of respiration.— *British Medical Journal*.

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*Epilepsy from Tobacco.*— A patient had convulsions, epileptiform in character, due to use of tobacco. For two months he had had one or two a week, and they were growing progressively worse in spite of treatment. With the discontinuance of tobacco the convulsions ceased.— SCOTT, in *Southwestern Medical Record*.

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The moderate use of alcohol is a delusion. The belief that, because no poisonous effects are apparent, its use is harmless, is a fatal error. Many moderate users of spirits are physiologically inebriated, and suffer from defects and degenerations of the brain and nervous system that are referred to other causes. They are more prominently diseased than others who become intoxicated often from excess of spirits. There is absolutely no moderate use of spirits that is not injurious, and no means of testing the degree and extent of the damage which follows from spirits in any given quantity.

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The phenomena of the first intoxication from alcohol is always significant of the direction of the degeneration in future excess. If this event were prominent in symptoms of dementia the continued use of spirits will terminate in this way. If delirium were prominent, the breaking down process will be along this line. If delusions and manias appear, they will follow in the future from each subsequent attack.

## BEWARE OF CHLORODYNE.

Dr. Coley, in the *Temperance Record*, writes as follows:

“Chlorodyne is a compound containing several sedatives, the most important of which is morphia, the chief active principle of opium. It is notorious that the morphia habit (like opium-eating and laudanum-drinking) is a slavery which is often even harder to break than the slavery of alcohol. It certainly does not produce crimes of violence; but in every other way the victims of morphia are as thoroughly demoralized as the victims of ‘drink.’ It should, therefore, be no matter of surprise that chlorodyne, which is shamelessly advertised, like other quack remedies, in religious periodicals, has been the ruin of many promising lives. Ladies especially are prone to become the victims of chlorodyne. I have heard from chemists of huge sums being spent in chlorodyne by ladies who have become addicted to the habit of taking it.

“On the whole, it may be open to some question whether the moral danger implied in the promiscuous recommendation of chlorodyne is not quite as great as that which is involved in similar recommendations of brandy.

“The physical dangers of the use of chlorodyne in unskilled hands are by no means small. Leaving out of account the possibility of an overdose, an ordinary dose might easily be dangerous under special circumstances. It is curious that chlorodyne is recommended in the advertisements for just those diseases where it might be particularly risky to administer any preparation of morphia. I have before me, for instance, an advertisement in a religious periodical (the managers of which ought to have too much high principle to admit any such advertisements), in which it is declared that chlorodyne is the best known remedy for bronchitis. Now the merest tyro in medicine knows that the danger of a really severe case of bronchitis would be greatly aggravated by the use of opium or morphia in any form.”

## THE NEW LAW RELATING TO INEBRIATES.

BY GEORGE L. SHATTUCK, M.D., Butler Hospital, Providence,  
R. I.

The enactment of a law by the Rhode Island legislature, at its last session, pertaining to the care and treatment of inebriates, has occasioned considerable comment and discussion by members of the medical profession.

The question of the drug-habit and its treatment is, all physicians well know, a vexed one. Whether regarded as a vice or a disease, or, as is more rational, a condition midway between these extremes, the physician is always the one appealed to when relief is sought, and he must treat its victims, like other medical cases, with the best therapeutic measures at hand.

In recent years so many alleged cures for inebriety have sprung up and been urged upon the public, that an unusually large number of cases have fallen into the hands of quacks to be treated by secret and mysterious methods. Sooner or later, however, the great majority of these patients apply for treatment by more honest, rational, and scientific measures. While it is, unfortunately, a fact that treatment by these means has heretofore resulted almost as unsatisfactorily as by the methods of quackery itself, it should be said in explanation of this fact, and in justice to the medical profession, that these discouraging results have been due, in a large measure, to the complete lack of control of the physician over his patient, and his consequent inability to properly carry out those measures which are absolutely essential for his relief. All authorities agree that foremost among these measures is seclusion — partial or complete — according to the necessities of the case. It offers to very many confirmed inebriates the only hope of cure of their baneful habits, and without it all treatment were as well abandoned. Secluded, the auxiliary means of treatment can be carried out with some degree of success. Elimination of



the drug from the system and restoration of the functions of the nervous system and other bodily organs from the exhausting effects of over stimulation to normal and healthy action, may, to quite an extent, be brought about; while the improved physical condition, prolonged rest, change of surroundings and associates, and absence of temptation will afford opportunity for the mind to recover its equilibrium and to again exert, by the proper exercise of will and judgment, its normal inhibitory influence.

Under the old regime these measures of relief could not even be approximated. Successful home-treatment was not to be thought of, and hospital treatment availed but little. The legalized means of commitment to hospitals was valueless, since, by the voluntary application of the patient, or his commitment by court, when in the delirium of drug-intoxication, he could not be restrained if he demanded his release, which he usually did before any benefit from treatment had been received. A few patients, only, had the requisite force of will and character to yield themselves voluntarily to treatment, — the great majority using the hospital simply as a sobering-off place, from which they soon took their departure, regardless of the advice of physicians or friends.

The new law is based upon the assumption, which we all recognize, that these patients are both unappreciative and careless of their own needs, and it provides, with proper limitations, for the restraint and treatment, regardless of their own wishes, of those persons so excessively or dangerously addicted to the use of alcohol or other poisonous drugs as to render it necessary for their own good or for the safety of the public that they be so restrained. The law is similar in many respects to the one which, during the last fifteen years, has been in operation in Massachusetts, but, including as it does, not only cases of alcoholism, but all forms of inebriety, the Rhode Island law is a much broader, and therefore more useful measure. Commitment by the certificates of two physicians has

been substituted here for the judicial method used in Massachusetts; and, in the absence of a hospital for inebriates in this state, the Butler Hospital has been selected as the most suitable one in which to carry out hospital treatment.

The law in Massachusetts was met, at the start, by much opposition on the part of hospital physicians, chiefly upon the ground of lack of proper facilities for the treatment of these cases in the state hospitals for the insane. They held that, in the large and over-crowded state institutions where insane patients of all classes and conditions were placed, the treatment of inebriates could not be advantageously carried out on account of the deleterious effect upon the latter of the surroundings and associations. This opposition culminated in the erection of a hospital especially for inebriates and dipsomaniacs, which began operation about three years ago.

The constitutionality of the law was also questioned by some upon the ground of improper infringement upon the liberty of the individual. This question was settled by a test case before the supreme court, the decision sustaining the law.

We have laws restraining patients with contagious disease, insane patients, and even inebriates, when they have, by reason of their habits, encroached upon the criminal law. When we consider how widespread and disastrous are the evil effects, physical and moral, arising from the habits of this last class of cases, is it reasonable or proper, especially for physicians, to oppose any just measure looking to their treatment before they have so far degenerated as to be beyond hope of cure, or have unfortunately committed some crime as the direct result of their intemperate habits?

Although seriously handicapped at first, partly by the opposition already noted, and partly by a misinterpretation of its object which resulted in the commitment of drunkards of all grades and conditions rather than those cases, only, for whom the law was designed, viz.:— those whose condition was amenable to treatment and offered some hope of cure,— the law in Massachusetts has produced encouraging results, as is shown

by the statistics published in the last annual report of the Foxboro Hospital.

The law in this State provides that the necessities of every case be submitted for judgment to the family or friends of the patient, two reputable physicians, and the trustees and superintendent of the Butler Hospital. Allowing, as it does, the additional privilege of a hearing before a justice, jury, or commission, the question of unjust detention is eliminated.

In selecting the Butler hospital as the one in which to carry out institution treatment, a demand has been made upon it which is not light. The peculiar characteristics of these patients, and the conditions attending their treatment, necessitate, as everyone familiar with them fully appreciates, a demand for much sacrifice on the part of a hospital and its officers in the interest of humanity.

The newly-enacted law is doubtless imperfect in some respects and might, perhaps, be amended so as to meet better the exigencies of cases. The spirit of it is, however, correct, and it is surely a step in the right direction. If it finds the support that it deserves among members of the profession, its defects will soon be made apparent, and can doubtless be easily remedied.

Although physicians may possibly differ as to the details of the present law, as they differ in regard to the details of management of other disorders, they at least should not forget that this question is a medical one, and should insist that, in its solution, medical ideas shall largely prevail. The doubtful prognosis and the extremely difficult and unsatisfactory means of treatment of inebriety hitherto available should lead them to welcome any legitimate measures offered, and should cause them to be slow to criticise, at least without trial, any measure which may be utilized by them in the interest of their patients, of the families of these patients, and of society at large.—  
*Atlantic Medical Weekly.*

The *Hypnotic Magazine*, edited by Sydney Flower, and published at Chicago, Ill., is a most excellent practical journal, treating the subject in a broad, scientific way.

It is very helpful and useful to all medical men, and should have a wide patronage. Send for a copy.

*Funk and Wagnalls* publish the leading religious review of the day called the *Homiletic Review*. It is an excellent instructive journal, and well worth a careful reading.

*Appleton's Popular Science Monthly* is now giving a series of valuable papers on racial geography, which are intensely interesting. Every number contains many papers of great medical interest, which are not found in the ordinary professional journals of the day.

The *Monist* is always a welcome guest to the library of every scholar. Its teachings are very suggestive and scholarly, and are studies of the higher psychology of especial value to every physician. It is published by the Open Court Publishing Company, Chicago, Ill.

The *International Journal of Ethics*, published in Philadelphia, Pa., is a magazine of rare and increasing interest to all scholars. Especially medical men should be students in this field. They have a more intimate knowledge of the relations of life, and its bearings than others. This journal should be among the essential periodicals of physicians who would keep abreast of the times. Send for a copy for examination.

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In the *Journal of Botany* there is a note by an observer on the drunken habits of certain humble-bees. The intoxicant is the honey produced by the crowded flowers of the capitulate heads of certain compositae. The bees, after sipping the honey, roll on their backs, striking their legs wildly in the air, and appear to be in a helpless condition. When the bees recovered from the effects they seemed in most cases eager to repeat the debauch, but some show signs of "remorse and disgust."

## Editorial.

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### SOME UNKNOWN PHENOMENA IN INTOXICATION.

Acute alcoholic intoxication is always marked by a general palsy of the senses and reasoning. At the first, delusional egotism, with deliriums of suspicion and credulity, and general confusion of thought are present. Then an increasing confusion and mental enfeeblement, also a general lowering of all emotional and functional activities. The reasoning is obscured and deranged, certain ideas may fill the mind to the exclusion of all others, together with mental instability of thought, such as changing suddenly from one topic to another, are present. In all cases degrees of dementia, with profound and progressive palsy, are the marked symptoms. These are so prominent and common to all cases that no one doubts the insanity and imbecility of an intoxicated person.

In a certain number of cases in this condition, there has been noticed sane moments and intelligent reasonings, with clearness of judgment and perception, equal, if not superior, to the highest brain activity in its normal state.

In a semi-comatose state, the mind will suddenly display a degree of wisdom and sanity in some opinion or advice, then sink back into its demented condition. Usually these sane thoughts refer to his present condition, as in the following:

In one case a man profoundly intoxicated, while being taken to the station-house, said to the officer: "I was overcome with the heat and drank some whisky; my brain has given way. Take me to the hospital." He was found dead in the station-cell next morning. His statement was true."

In a second case, a physician notoriously stupid from spirits said: "I am poisoned from kidney disease. Put me in a hot

bath, and purge me," then relapsed into a delirious state. The next day he died, and his advice was found to have been true.

A man arrested for assault, in a delirious state, said: "I hit the man because he was kicking his wife; it made me mad to see him do this." He then relapsed into delirium, and, although sentenced to jail, never repeated this statement. It was afterward found to be true.

These are prominent examples of sane statements and reasoning for a brief moment. Other cases less prominent, referring to more trivial things, are also common.

These sane moments concern the acts and motives of others, as in the following:

A man in a pronounced alcoholic delirium, said: "I have willed my property to a banker to avoid arrest for using trust funds. I have returned all the money, but he has refused to give up the deeds. He has been urging me to drink on every occasion, and wishes to destroy me." He recovered, and this was found to be true, although he never referred to it when restored.

An inebriate in a comatose condition, suddenly begged me to write his mother in St. Louis where he was. He recovered and had no memory of this. The letter to his mother was the first news she had from him for two years.

A stupid comatose inebriate, son of a business man, was brought to me. The father complained of financial stringency, when suddenly the son said: "Discharge my brother, and put a stranger in his place, and times will be better." The father did this and wrote that he found and stopped a serious defalcation. The inebriate son did not remember this remark, and could not understand why he made it.

A man, suffering from delirium tremens, said to his brother: "Sell out all your stock in such a company, for it will fail." Of course no heed was taken of this advice, and the man when he recovered denied all recollection of it. Later the company failed and all his property was lost.

A man found in deep drunken stupor on the street, said: "Get a physician for my friend who is dying in a room at a leading hotel. Later a man was found dead in a room at this hotel who was his friend. When sober he could not recall this remark. He had drank with this man a few hours before he was found on the street.

These cases show that certain ideas are formed, and expressed unconsciously, leaving no impress on the memory, and appear in the stupor and palsy of intoxication.

Probably some special exciting cause brings them to the surface as flashes of reason, and conceptions of truth, then all is a blank again. Of course these incidents are not common to all intoxicated men, but exceptional. Occurring as they do in the extreme palsy from spirits, they suggest the operations of consciousness below the senses, and behind the phenomena of ordinary brain activity. The shrewd remarks and wise advice of intoxicated men at times out of all harmony with their present or past actions is the same condition. These sane moments are marked in some cases, who, when clearly intoxicated, seem to have flashes of wisdom unusual at other times. The remark so often made by the laity that states of intoxication in certain men are followed by greater wisdom and judgment than ever manifested during their sober periods, is a recognition of this condition.

The theory of double consciousness applies and explains much of this phenomena. The ordinary consciousness is palsied by spirits, and cannot act only along automatic lines. The sub-consciousness or subliminal sense breaks through this palsy and asserts itself, in wise comments or statements of events, predictions and sane thoughts. It is certain these manifestations come from some deeper and less impaired mentality, and are not mere accidents and morbid impulses of the moment.

The gathering and grouping of a number of well-authenticated incidents of this class may bring out some laws and conditions which control these at present very obscure phenomena.

## SMALL ASYLUMS FOR INEBRIATES.

The number of inebriates who come under medical care are increasing every year. Many of the large hospitals have wards especially devoted to this class, and rooms with nurses who are experienced in the care of such persons. Almost innumerable homes and private asylums advertise to take such cases, in connection with mildly insane and nervous victims. One asylum advertises to receive all kinds of surgical cases, also mental and alcoholic patients, and offers superior facilities in the treatment.

One institution claims to have a cottage system, in which all cases of mental and drug origin can be separated and treated alone. Epileptics are taken at this place. A great number of these places claim great superiority from the use of special means and drugs, and hint that a wide experience promises a cure in most cases. One of these places claims to have had thousands of cases under treatment; as the advertisement of the asylum dates back less than two years, this experience is remarkable. The failure of the gold cure homes sends an army of drug takers to these asylums, who come under the impression that some special rapid curative agent will be used. In some places this is encouraged and the patient goes out buoyed up with the hope of perfect recovery, only to relapse, and be sceptical of other means. All of these small asylums work under great disadvantages in having other cases associated with them. The means and measures essential for one are not useful for the other. Inebriates should be treated alone in small groups of not more than twenty or thirty, and in special prepared asylums and the most favorable surroundings.

Most of the recent asylums are mere hospitals for recovery from the drink paroxysm, the patient deciding for himself that he is well and able to go out. Of course few, if any, permanent recoveries follow, and the public judge of the failure of such asylums by the statement and experience of those who have claimed to be cured. In large cities, hospital wards



and rooms for alcoholics suffering from narcotism, of spirits and drugs, often bring large returns in money to the hospital, which fact encourages the growth of homes and small asylums to divide up this business. In reality this is a very small part of the treatment, and in most cases can be accomplished without medicine or medical care. All these cases require months, and even years, of long persistent nerve rest and special medical care, in the most favorable surroundings and conditions of living. High altitudes and seashore levels, special methods of treatment in special conditions may all have advantages. But no one means or remedy can be depended upon. The successful treatment requires not only an exhaustive study of the case, and the conditions which enter into the causation, but the scientific application of every rational remedy and means to build up and restore the brain and nervous system.

The treatment of inebriety will be superficial, empirical, and transient, or scientific, exact, and thorough, according to the study of the case and knowledge of the physician. The care of such cases for a few weeks in temporary homes, established accidentally, is not likely to be very thorough or scientific. The most unfortunate fact, that nearly all cases are in chronic conditions before they come under treatment, should be recognized in all asylums, and long, persistent treatment should be urged by all physicians. The present empiric stage of treatment is rapidly passing away, and we may expect in the near future a great advance in the asylum treatment of inebriates.

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### SUNSTROKE IN INEBRIATES.

Experience in India and other warm countries has indicated an extreme fatality from sunstroke in persons using alcohol to excess.

The congestion and vaso motor paralysis, common in all inebriates, are both predisposing and exciting causes for the

coma from the sun's rays. The breaking up the heat regulating centers of the brain by alcohol leaves the body powerless to resist the sun's rays. Yet this fact is not very widely recognized, and every summer the record of such cases becomes more prominent. Dr. Norton, in the *New York Medical Journal*, reports fifty cases of sunstroke brought into the Presbyterian Hospital with the following comment:

"The use of alcohol seemed to have a direct unfavorable influence. The habit was marked in thirty-two per cent., moderate in forty-six per cent., denied in ten per cent., in the remaining twelve per cent. no history could be obtained. Eight persons were markedly alcoholic on admission, and of these four died.

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#### INEBRIETY IN INFANCY.

A moderate drinker and gormand married a woman whose ancestors were wine-drinkers, she being temperate and well.

The first child, a boy, died of marasmus in infancy. The second child was feeble, and anaemic from infancy, manifesting great irritability, crying all the time during its waking hours.

One day the nurse gave some wine in sugar, and for the first time the child was quiet. From this wine was given daily, and the child exhibited a radical change of temper and emotions. The physician took to himself the credit and curing the child by wine in a solution of bark. It was found that when this remedy was withdrawn, more extreme symptoms of irritability appeared. On one occasion it was very difficult to procure the remedy, and the child went into a paroxysm of nervous excitement, followed by stupor.

From this time some form of wine and spirits was used constantly. This was continued up to ten years of age when death followed from some brain affection.

This was a veritable case of inebriety from inheritance.

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The alcoholic who boasts of superior strength, because he

was never intoxicated, calls attention to the physiological fact that he possesses an abnormal brain. The absence of symptoms of poisoning (intoxication), in one who uses spirits continuously, indicates serious faults of structure, and a coarser, more degenerate type of brain. The injury from alcohol is more general and marked, and the higher psychological centers are more profoundly paralyzed. The consciousness of his real condition is covered up. The sensory centers are perverted, false impressions and false reasoning increase steadily, and the power of correction diminishes. The condition is one of psychical palsy, from which restoration is difficult. All such persons are defects and degenerates, both inherited and acquired.

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### NEW SCHOOL OF PSYCHOLOGY.

The evidence on which the disease of inebriety is founded is so well attested and confirmed, that it has grown up into a body of accepted doctrines, which may properly be called a new school of psychology.

This school takes up the study of the effects of narcotics on the brain, and the brain conditions which demand narcotics; in other words, the psychology of the toxic state of the brain and nervous system. This school is peculiarly American, in history and attainments. The facts and their meaning have been boldly asserted for over half a century, and slowly they have roused inquiry and study, and been confirmed by students all over the world. Independently, without theories or teachers, the facts have been accumulated and examined by scientific methods, by many persons widely scattered over the field like skirmishers, each one working by himself.

There have been no great masters or teachers, no universal work discussing exhaustively the entire subject. Empireism has gathered like storm clouds over every advance, and even now obscures many lines of the study, but through it all there are outlines of the facts which cannot be lost or covered up.

An ever-increasing number of persons are studying the phenomena of inebriety by scientific methods. The number of papers and monographs issued every year are also increasing. Unmistakable tracings of a new school of psychology are apparent. The demand for the Journal of Inebriety, and the study of its pages, noted by the increasing number of letters after each issue concerning the facts presented, is also further evidence. This new school of study promises to solve the great questions gathering round the so-called drink problem, and point out the real means and measures for prevention and cure.

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#### INTERNATIONAL CONGRESS AT BRUSSELS.

The sixth International Congress against the abuse of alcoholic liquors is to be held during five days in the early part of September next.

The arrangements differ from the former congresses in that part of each day will be devoted to general assemblies, when papers will be read, but no discussion allowed. During another part of each day the different subjects will be treated in sections, at which free discussion will follow the reading of the papers. The preliminary program already issued is a very long and varied one. Among the subjects for the general assemblies the following may be mentioned:

Influence of alcoholism on civilization.

The mission of the state in the struggle against alcoholism.

Women's help in the temperance reform.

Necessity of creating national and international centers of union for all temperance societies or workers.

The subjects for discussion are divided into four sections:

1. Legislation — Sociology — Political Economy.
2. Education — Instruction.
3. Medical and Hygienic.
4. Temperance propaganda — Women's help in the struggle against alcoholism.

Dr. Th. Belval is designated as president, and the general secretaries, Herr Merzbach and Dr. de Vancleroy, may be communicated with at 290, Avenue Louise, Brussels.

**SNUFF INEBRIETY.**

It is a well-known fact that a large number of persons use tobacco snuff to excess.

In some sections of the country this addiction is very general, and prominent in the marked degeneration of the victims.

The narcotic effects of tobacco used as snuff seems to cause a profound depression of all the senses, and the body generally. The higher psychical life appears to suffer most, manifest in loss of pride of character and appearance, diminished ambition to excel in any work, disregard of surroundings and opinions of others. Later, delusions of persecution and injury, with suspicion and doubts of anything that is true.

A form of low general dementia follows, terminating in death from melancholy or acute disease.

Recently another form of snuff taking in which cocaine is the central drug used, has come into prominence. Cocaine is given for some of the distressing catarrhs and nasal troubles which are so painful. Its narcotic action on an inflamed mucous membrane is very marked, and is quickly followed by a certain fascination to continue the drug which is difficult to control. The possibility of not being able to give up the drug never occurs until symptoms of obvious poisoning appear, and then, in many cases, the mind has lost all power of appreciating its real condition. Voluntary efforts are usually confined to changing to some other narcotic used by the mouth. The effects of cocaine by the nose, in most cases, differs but little from that used in other ways. Yet there is a certain mental fascination in the inhalation, as in the use of the needle, which is hard to overcome. The delirium and pleasing relief, with mild excitement which follows, make this form of inebriety most attractive.

The rapid exaltations of the sense of comfort and strength, and sudden disappearance of pain and mental fears and worryment, all make a powerful impress on the mind and nerve cen-

ters. This for a long time is far more powerful than the depression and suffering which follows.

There can be no question that this form of inebriety exists to a considerable extent in all our large towns and cities. A very sensational story of a large number of persons in a certain eastern village affected in this way has some foundation in fact. It appears that a certain druggist pushed the sale of a nostrum containing cocaine used in this way, until the demand was very large. The appearance of the toxic effects of cocaine in several persons resulted in an exposure of the danger of the drug, and its sale practically ended. No doubt similar instances are occurring in individual cases where the drug is not abandoned, and cocaine inebriety or other drug taking follows. As a nasal remedy it is exceedingly dangerous, and should be concealed and guarded by the physician with great care. The use by inhalation is more likely to become an addiction than by the mouth or needle. The treatment is surrounded with great difficulties, and often taxes all the resources of the physician to the utmost.

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### CLAY INEBRIATES.

In some sections of the country a number of people are found who daily use clay as an article of food.

It is used so ravenously and with so much relish, and its effects are so marked, that it can be called a veritable inebriety. The clay eaten is of dirty white color, and has a peculiar oily appearance and does not crumble, but becomes sticky when moistened. It is held in the mouth until it dissolves, and is swallowed in small quantities. It evidently possesses some nourishment, and the opinion prevails that persons can subsist on it for days without any other food. The quantity used varies largely from two ounces to several pounds a day.

There is a strange fascination which, like the diseased craving for narcotics, demands so much of this clay every day.

When, by accident or design, the supply is cut off great

restlessness, anxiety, and intense depression follow. The effect of clay eating is noted on young persons by blanching the skin, giving it a peculiar pallor, and soon a prematurely old, wrinkled look. The mind seems to be depressed and under a cloud, and all vivacity and emotionalism reduced to a low level.

General muscular indisposition to exertion and indifference as to the consequence of acts and the possibilities of the future are the symptoms in adult clay-eaters. Whisky drinking, tobacco smoking, chewing, dipping, and snuffing are common accompaniments.

All ambition to improve their surroundings and add to the mental pleasures of life is absent, and profound general depression prevails. Superstitious hallucinations and fears of the supernatural, with efforts to interpret every unusual event in nature, and the most primitive struggles to supply the common wants of the body, constitute the whole of life.

Very little sickness follows, and after years of this addiction some acute disease of the stomach or liver is followed by death.

These people occupy some of the mountain counties of the Southern States, and seem satisfied to live in the poorest sections of the country. They are content to live isolated, and by farming, hunting, and fishing make a living.

The craze for the clay used is remarkable for its persistence and tenacity. The supply for daily use is provided with more energy and precision than food. The skin of clay inebriates soon becomes of a dirty yellow color, and never changes during life. Tobacco using seems to be more closely associated with this addiction than spirit drinking. No change ever takes place except death. They cling to the same ways of life and living, never increasing the amount of clay used to any extent from one generation to the other. Both body and mind slowly retrograde down through degrees of dementia to death.

## Clinical Notes and Comments.

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### ELIGIBLE VASO-MOTOR STIMULANTS AND BLOOD BUILDERS.

It is probable that no busy practitioner is doubtful as to the therapeutic value of mercury and arsenic. It is just as probable that every physician has frequently encountered grave difficulty in his attempt to administer these agents for a sufficient length of time or in proper quantities to produce their full therapeutic effect. Long before their remedial properties have had opportunity to exert themselves some form of stomachic disturbance or an exhausting diarrhea accompanied by profound mental depression, have indicated their discontinuance for sufficient time to permit the patient to re-establish such tone as would enable him to again "stand the treatment." This is especially true in its application to mercury, and equally true, though in a lesser degree, with reference to arsenic. That these metals have been rendered more easy of assimilation and their therapeutic value distinctly enhanced by skillful manipulation and combination, recent medical literature leaves little doubt.

In the preparation known as *Arsenauro* we have in solution a combination of the bromides of arsenic and gold, which is certainly an advance in pharmacy.

*Mercauro*, which is one of the same class, has in addition to gold and arsenic the bromide of mercury in solution.

According to Drs. Stucky, Lydston, Wight, Dumesnil, Ingersoll, Wade, Kennedy and others, these solutions are blood-builders and blood-makers, valuable nerve tonics and vaso-motor stimulants, and in the experience of several *Mercauro* has earned first place in the treatment of the later stages of syphilis, with its accompanying nerve tissue degeneration.



*Listerine* is a standard antiseptic, well-known and very largely used by the profession. It is found to be very useful in rheumatism and other affections. Send to the Lambert Chemical Co., St. Louis, for circulars.

*Reed & Carnrick* of New York city have put on the market two most valuable remedies in Protonuclein and Pepsin. These are especially chemical physiological remedies which from experience and test have proven to be invaluable.

Careful experimentation with Protonuclein by many physicians who have carefully observed its effect since its first introduction has proved that if one tablet or three grains of the powder is given internally one hour before meals and two tablets or six grains of the powder is given two hours after meals, it will seldom or never fail to produce the desired effect. The dose given one hour before meals is taken directly into the circulation and increases general leucocytosis; and the dose given two hours after meals produces almost immediate proliferation of the white corpuscles, which aid in the assimilation of the digested meal.

Jno. C. Levis, M.D., West Bridgewater, Pa., says: "I have used *Celerina* in my own case for insomnia. Among all the hypnotic preparations and nerve tonics, it stands justly pre-eminent. Several persons are now using it and report that no preparation has given such permanent and prompt relief. In a general practice of more than half a century, this is perhaps the first public testimony I have offered. *Celerina* is the very best nerve tonic now offered to the profession, and cannot be too highly recommended. To those wanting a nerve stimulant it will be just the remedy."

We called attention to *Bovinine* in our last number, and described some results from its use. Our later experience has fully confirmed these observations. We now use it freely in all cases where spirits are withdrawn for at least two or three weeks with the most signal results. The improvement is very marked at the first, and its tonic and nutrient qualities are distinct and positive.

We have repeatedly urged upon our readers the value of *Horsford's Acid Phosphate*. In certain conditions of nervous exhaustion it has proved to be almost a specific, and deserves a trial under all circumstances.

The *Tissue Phosphates* by *Dr. Wheeler* of Montreal, is without a rival in the market as a tissue tonic, and should be tested to realize its virtues.

*Fellows' Syrup of Hypophosphates* has been on the market for years, and is used as freely to-day as ever, for general debility and nervous and bronchial affections.

For many years *Gardner's Hypophosphite of Lime* has been very largely used for general exhaustion and debility. It is one of the few very valuable remedies which have stood the test of time and experience.

I have prescribed *Bromidia* with pronounced success in several cases of nervousness and restlessness, and in one case of acute cystitis. I have combined Papine with *Bromidia*, which gave instant relief. Parenthetically, I may say I have personally used a teaspoonful of *Bromidia*, after having successively lost several nights' rest and procured a refreshing night's rest with no bad after effects.

CHAS. E. QUETIL, M.D.

Philadelphia, Pa., Feb. 23, 1897.

*Lactophenin in Typhoid Fever.*—*Dr. Beverly Drake* Harison, of Sault Ste Marie, Mich., related his experience with typhoid (500 cases with only two deaths) and explained his treatment before a recent meeting of the Upper Peninsula (Michigan) Medical Association. The full report is published in *The Physician and Surgeon* Nov. 1896). His treatment, briefly expressed, consists of *Drainage, Disinfection, and Diet*. He gives calomel and citrate magnesia water, washes out the rectum and lower bowel with normal salt solution, orders an antiseptic mouth wash, lithia water, intestinal antiseptics, etc., and gives careful attention to the diet. His noteworthy estimate of a serviceable antipyretic is the following:

“To eliminate the toxins and to promote skin drainage I prescribe the antipyretic, lactophenin, which is allied chemically and therapeutically to phenacetin, lactic taking the place of acetic acid. It acts like phenacetin, but more slowly; has a more calming and hypnotic effect, with no effect upon the heart except that the pulse becomes fuller and slower, while the breathing is unaffected. A moderate dose, five to ten grains, is given every second hour if the temperature rises above 102 degrees F., until perspiration is produced. The dose and frequency of its requirement is diminished as the case goes along. The temperature is seldom if ever reduced below 100 degrees F. by its action, and the reduction is gradual, occupying three or four hours. I cannot speak too highly of lactophenin as an antipyretic and hypnotic. I have used it altogether in my practice during the past three years to the exclusion of all other antipyretics, and I have yet to learn of a single case in which it had the slightest depressing effect upon the heart or circulation. I also regard it as a valuable toxin neutralizer, as it will reduce temperature at 100 degrees F. one or two degrees without causing perspiration. In treating moderate cases of typhoid, I have, on several occasions, discontinued the lactophenin in order to watch the effect of intestinal antiseptic treatment alone, but have been forced to renew the antipyretic at the earnest solicitation of the patients, who complained that they were not doing as well, and that the only time they had any peace was after taking a ‘sweating powder.’”

The report, considering the excellent record of success, is a valuable one, and the treatment described may well be followed in general practice with certain hope of best results.

#### AN ACROSTIC — LA GRIPPE.

A-ll the nerves gone on a bender,  
N-ot an organ is exempt,  
T-eeth and scalp and muscles tender,  
I-cy chills, the bones pre-empt;  
K-aleidoscopic are the symptoms legion,  
A-s they over-run the system,  
M-aking life a weary region,  
N-o one able to resist them.  
I-s there nothing that will cure?  
A-ntikamnia will, I'm sure.

— Frederick B. Sutton, M.D.

Atlanta, Ga.

# NERVOUS EXHAUSTION.

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## *HORSFORD'S ACID PHOSPHATE*

**R**ECOMMENDED as a restorative in all cases where the nervous system has been reduced below the normal standard, by overwork, as found in brain-workers, professional men, teachers, students, etc.; in debility from seminal losses, dyspepsia of nervous origin, insomnia where the nervous system suffers.

It is readily assimilated and promotes digestion.

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**Dr. EDWIN F. VOSE**, Portland, Me., says:

*"I have prescribed it for many of the various forms of nervous debility, and it has never failed to do good."*

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THE  
QUARTERLY JOURNAL OF INEBRIETY.

Subscription, \$2.00 per year.

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FORMS OF SUGGESTION USEFUL IN THE TREATMENT OF INEBRIETY.

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BY R. OSGOOD MASON, A.M., M.D., NEW YORK.

Author of *Telepathy and the Subliminal Self, etc., etc.*

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In proportion as the nature and uses of hypnotism and hypnotic suggestion become known and realized, are their uses also being extended in the treatment of diseased conditions; and especially is this noticeable in the treatment of certain forms of insanity and of inebriety.

With all new and unfamiliar agents there may be wise and unwise methods of applying them; it is proper, therefore, to call attention to some of the ways by which those here under consideration may be most advantageously used, particularly in the treatment of inebriety.

As the different stages of inebriety demand different medical treatment and management, so the methods of suggestion applicable in their treatment vary, according to the stage of the disease and the condition of the patient; nor in any stage is it necessary to forego methods of medical treatment which have been proved to be of genuine service, such as the purge and baths in acute alcoholism and tonics in the stage of reac-

tion and prostration; but that hypnotism and suggestion will often be found to be most valuable allies to these more usual and well-known means of cure will hardly be doubted by any one who has observed their effects.

For the purpose here intended the subject may be examined under three heads, viz.: (1) Direct Suggestion; (2) Suggestion directed to physiological processes; (3) Auto-Suggestion.

In the acute stage of inebriety, when the patient is still drinking, or has recently been doing so, what we will designate as the *direct* method of suggestion will be found most useful. For this purpose bring the patient into the best hypnotic or subjective condition which it is possible to secure, and then suggest directly and positively, though not necessarily in a loud, and certainly not in a startling, tone of voice, that alcoholic drink is his worst and most dangerous enemy — that he knows this very well, and that he desires to be free from that enemy's power; suggest that his desire for alcoholic drink has now left him, and that in future he will shun and refuse it in every form and under all circumstances; that he will have no desire whatever for it, and that it will even disgust and nauseate him. Suggest also that he will sleep, that he will not suffer from nervousness, nor from unpleasant dreams and visions, and that he will soon recover from his illness. Keep the patient in this deep sleep or subjective condition, as the case may be, for one or two hours if possible, repeating at intervals the suggestions, and repeating the whole process in twelve or twenty-four hours. If the first attempt at treatment does not succeed a later one may prove more fortunate.

In the *second* stage of the disease, when the drink or drug habit has temporarily at least been abandoned, but the patient is suffering from the after effects of the poison — when the nervous system is prostrated, changes more or less profound and injurious have occurred in the cells of the brain and spinal cord, so that their action is abnormal or imperfect,

vitality is lowered, the will power weakened; nutrition also, the very process by which alone these damaged cells can be permanently repaired and vitality restored, has been interfered with, the mucous membrane of the stomach and intestinal canal is congested, and its functions weakened or perhaps temporarily paralyzed or destroyed — of what use can hypnotism and suggestion then be? Can suggestion influence, or modify physiological processes so as to be of practical value under such circumstances?

I am aware that the general feeling in the profession is that the use of hypnotism is very limited — that its main field of usefulness is in so-called nervous or imaginary diseases; but if the reports of eminent foreign observers, such as Liebault, Bernheim, Liegois, Montpallier, Borru, Krafft-Ebing, Delbeuf, and others, as well as those which I have myself recently made, can be trusted, then physiological effects of the most positive and practical character are frequently realized from hypnotic suggestion; the functions of digestion, defecation, absorption, menstruation can be stimulated to more vigorous action, hastened, or retarded; lactation and other physiological secretions of the body can be increased, diminished, and greatly controlled; the action of the heart can be increased or diminished both in force and frequency; blisters may be raised, bleeding may be caused from the mucous surfaces, or at designated points upon the skin, as for instance upon the chest, the arms, the hands, the feet. It is not claimed that results like these can be obtained in every case, nor even in a majority of cases, but they have been obtained in cases sufficiently numerous to establish the fact, that suggestion in the hypnotic condition is capable of influencing physiological processes to a very remarkable degree.

Applying this knowledge to the treatment of alcoholism or drug addiction in the second stage, as above described, most important aid may often be obtained. Let it be suggested, for instance, that the congestion or inflammation of the mucous membrane of the stomach will rapidly diminish, and the func-

tion of digestion will be restored; that food will be desired, will be retained and digested; that the process of assimilation will go on normally, a pure and wholesome blood will be elaborated and will be distributed to the brain, the spinal cord and nervous system generally. So that each diseased and enfeebled cell will be nourished, repaired, and stimulated to renewed, normal activity, and that the whole system will in like manner be nourished, strengthened, and renewed. It may also be suggested that the intellect and the moral sentiments will be strengthened or improved if deficient, and the will be made energetic in executing the behests of the intellect.

No miraculous, nor even marvelous, results may follow in any given case, but at all events the mind of the patient, even if remaining conscious, is put in a favorable condition and attitude for improvement, and the suggestions themselves thus prove helpful in a way which every physician appreciates, and if the unconscious state be secured or even a semi-conscious or subjective one, we then invoke the aid of the sub-conscious mind or subliminal self — an ally whose good offices we are only now beginning to understand and appreciate.

Finally, the effects of *Auto-Suggestion* should not be lost sight of. Generally they are little considered, but a moment's thought will disclose to us an influence which cannot be ignored. As an example of its power, witness the hundred or more cases of stigmatization which have been reported, from St. Francis of Assissi in the thirteenth century to Louise Lateau at the present time. These cases have been looked upon with suspicion or absolute incredulity by scientific investigators, as instances of self-deception or intentional fraud. They have been so looked upon not because of lack of evidence that such conditions actually existed, nor because they were easily explained upon known principles, or had been proved fraudulent, but because they could not be explained at all excepting upon the supposition of a supernatural influence or force having been concerned in their production — a supposition which, of course, threw them out of the category of



subjects amenable to scientific treatment. But taking into account the power of the subliminal self and the known instances of physiological changes which have been produced by suggestion, and placing auto-suggestion in the place of suggestion received from another person, and these cases of stigmatization fall naturally into the same category. The recluse or religious enthusiast, with physical force greatly diminished by fasting and vigils — by intense concentration of the mind upon the sufferings of Christ and the mental picture of his five wounds, passes into a condition analogous to trance — a self-induced hypnotic or subjective state, in which the picture so vividly impressed upon the mind is realized upon corresponding portions of the patient's own body; deep red marks appear, or blood oozes from the hands, the feet and the side, at points corresponding to the mental picture which had so deeply impressed the devotee.

Analogous to these most striking though less frequently observed examples of auto-suggestion, are the multitude of cases where a dominant idea presented during moments of profound mental excitement becomes a potent factor in causing most radical changes in the action, life, and character of the person so impressed. The condition of mind favorable for receiving such potent impressions may be brought about in many and various ways — by the grandeur of architectural effects, decorations, music, ceremonials, and the associations of churches and cathedrals, by impassioned oratory, or the sympathetic action induced by a multitude of persons swayed by some common sentiment or emotion, as of patriotism, reform, or religion. Such conditions were the foundation of many of the epidemic excitements and delusions which flourished during the middle ages — the crusades, the flagellants, the dancers and the horrors of witchcraft, and in later times the trances, ecstasies, sudden conversions and reformations associated with temperance and other reform movements, and especially with religious revivals.

That dominant ideas entertained in times of such high

mental tension often become realized in a most remarkable manner is undoubtedly true, and the semi-hypnotic condition of intense concentration upon a single idea, into which such men as Wesley, Gough, or Moody have, by their peculiar power and eloquence, been able to throw large audiences, has in particular instances been utilized for good, and many an inebriate and many a slave to hurtful and degrading vices and sins under this subtle influence has, without reason, will, conscious effort, or even resolution of his own become changed, then and there, in character and action.

That these sudden changes are always permanent is, unfortunately, not true; and the effect of the highly wrought excitement upon those who go back to their old life may be a matter for consideration, but that the key to these profound changes is to be found in auto-suggestion under the influence of a dominant idea and favoring conditions of mind can hardly be doubted.

As an aid in the treatment of inebriety, auto-suggestion plays a subordinate part, nevertheless it also has its experimental uses. Let the patient, already anxious for recovery, be impressed with the idea that his recovery will be much influenced by his own mental attitude — that if it is positive and hopeful he will recover his health much more easily and rapidly than if it is despondent or indifferent, and that in this matter he can greatly assist himself. This being impressed, teach him, with earnestness and sincerity, to affirm to himself constantly, and especially while going to sleep, ideas like the following, expressed in such language as the physician thinks advisable: “The power of the alcohol habit (or drug habit) is broken; I am sufficiently strong, and my will is sufficiently firm to resist successfully every temptation; no influence can make my hand carry the poison to my lips. I shall gain strength and self-control through sleep; I shall rapidly and perfectly recover.”

Such is a mere outline of a subject which in my judgment is fraught with interest of a most practical character, and

should claim the serious consideration of every physician, and especially of every one whose work lies particularly among the unfortunate victims of alcohol and drugs, or the insane; not with the idea of speedy and radical changes in their management, nor of finding a panacea, but of careful study and experiment as favorable opportunities occur, with the hope of securing another useful agent for his armamentarium.

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### TOBACCO AND THE EYESIGHT.

Prof. Craddock says that tobacco has a bad effect upon the sight, and a distinct disease of the eye is attributed to its immoderate use. Many cases in which complete loss of sight has occurred, and which were formerly regarded as hopeless, are now known to be curable by making the patient abstain from tobacco. These patients almost invariably at first have color blindness, taking red to be brown or black, and green to be light blue or orange. In nearly every case, the pupils are much contracted, in some cases to such an extent that the patient is unable to move about without assistance. One such man admitted that he had usually smoked from twenty to thirty cigars a day. He consented to give up smoking altogether, and his sight was fully restored in three and a half months. It has been found that chewing is much worse than smoking in its effects upon the eyesight, probably for the simple reason that more of the poison is thereby absorbed. The condition found in the eye in the early stages is that of extreme congestion only; but this, unless remedied at once, leads to gradually increasing disease of the optic nerve, and then, of course, blindness is absolute and beyond remedy. It is, therefore, evident that, to be of any value, the treatment of disease of the eye due to excessive smoking must be immediate, or it will probably be useless.

THE MORPHINE HABIT, ITS CAUSATION, TREATMENT, AND THE POSSIBILITY OF ITS CURE.

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BY DR. J. W. ROBERTSON, OF LIVERMORE, CAL.  
*Superintendent Livermore Sanitarium.*

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The undue use of morphine, either to relieve pain, or for the purpose of re-establishing normal tone to the nervous system, has become so common, and its abuse is so closely connected with the same predisposing causes that underlie all neuroses, that an inquiry into its symptomatology and treatment seems pertinent. Even of more interest is the study of its causation and the establishment of the fact that, in the great majority of cases, it is as much a result of the nervous heredity as is neurasthenia, insanity, epilepsy, or dipsomania. By this is meant that morphomania belongs to the group of functional neuroses which has, as a basis, the nervous diathesis; and that, when a person possessing this constitution, even for a few times, experiences the pleasing exhilaration that opium brings, he not only becomes addicted to the drug, but, to such an extent, its slave, that he will sacrifice all in life that should restrain and stand between him and his appetite, and will barter honor, truth, and all social considerations for the relief of the craving so soon established. As a rule, the morphomaniac receives but little sympathy and, while the world readily excuses those patients who become addicted to the habit because of pain, it harshly judges the equally unfortunate who have, as an excuse, hereditary compulsion.

Opium, either refined or in its crude state, together with its alkaloid morphine, is, of all drugs, the one most frequently selected for the purposes of intoxication. Taken either as an extract or an alkaloid, smoked, eaten, or injected, its evil influences, over both body and mind, are soon established.

Opium smoking, so prevalent in China, is, to some extent, practiced in California, for every Chinatown in the state is a focus from which the infection spreads. As a rule, however, it is only the vicious and criminal who resort to these dens, and even this class soon discard the filthy and nauseous surroundings for the more seductive and less expensive needle. Opio-phagia, or the eating of opium, while chiefly practiced in the Oriental countries, was, until recently, a most common vice in both Great Britain and the United States. Of all forms it is the easiest to conceal, and can be practiced for a certain time without detection even by the immediate family. Its effects do not seem so disastrous as do the other forms, and some observers claim increased powers of resistance and endurance from its moderate use.

The invention of the hypodermic needle, and the discovery of cocaine, have added greatly to the dangers of morphine. It is possible either to smoke or eat opium for a lifetime and still not absolutely unfit a man for social life, but the hypodermic use of morphine connected, as it usually is, with cocaine, soon brings physical and mental disaster, and, in a little while, he becomes a burden either on his family or the public charities.

While the invariable excuse for the use of morphine is that it was originally taken on a physician's prescription, and for the relief of pain or some other illness that called for opium, yet even after the cause is removed, the patient cannot relinquish the drug. Many authorities assert the causative influence of pain and, while it certainly may act as an exciting cause, yet, back of all this is the question of heredity and the presence of a nervous diathesis. A normal individual, when freed from physical suffering, is often enabled to throw aside the drug, but, in the neurotic, this is not the case, and, when the disease is cured, a thousand hysterical pains spring up and demand the continuance of the drug.

The part that heredity plays in all functional diseases or states of the nervous system is not to be misunderstood. It is safe to assert that no idiopathic case of insanity, chorea, hys-

teria, megrim, dipsomania, or moral insanity, can occur except by reason of inherited predisposition; and the same family type may assume any of these psychoses, but which particular one will develop we cannot predict. It is not contended that morphinism is a physical disease such as epilepsy, for instance, but it is asserted that it has its origin in the same stalk, and while one develops naturally the other is most easily grafted. Take, for instance, a neurotic family. Its founders may be two individuals, neither of whom possesses a markedly nervous temperament, but both have similar nervous tendencies and their conjoined effect is such that their children are typical neurotics. Or suppose the mother to be tubercular and the father an alcoholic, we have a resulting family, each individual member of which in time develops a neurosis. One child may be an idiot and the rest unduly precocious. Probably some of these children die early of tubercular complications, for precocity is but another name for scrofula. In youth one may develop epilepsy, another chorea, a third, megrim, while of those who escape the neuroses of development, many later break down when tried in the crucible of human endeavor and competition and fall by the wayside, either as hysterics or neurasthenics, or they possibly manifest the more active types of insanity. Very many of us escape all pitfalls and go through life possibly eminently successful, the nervous temperament even adding to our peculiar fitness for specialized work. It is from those possessing this highly developed nervous system that the genius and the man of strong character springs, as well as the crank and that other more confirmed class, the monomaniac and the moral idiot. Why one fails when others succeed is often due to some blot on the brain, some mental defect that clogs the machinery and unfits the sufferer from association with his fellow beings, simply because of some slight but inexcusable moral weakness.

“He rode a horse with wings that would have flown,  
But that his heavy rider kept him down.”

To the alienist these all bear equally the marks of the neurotic stigmata. Too great concentration of energies and dis-

position in any one direction may result in an abnormal mentality, yet it is to those possessing this nervous force and energy that we owe much of the world's progress. It has been said that it is the crank that turns the world. It is not claimed that the possession of this temperament necessarily leads to the use of morphine, but it is certain that the possession of it strongly inclines to easy assumption of the habit; and that, when morphine's charms are once experienced, it is far more difficult to cure them, for they possess a hundred morbid ideas, desires, and neurotic longings that the normal man cannot realize and which only a narcotic will satisfy. They take it, not because of pleasant dreams or intoxicating oblivion, but simply for the purpose of controlling or ballasting unstable nervous organization, neither asking forbidden pleasures nor undue exhilaration, only demanding that rest and peace which is the heritage of the normal man.

The symptoms characterizing the morphine habit all refer to an unstable nervous state of either the body or the mind. The bodily symptoms are emaciation, weakness, ataxia and paresis of the sphincters which Levinstein and other writers have included under the name of morphinism in contradistinction to morphinomania, under which term they include loss of will-power, moral insanity, imbecility, and other mental perversions. For the first few months its use apparently gives mental strength and bodily vigor. The victim is exhilarated, moves with alacrity and life, is full of zest hitherto unknown. Neurotic longings and physical infirmities are forgotten, and, for the first time, possibly, the patient experiences the sensation of being normal. He is certain of his own mastery and the honeymoon following the first knowledge of the drug is bliss unspeakable; not that visions such as De Quincey has familiarized us with are of usual occurrence, or that delusions and hallucinations are generally present. These may come with overdoses of the drug, but, at least in the early stages, are temporary. The patient, probably beginning with one-quarter grain used occasionally, soon adopts it as a daily habit, and rapidly increases it to four or five grains, later find-

ing that excessive doses are necessary to produce the old-time effect, he becomes alarmed, and attempts to stop the drug. He reduces the morphine, and possibly resorts to alcohol as a stimulant, but the fight is a losing one, and, while he may temporarily reduce the amount, he cannot throw aside the habit. Finally, thoroughly frightened, he seeks relief; probably takes some advertised cure and stoutly asserts his freedom, yet secretly indulges to a greater and greater extent, and despairing of morphine bringing any relief, gradually adds cocaine. When this stage is reached, all hope of unaided recovery goes. The patient grows more infirm, more debased physically and morally, until he becomes a *pariah* amongst his fellow men. The desire for reform is a real one, and they are willing to sacrifice everything they hold dear in life — except morphine — could they only recover.

When fully under the power and the first pleasurable sensations have disappeared, the bowels become constipated, relieved by occasional diarrhoea; the appetite diminishes, and the body emaciates. Frequently there is paralysis of the sphincters, both rectal and vesical, and the heart becomes irritable with a frequent and compressible pulse. Veneréal desire, at first increased by the drug, gradually lessens, until mental masturbation takes the place of virile power. The skin is sallow, the eyes sunken, the face emaciated and expressionless, giving the well known *morphine facies*, which, with an ataxic gait, constitute the main symptoms of morphinism. The morphinomaniac symptoms are equally well marked. Its early effects are an increase of the mental power and ability to carry out life's routine, but, as soon as the habit becomes firmly established, and the patient, after a few half-hearted attempts at abstinence, finds his only course one of concealment with increase of the drug, he loses all interest in his work and his former pleasures, and concentrates his whole energy on supplying himself with the opiate. He neglects business, no longer cares for social life, consorts with those similarly afflicted, and sinks into hopeless physical and mental decadence.



The effect of morphine upon the mind, whether for the relief of pain or because of natural inclination, is destructive; and no one can become its victim without lowering of moral tone and loss of will power. They may theorize as well as ever, but let a few hours elapse without their accustomed stimulant, and their unquiet nerves and uncontrollable longings cause them to jeopardize their souls for the drug, and there is no commandment in the decalogue they would not break to gain mental ease. No matter how honorable, upright, and conscientious a man's past life may have been, let him become thoroughly addicted to morphine and I would not believe any statement he might make, either with reference to the use of the drug, or on any other subject that concerned his habit. This extends further and clouds his moral perceptions in all relations of life. Authorities even go further than this and claim imbecility with organic brain changes. My experience has been large, and while I cannot claim to speak authoritatively, yet my own observations do not confirm this statement. I do not deny occasional mental deficiency, yet while at Napa, and later when temporarily in charge of the Home for Inebriates, many morphine cases were committed as insane, yet not a single one exhibited either delusion or hallucination, and all were voluntarily committed for the purpose of cure. They showed no mental change on the day of their discharge, and they were all discharged "cured," differing from their condition on admission; yet, in the broader sense of the term, they were all insane, morally insane. They could not tell the truth; they were boasters, perhaps not so much in the belief that they would never relapse, as in detailing the amount of drug taken. They ridiculed any possibility of relapse, yet many left these institutions and hardly let the day elapse before they were back in their old haunts.

Briefly summarized, morphine does not produce active insanity. Unlike alcohol, which, when long and excessively continued, produces chronic pathological changes, morphine simply destroys the bloom of the mind, obtunds moral sensibility,

and only when excessively used, produces temporary mental aberration.

The treatment of these cases is a most difficult matter, and my reason for dwelling on the nervous and mental state was to show the difficulty of caring properly for these patients, while they are allowed the slightest liberty of person or freedom of judgment. There is certainly no royal road to cure, no Sotera or other patent medicine that will in a night charm away desire. The only chance is in the slow and permanent upbuilding of the body, and the protection of the patient against himself, till his will power can reassert its old mastery.

To stop the drug is the first but not the most difficult step in treatment. Whether it be withdrawn quickly or gradually, is a matter of indifference. Our books warn us against sudden withdrawal because of probable heart failure. My experience does not bear this out. Certainly fifty cases, many of them *in extremis*, were admitted to Napa, and it is fair to presume that when so radical a step was taken, their cases were considered desperate. In every instance they presented the same general appearance, an emaciated body, a haggard face — pale, drawn and expressionless, eyes lusterless, and gait unsteady. They belonged to the dregs of society, and nearly all were graduates of opium joints in Chinatown. We could never determine on what just grounds they were committed, as none presented any mental symptoms except of moral degradation. The invariable practice was to shut them in a small room after bathing and supplying fresh clothing. This was necessary because they always came with their own clothing lined with morphine powders. Within twenty-four hours they were in a state of frenzy, begging and pleading for relief. Soon they became bedfast, vomited, and occasionally purged a viscid green bile, peculiar to this disease. Nothing either medicinally or dietetically was done for their relief. The breakfast consisted of mush, with syrup and fat bacon, and their other meals were equally unappetizing. From the sixth to the eighth day they rallied sufficiently to walk around the

ward, and, in two weeks, were usually able to go out and relish their food. Within a month their appetite was voracious. The return to physical health was rapid, and, in from six weeks to two months, the patient was strong, robust, and apparently in the full possession of both physical and mental health. They were loud, and possibly honest in their assertions of reform, but in no single case — with one exception — do I know that the patient did abstain. While death may follow any mode of treatment, our experience demonstrated that sudden withdrawal was not dangerous, even though it seemed heartless.

In private practice, the gradual reduction of the drug is the only procedure possible. The patient will not willingly endure the unnecessary suffering entailed by the sudden withdrawal. It is not a difficult matter to gradually reduce the drug from the daily five to ten grains to three-quarters of a grain within the first week, but it will probably take another week to reduce to one-quarter of a grain, and another week still to stop the drug altogether. It is not well to let the patient know when the drug is withdrawn, as the physical influence is strong, and the mind, as well as the body, demands treatment. Fortunately, we have remedies that greatly assist us in so strengthening the nervous system that it can successfully stand the shock of withdrawal — strychnia hypodermically and the red extract of cinchona internally, are excellent stimulants, and, while they are not altogether as beneficial as they are in alcoholism, yet they powerfully assist. In the lighter cases, especially where no cocaine has been used, the more serious evidences of shock, vomiting, rapid pulse and physical prostration, may be slight. But where excessive and long-continued abuse has wrecked the system, they will be pronounced, and will continue more or less during the withdrawal. In fact the rapidity of withdrawal is to be regulated by the severity of these symptoms.

The strychnia solution should be 1 to 200, and of this 10 minims can be used not less than twice, and possibly four or five times in the twenty-four hours. So specific is its action

that the system can stand one-half grain without developing physiological symptoms should the necessity be great. With this, equal parts of red cinchona and fl. ext. cocoa are prescribed, of which one drachm may be taken two to four times daily. But with all this stimulation, the system is occasionally rebellious, and the nervous system so unstable that brom. potash is added. The object in giving it is to overcome the nervous paroxysms, and when it is necessary to resort to it it should be pushed to narcotism. In other words, 90 to 120 grains are daily given, and while bromism continues, the morphine may be fully and finally withdrawn. Even from the beginning of treatment, the morphine is never given alone, but in connection with strychnia, and the patient must be kept in ignorance of the amount of drug taken, and especially of its final discontinuance. These excessive doses of strychnia and cinchona are to be decreased as rapidly as possible, and, by the end of the second week, their administration can be reduced to two daily, during the third week to one, and discontinued in the second month, the strychnia to be again resorted to when symptoms demand it. The diet to be prescribed is, at least for the first two weeks, milk, to which, as the appetite returns, scraped steak is added, and later a generous diet. By the end of six weeks the appetite is enormous, and the body responds quickly. By the end of the second month the patient presents every evidence of health, and it is now that the difficult portion of the treatment begins. Before this, a special nurse has been necessary, and the patient has welcomed his companionship, but, with returning strength, he resents surveillance, insists that his moral strength equals his physical, and, too often, persuades his friends that he is perfectly cured. But such cannot possibly be the case. Whether he stays under supervision, or goes home, the result is the same. By the end of the third month, he becomes restless, irritable, and is the prey to all the old-time neurotic longings. He still asserts his freedom from desire, yet, unless carefully watched, will resort to coffee, alcohol, or other and stronger stimulants. It may again be necessary to resort to strychnia and bromide, although

not necessary to produce bromism. Until several such attacks have been successfully combated, the patient remains in danger of backsliding. At my sanitarium, six months is the shortest time I will receive such a case, and the limit may be prolonged to twelve months. A shorter time invariably results in relapses, discouragement, and a return to hopeless slavery. For this reason, the great majority never recover; but, where sufficient time has been successfully expended, and the neurotic taint is not too strong, re-establishment of the will power may proceed to such an extent as to overcome the lessening nervous outbreaks. Where there is no hereditary taint, and the diseases for which the morphine was originally prescribed can be cured, the prognosis is as hopeful as in cases of non-hereditary alcoholism; but the treatment, even in milder cases, must be of at least six months duration. To discharge a patient at the end of the second month because his physical system is restored, is a waste of time and effort, and can only succeed in very exceptional cases. When the disease has affected the mind to such an extent that organic weakness is present, no treatment can benefit. Time, and protection of the patient against temptation till he is restored mentally as well as physically, is the only rational method of treatment.

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#### THE TREATMENT OF INEBRIETY IN RUSSIA.

The excellent results obtained in Russia during the last few years by the treatment of inebriates in special homes have been so striking that it is now generally admitted to be the only means in dealing efficaciously with patients of this kind. The number of special hospitals for inebriates is, therefore, rapidly increasing in that country. Hospitals are being erected in Moscow and in Kieff, and the government has recently made a grant of nearly £7,000 towards the crection of one in Kasan. — *British Medical Journal*.

## ALCOHOLIC MANIACAL EPILEPSY.

TRANSITORY DISTURBANCE OF CONSCIOUSNESS MEDIATING  
CRIMINAL ACTS.

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 BY WILLIAM LEE HOWARD, M.D., BALTIMORE.
 

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The recent cases of Duestrow, Marie Barberi, Koerner and others, have brought forward prominently the role alcoholic epileptic mania plays in heredity and medico-legal questions. The subject is also of paramount interest to the sociologist and the physician. It is of great importance that the latter should be able to distinguish between drunkenness as a vice and inebriety as an effect of an abnormal, unstable, and degenerate inherited neurotic personality.

In this country, where intoxication is no excuse for crime, it is necessary we should recognize two phases of alcoholic inebriety; acute alcoholic insanity and alcoholic maniacal epilepsy. Such forms of insanity are now recognized by leading neurologists and alienists. A very small amount of alcohol will put a person of peculiar neurotic tendencies into a state similar to psychical epilepsy (psychical epileptic equivalent). In this condition atrocious crimes are often committed for which the individual is not responsible. In a recent trial the presiding judge would not allow evidence on this fact to be given. He evidently did not recall that maxim of his profession: *Factum a iudice quod ad ejus officium non spectat, non ratum est.*

Great is the confusion and misunderstanding of terms when treating of "alcoholism," "inebriety," and "drunkenness." In order to avoid confusion I shall tighten up this loose nomenclature by using the terms as given by Norman

Kerr. "Inebriety" is used to distinguish that "overpowering morbid impulse, crave or craze, which tends to drive certain individuals to excess in intoxicants." Scientifically this should be designated "narcomania" to cover the field of morphine, cocaine, chloral, and other allied intoxicants; but as I am dealing only with alcohol, inebriety will suffice for our purpose. Inebriety is a disease; an intoxication mania of such furor, intensity, and force that men will sell their honor, barter their worldly goods, and ruin those dearest to them for alcohol. The criminal acts and insane deeds of these individuals are symptoms of a diseased brain. The distinction between inebriety and drunkenness is one of perversion and perversity. This distinction as made by Krafft-Ebing is as follows: "We speak of perversion when the moral instinct is a perverted one, while we speak of perversity when it is a question of a perverse action, without taking into account the motive that has determined that action, whether it be a perverse inclination or any other motive, a criminal action, for example." Hence, perversion is an inclination independent of the will, and for which no one can be held responsible, at least in the eyes of an impartial judge; on the contrary, perversity, which is manifested in the action, must often be placed to the account of the individual.

A good example of alcoholic epileptic insanity is the Duestrow case. It also shows the powerful influence environment and heredity exerts in certain cases. Duestrow's mother was the daughter of a saloon-keeper of the lower type, and was accustomed to drink at her father's place. His father belonged to the same class and was a habitual user of alcoholic drinks. These habits continued throughout the life of both parents, and the son, Arthur Duestrow, was given beer to drink when an infant. The father became suddenly wealthy when Arthur was about thirteen years of age, who at that early period in his life began a series of dissipation which continued up to the time he committed his repulsive crime. His only child, a little boy three years of age, he was passionately fond of, and devoted all of his time at home to amusing the little fellow.

On the day of the murder he drove up to his handsome residence to take this child and its mother out sleighing. He had purchased on the way a handsome toy for the child, which he took into the house with him. He called to his wife, and asked if she was ready, and then sat down to play with his son. Suddenly, without warning, he pulled a pistol out of his pocket; shot his wife, then picked up his child and fired two bullets in the little one's brain. He walked out hatless, was found on the street in a dazed condition, went quietly to the police station and there made several contrary statements. Such in rough outline is a typical case of alcoholic epileptic mania. Remember the State could prove no motive for the crime. Afterwards he continually denied knowing anything about the deed and insisted that his family were alive.

An epileptic maniac after committing a crime will when arraigned in the police court the next day admit the crime and say he was driven to it by some irresistible impulse, but when some months later he is brought to trial he denies knowing anything about the crime, and is not believed, except by those who have made this form of insanity a study. It is a very common thing for epileptics to give some inconsistent excuses for their actions; they have no accurate knowledge of what has transpired, but have a vague and indefinite idea, and attempt to excuse their conduct by absurd and illogical stories. The suddenness, the brutality, the recklessness, the atrocity and unnaturalness of such an act as Duestrow's suggest at once the suspicion of some brain disturbance.

We have to fully realize the significance of the history of these cases to distinguish the falseness or verity of these temporary disturbances of consciousness. A careful study of individuals who have had attacks of epileptic mania would show an abnormal condition of mind and morals in early life; physical timidity except when fortified by alcohol; anesthetic morality, apprehensions of all sorts of vague and indefinite happenings and an existence, both mental and physical, un-



natural to the normal human being. As these lycanthropists continue to indulge in increasing quantities of stimulants, toxic alcoholic epilepsy insidiously develops. The sudden and very transitory attacks of loss of consciousness are scarcely noticeable to the individual's barroom comrades, or, if so noticed, are accounted for by the fact that he has been drinking.

But these fits of staring which are pathognomonic of *petit mal*, called by some minor epilepsy, but which are in reality major epilepsy as regards their ultimate results, are totally different in appearance from the well-known stare seen in drunkenness. It is this peculiar characteristic of *petit mal* that differentiates it from other forms of epilepsy. We have none of the "falling down fits," frothing at the mouth, violent muscular twitching or clonic spasms seen in major epilepsy. It also differs from the epileptiform attacks sometimes witnessed in delirium tremens. It is because the individual with commencing attacks of alcoholic epilepsy is seldom observed except by his boon companions that he continues unnoticed until the attack occurs with all its concomitant furor and ends in unaccountable and horrible deeds. These attacks of unconsciousness may be partial or complete, and last but a few seconds.

In some instances there is only slight clouding of the mind; a hazy, vague condition of the intellect, and finally during the epileptic furor complete abolition of consciousness, during which we have almost inconceivable brutality, ferocity, and violence, inhuman tiger-like devilish action, which is characteristic of alcoholic epileptic insanity. This is not the masked epilepsy of some writers. No disease can be masked whose symptoms are so plainly demonstrable. The disease is masked in so far that these cases seldom come under the notice of the physician until the epileptic explosion has taken place which has brought the individual into unenviable and often very unfortunate notoriety. The layman cannot diagnosticate a drunken stare from an epileptic stare.

It is beyond cavil that the confused disturbed mental conditions which frequently manifest themselves in persons who are habitual and hard drinkers and yet have no epilepsy, are not the same confusion seen in alcoholic epilepsy. The alcoholic stare is a drowsy, sleepy sort of stare, and there is no fixedness of the body, as well as the muscles of the eye; the attention of the person can be attracted or changed. In the drunken stare the peculiar expression of the eye continues while the individual is speaking, while, on the other hand, the epileptic stare ceases on return to consciousness.

The epileptic stare is sharp, sudden, and instantaneous and there is a fixedness of the muscles, as well as the features of the eye. This fixedness of the eye is a pronounced mark of minor epilepsy. We also frequently notice the sudden grasping by the hand of the nearest object. In court the question often arises, when the plea of alcoholic epileptic insanity is used, "Was not the deed done in a state of alcoholic furor?" The facts of the case easily decide the question.

In alcoholic epileptic insanity the period of anger is preceded by a calm attitude; then comes the sudden period of ferocity during which the deed is done; almost immediate subsidence of the furor, followed by partial or complete ignorance of the act. If the deed was committed in a state of ordinary alcoholic furor the ferocious condition would be manifest until the alcohol which was causing it lost its influence. In other words the condition would last as long as the effects of the alcohol continued. These individuals who suffer from minor epilepsy do not indicate any physical conditions which would differentiate them from normal individuals. The form of so-called alcoholic epilepsy which is unaccompanied by mania, while recognized by many authorities as being, *per se*, caused by excessive indulgence in alcohol, does not offer sufficient evidence as yet to allow us to be positive in the matter. In those suffering from attacks of idiopathic minor epilepsy the use of alcohol unquestionably causes maniacal attacks. The knowledge that such attacks are probable should prevent

the use of alcohol in any form by those who have been subject to minor epilepsy; and should such individuals with a full sense of this fact commit crime when in a state of alcoholic epileptic mania, they should be held guilty. According to Garnier the offsprings of alcoholic parents are prone during adolescence to attacks of epileptic mania. They exhibit a psychological as well as a cerebral degeneration. A certain mental condition accompanies, precedes, or follows attacks of minor epilepsy. This is mental depression and it frequently ends in insanity. Such attacks of insanity take the place of staring and the other well-known objective symptoms noticed in minor epilepsy and are known as equivalents, psychical substitutes. This condition is frequently observed in cases where not the slightest attacks of a minor epileptic nature have been manifested or known to exist.

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#### DANGER IN NERVE STIMULANTS.

All of the so-called strengthening preparations which enable a man to accomplish more work when he is under their influence, do this not by adding units of force to his body, but by utilizing those units of force which he has already obtained and stored away as reserve force by the digestion of his food. Kola, cocoa, chocolate, coffee, tea, and similar substances, while they temporarily cause nervous work to seem lighter, only do so by adding to the units of force which a man ought to spend in his daily life, those units which he should most sacredly preserve as his reserve fund. The condition of the individual who uses these articles when tired and exhausted, with the object of accomplishing more work than his fatigued system could otherwise endure, is similar to that of a banker who, under the pressure of financial difficulties, draws upon his capital and reserve funds to supplement the use of those moneys which he can properly employ in carrying on his business. The result in both instances is the same. In a greater or less time the banker or the patient, as the case may be, finds that he is a pecuniary or nervous bankrupt.—*Popular Science News.*

## PERIPHERAL NEURITIS.

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BY ALEXANDER MCPHEDRAN, M.D.,

*Associate Professor of Medicine, University of Toronto, etc.*

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I am of the opinion that many cases of mild neuritis pass unrecognized, being usually looked upon as rheumatism, to the poison of which no doubt, in many cases, the occurrence of the neuritis is due.

Peripheral neuritis may be isolated, confined to one or a few nerves; or it may be multiple, symmetrical in its distribution, affecting the nerves of all the extremities. These peculiarities of distribution harmonize with the pathological changes occurring in each class. In the isolated neuritis, the disease begins in the nerve-sheath, constituting a "perineuritis" at first, the inflammation extending to the nerve-fibers later. In the multiple forms, on the other hand, the nerve-fibers are themselves the seat of the primary change—a "parenchymatous" neuritis, the sheath becoming affected later. These forms of multiple "parenchymatous" neuritis are always due to some virus in the blood, an organic or inorganic chemical compound usually, which may have a special affinity for nerve tissue, and affects the periphery of the nerves, because these parts, being farthest removed from their nerve cells from which they derive their energy, are least able to resist it. The occurrence of the poison in the blood accounts for the wide symmetrical distribution of the disease.

On the other hand, isolated neuritis is due to some cause acting locally, and if several nerves are affected their distribution is irregular, not symmetrical. In these cases there is always a constitutional cause at work as well, predisposing to the disease. In proportion as the constitutional condition is

marked, the exciting cause produces the disease the more easily, and the number of nerves affected becomes greater and the attack approaches more nearly to a symmetrical one in character.

Alcoholic peripheral neuritis is the form most often met with, but it does not occur nearly so frequently in this country as in Europe, doubtless because with us much less stimulants are consumed by women than is the case in Europe. There the women are much given to regular indulgence in the stronger spirits, usually secretly, and such drinking appears to be more productive of neuritis than indulgence in occasional "bouts" of drunkenness. In men, delirium tremens is much more common, while it is rare in women. It is difficult to explain this difference; it is attributed to the fact that men drink beer rather than spirits. With us, however, spirit-drinking is more common and delirium tremens results oftener than neuritis. The cases of neuritis I have met, in which the disease was well marked, have all been among males. The following case is a well-marked example:

Case I.—Wm. G., aged seventy-three, clockmaker. He has always been healthy. He came from Scotland when a young man. He says he has taken one or two glasses of brandy or whisky daily since he was ten years old, but never drank to excess. For the last twelve years he has lived alone, doing his own cooking, and has taken two or three cups of tea or coffee with each meal.

In June, 1893, while walking on the street, he noticed his legs became weak and his calves and feet numb — although he was only a short distance from home, he found it difficult to get there. In a day or two he noticed a similar condition in his hands and forearms. In five days he was unable to walk. He was admitted to the Toronto General Hospital, under my care, on July 6, 1893. His condition was as follows: Complete paralysis of the muscles of the legs and feet, the muscles of the thighs retained some power. There was foot-drop — the foot extended, and the toes flexed. Sensation to touch was

much lessened, but great sensitiveness to painful impressions of any kind, especially on deep pressure. There was some "pins-and-needles" and burning feeling in the feet and legs, but not excessive, although sufficient to interfere somewhat with sleep. The skin was dry and harsh, the muscles flabby and tender. Knee-jerk was lost. The hands, forearms, and arms were similarly affected, but to a less degree. He could use his hands slightly, but not sufficiently even to feed himself. He was rather dull and apathetic, but healthy-looking. There was gas in the stomach and bowels. The sphincters of both bladder and anus were weak. Urine was passed every two or three hours; this may have been due to enlarged prostate, but the sphincter ani was undoubtedly considerably affected, and required many months to recover. The heart was enlarged and the arteries were sclerosed. The urine was pale and of low specific gravity, so that doubtless there was more fibrosis of the kidneys than would be accounted for by senile change. There was no reaction in either nerves or muscles to the galvanic or Faradic currents. Marked atrophy of all the muscles of the extremities followed.

On September 27th, nearly three months later, the following note was made: "Is gaining some power in both hands and feet; is able to flex toes slightly, but the foot is still markedly 'dropped.' There is slight response to Faradic current in the forearms." In January, 1894, he was able to sit up, and use his hands well, but they were weak. There was no pain, sensation was good in the hands, and fair in the feet. The toes were still flexed, and pressure to extend them caused pain, especially in the calf. There was complete control over the sphincter ani, but the urine was still troublesome, although control of it was improved.

He left the hospital the following spring considerably improved, but still unable to walk. He could stand with support, but the extension of the toes gave him pain in the feet and calves.

In this case the "pins-and-needles" sensation was not very marked for so severe a case, and there was not so much loss of mental power as is usual in alcoholic multiple neuritis; there was some dullness and apathy, but apparently no more loss of memory than age would account for. Otherwise the symptoms were very marked and typical. The weakness of the sphincter ani indicates that the neuritis extended into the lower part of the spinal cord. As he lived alone, confirmation of his statement of the quantity of spirit he took daily could not be obtained. He always told the same story, however, and seemed quite clear-headed. If his story is correct, it is difficult to see how the amount of alcohol taken could cause such extensive disease of the nervous system. Many men drink much more and just as regularly without disturbance of the peripheral nerves. The same is true, however, of diseases of other organs, of cirrhosis of the liver, for example. There must be some predisposing condition or some additional poison to enable the alcohol to cause such changes.

In the case of a man who entered the Toronto General Hospital seven years ago for alcoholic peripheral neuritis, the history differed materially from the foregoing case:

Case II.—He was about thirty-five years of age; drank freely, but irregularly; was exposed to changes of weather. He had been drinking heavily and slept out all night. It was early autumn, and the nights were cool, but without frost. He found his legs weak next day, with tingling in them, and he was soon unable to walk. The hands were slightly affected. When brought to the hospital he could neither stand nor walk, but could move the feet and toes while sitting or lying. On walking with support, the walk was ataxic. There was no atrophy. His mind was not materially affected, not more so than is usual in alcoholic cases. He made a complete recovery within three months.

In the first of these cases the symptoms are typical of peripheral multiple neuritis; the numbness and "pins-and-needles" sensations, the burning pain, the tenderness to deep

pressure, the weakness amounting to complete paralysis in the most remote parts, the atrophy, the loss of superficial and deep reflexes, the loss of electrical reaction, together form a symptom-group that cannot be misinterpreted. The absence of a history of excessive indulgence in alcohol, and of material mental disturbance, might be considered as ground for questioning it as one of alcoholic neuritis. Arsenic is the only other cause to which to attribute such an extreme attack. The mental apathy and diminished pain discriminate this case from arsenical cases, as will be seen in the following examples of arsenical peripheral neuritis:

Case III.— A man somewhat over sixty years old had a rather deeply seated tumor below the left parotid region, which a so-called cancer-doctor pronounced a cancer, and applied a plaster. The plaster was reapplied several times at intervals of two or three days, followed by poultices. By this time numbness, with painful “pins-and-needles” sensations, appeared in the fingers, soon followed by similar signs in the feet. Weakness followed, and in a few days he was unable to walk or help himself. The numbness, pain, and tenderness also grew much worse. This was the history he gave when received in to the hospital about two weeks after the appearance of the symptoms. His condition then was one of utter helplessness. The muscles of all the extremities were much atrophied, the atrophy being more marked in the feet and legs than in the thighs; and in the hands and forearms than in the arms. Ordinary sensation was lost in the feet and hands, and greatly blunted in the proximal parts of all the limbs, but there was great sensitiveness to painful impressions of all kinds. He was not able to bear even the weight of the blankets on the feet. There was a constant burning sensation in the hands and feet, especially at night, so that opiates were necessary to secure sleep. The skin was glossy, and disquamated rather freely, these changes being most marked in the peripheral parts. There was great sensitiveness in the muscles to deep pressure. The mental condition, in contrast to the alcoholic cases, was clear and active, as in health.



There was very little improvement for three months. After he was able to stand, the feet were so tender that he could not walk, and the hands so tender that holding a cup to drink was painful. The foot-drop was not nearly so marked as in Case I. He left the hospital able to walk and to attend to his dress and other wants, although with much pain and difficulty. He returned some months later to have the tumor treated, considerably improved, but still far from well. The ultimate result I am unable to give, as he has been lost sight of.

Case IV.—A young man, aged twenty-two, blacksmith, entered the Toronto General Hospital, September 29, 1894, under the care of Dr. J. L. Davison, who kindly permitted me to see the case. At five o'clock on the morning of September 8th, three weeks before admission, he ate some pie in the pantry at his boarding-house. Half an hour later he became nauseated, and on inquiry found that the pie had contained a large amount of "Rough on Rats," a mixture consisting of about fifty per cent. arsenious acid, which had been placed in the pantry to poison rats. An hour later he began vomiting, without straining. There was no pain but considerable depression with free perspiration. He worked until eleven o'clock. Then he sought advice, and was given emetics. He had no diarrhoea. There was marked metallic taste in the mouth, no appetite. He felt fairly well next morning, and went out to sit in the sun. He soon became faint and perspired profusely. The breathing was slow. He lay down, sucked some ice, and soon revived.

At the end of the first week a tingling sensation began in the hands and feet; a few days later, trembling at the knees, with much weakness. He found it difficult to hold a cane. Hands and feet became very tender, and weakness increased. He lost flesh rapidly, especially in the extremities. There was much burning pain, most marked in the feet, and there were darting pains down the legs.

He was able to be about until September 26th, when he

suddenly collapsed in the afternoon, and was unable to stand. He partially recovered in two days, and was able to stand again, but the power disappeared the next day, and he was unable to use his limbs or stand for eight months.

On admission to the hospital his extremities were much wasted. There was very little power in the arms, and still less in the legs. The skin was harsh and dry and desquamating. There was much numbness in both hands and feet. Ordinary sensation was almost lost, but there was great sensitiveness to deep pressure. Heat and cold were felt as painful impressions. All reflexes were lost. His mental condition was clear and active. Pain disturbed his nights.

The wasting, tenderness, and paralysis increased during the next few weeks, and two months later paralysis below the knees was absolute, and almost so below the elbows. The thigh-muscles were much wasted, but retained a little power. But pain was much less and only slight "pins-and-needles" sensations remained. His appetite and digestion were better. Reflexes of all kinds, including electrical, were, of course, absent.

Six months after poisoning improvement began, and has continued steadily since, so that now, eighteen months after taking the arsenic, he may be considered quite recovered. There is still slight numbness in fingers and toes, and the knee-jerk is absent. The muscles of the anterior tibial region of the right leg are still weak, and have not regained their full size. They react only to a strong current (Faradic). In walking the foot is easily turned under him, and he cannot raise the toes freely. All the other muscles have completely recovered.

This is a very remarkable case of arsenical neuritis, and a no less remarkable case of recovery from arsenical poisoning. To the dilution of the arsenic with the pie he no doubt owes his escape from a gastritis that would have proved fatal.

In both of these cases the history is typical of arsenical neuritis. In recovery also their course was regular — the

power of motion returned before the electrical reaction, and the electrical reaction before the nutrition. It is interesting to observe power of motion gradually being restored long before the muscles show increase in size.

These cases also illustrate the remarkable recuperative powers of nerve-tissue. There had been extensive degeneration of fibers, requiring months to become complete, followed by months of apparent quiescence, and then came the signs of gradual regeneration, requiring many months to become complete.

To these cases I shall add one of mild neuritis, probably due to arsenic taken in medicinal doses. It was a case of pernicious anemia I published in the *Medical News*, October 11, 1890.

Case V.—Dr. P. was extremely ill with pernicious anemia. He had been vomiting incessantly when first seen. As soon as the stomach would tolerate it he was given liquor arsenicalis, 1 minim every three hours, and this was increased gradually until he took 45 minims per day. In two months he was able to return home. He was directed to intermit the medicine for a few days from time to time, but in his anxiety to make a complete recovery, he took it continuously. In the third month of taking the medicine numbness and tingling of the hands and then of the feet began. After two or three weeks sudden advent of pain and a purpuric rash occurred. When seen about two weeks later, the anesthesia and tenderness were sufficiently marked to make the hands awkward and walking irksome. It took about three months for him to recover.

The recurrence of neuritis as the result of medicinal use of arsenic is not very rare; nevertheless, the drug is often given even more freely than in this case without any toxic effects. The sudden onset of general pains and the purpuric rash indicate the existence of some other poison in the blood, possibly of a lithemic or rheumatic nature, and this, or the toxic agent producing the pernicious anemia, may have caused the neu-

ritis. I have a patient under observation at present in whom peripheral neuritis occurs in connection with pernicious anemia.

Case VI.— A married woman, aged forty, of good family and personal history, has been ailing for over two years, growing gradually more anemic. She lost a daughter last year, after which her condition grew much worse. I saw her first on January 4, 1896. She was then very prostrate, her body fairly nourished, but her limbs were much wasted. She was unable to sit up. On careful repeated examinations the blood was found to contain only between 400,000 and 500,000 red corpuscles per c. mm., and hemoglobin twenty-two (Fleischl). There was some numbness with tingling of the hands and feet. The following week she had great pain and considerable swelling in the feet, the right being most affected. The feet and legs were partially anesthetic, and very tender, especially to deep pressure. It was thought at first that probably phlebitis was the cause of these symptoms, but there was no special tenderness along the course of the veins. The temperature varied from 99 to 102 degrees F. There was some improvement in a few days, and, within a month, the pain and swelling had disappeared, but the numbness and tenderness persisted and have not wholly disappeared yet. Her general condition has greatly improved, the blood-count being now over 3,000,000 corpuscles per c. mm. Sensation is not yet normal, and the legs especially are still much wasted. She is able to walk a little, but the knee-jerk is absent, and there is no response to a strong Faradic current below the knees, and only faint response in the forearms.

The cause of the neuritis was probably the same poison in the blood that caused the destruction of the red corpuscles. I have not met with a case of multiple neuritis occurring in pernicious anemia before this one, nor have I found it referred to in the literature of that disease. It is just possible that in Case V. the neuritis was due to the poison of pernicious anemia and to the arsenic. In isolated peripheral neuritis a

local exciting cause is the chief consideration, and is of importance in proportion as the neuritis is circumscribed, even in these cases, however, a predisposing condition probably always exists. Of these predisposing causes it is known that gouty and rheumatic conditions are among the most frequent. Lithemia should be added to these as probably one of the most frequent causes rendering the nerves liable, to become inflamed from slight local causes, such as cold and traumatism. Patients seeking advice for "torpid" liver, dyspepsia, constipation, etc., not infrequently complain of numbness and tingling in a hand, a foot, or some other part. They are usually much concerned about these symptoms, fearing that they may be the precursors of paralysis. Lithemia is probably the most frequent predisposing condition leading to the development of inflammation of the nerves, after injury to them, as often occurs in dislocation of the shoulder.

In the treatment of this disease, the first duty, of course, is the removal of the cause — the "etiological treatment." The cause may be easily demonstrated, when, as in most cases, it is alcohol, lead, or arsenic; it is more obscure in uric-acid poisoning, and in diabetes. For the neuritis we have no specific remedy. Anodynes may be required to relieve the pain. Rest and protection of the parts from injury are of importance.

Strychnine is regarded by some as a specific, and some satisfactory results are reported from its use, especially by subcutaneous injection gr. 1-20 to 1-30 twice daily. It favors the return of normal nutrition by stimulating the irritability of the affected muscles. Probably it also stimulates the multipolar cells of the spinal cord, so that they may impart greater energy to their fibers, and thus enable them to resist further destruction and hasten repair in those already degenerated. Electricity may, to some extent, effect the same purpose, but it is doubtful if it has any further effect than to stimulate contractions of muscles, if they react to the stimulus.

As soon as tenderness has abated massage and baths will

prove useful in hastening the removal of excrementitious matter, and stimulating the nutrition by increasing the flow of blood through the affected parts.

In the later stages the rousing of the patient's latent energies and encouraging him to make voluntary use of the muscles, as far as possible, will do more to accomplish the objects in view than any other plan of treatment.

With few exceptions the prognosis is good; recovery will be long delayed in severe cases, and in a few acute cases a fatal termination occurs within a few days or weeks. In the first case I have related, full recovery did not probably take place on account of age.

Bad cases grow worse for weeks or months and then remain stationary for a time. Complete recovery requires several months.

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It is a well-observed fact that the less a man knows of inebriety and of its clinical varieties and causes, the more positive he is of the remedies which will cure it. The man who has had phenomenal therapeutic success in the treatment is clearly not well acquainted with the conditions he is trying to remove.

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Prof. Schooling, in a recent paper before the Royal Statistical Society of London, says that there are eight principal causes of insanity, and the percentage of each as regards every 100 of lunatics as follows: Drink, 33.6; domestic troubles, 15.1; mental anxiety, 13.4; old age, 13.2; adverse circumstances, 13; accidents, 6.5; religious excitement, 4; love affairs, 3.2.

## ALCOHOLISM AS A DISEASE.

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BY **GEORGE H. McMICHAEL, M.D., BUFFALO, N. Y.**

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Although the battle with alcohol still continues, there are signs that the community is ceasing to regard alcohol as a food. It is no longer considered the duty of a "gentleman" to drink wine, and in a hundred years people will wonder how the consumers of gallons of beer every week managed to live as long as they did.

The hereditary nature of the abnormal condition of which inebriety is the outward sign is not understood, even by physicians, as it should be. It is still, I regret to say, looked upon as a vice acquired by the individual, the outcome of voluntary wrong-doing. In some few cases this may be true, but in the majority of instances enquiry into the family history will reveal the presence of an inherited taint, such families usually showing a neurotic condition. No position in the social or intellectual world is, or even has been, entirely free from the tendency towards alcoholism, and a study of the family history of the great men who have fallen victims to alcohol will show that the cause has been identical with the cause among the most obscure of mankind — viz.: — that a degenerated nerve-condition has been inherited which renders the sufferer specially susceptible to this and allied neuroses, such as epilepsy, idiocy, and suicide. The inheritance of an unstable nervous system makes the individual easily affected by what I must call "alcoholic surroundings." In other words, the provocation to drink which would have no influence upon an ordinary stable nervous organization, is sufficient to turn the neurotic into a confirmed drunkard.

Some evidence of the hereditary character of the pathological condition of which I am writing, is seen in the pertinacity with which the disease adheres to the sufferer in spite of medical attention. An acquired disease often gives way quite quickly when judicious treatment is resorted to, but an inherited nervous disorder is far more troublesome and may require treatment carried on through several generations.

It is admitted, of course, that habitual inebriety causes deeper degradation of the individual, more acute suffering in the family, and a greater expenditure by the taxpayer than any other disease or vice. It is nothing short of a curse to the community, for it is the starting point of both crime and pauperism. Moreover, there is no other dyscrasia which destroys the moral sense with such rapidity and such thoroughness — unless it be epilepsy, to which it is allied. The drinker at first expresses shame and regret for his weakness, and for the disgrace which it brings upon his family. But this feeling seldom lasts long, and the moral nature — never strong in such persons — becomes undermined, and we find the man or woman who, a short time before, might have been absolutely relied upon, now transformed into an unscrupulous perverter of the truth, without any sense of honor, and ready to do almost anything to obtain the poison with which to satisfy his pathological craving. Once on the down grade, a level is soon reached where ordinary honesty ceases. The descent of a woman, however, fortunately *comparatively* uncommon, is even more rapid than that of a man.

In spite of all that has been written upon alcoholism, the subject continues to be misunderstood, and the law treats the victims of the disease exactly as it treats thieves or other law-breakers. As might be expected, this method very seldom does any good. Proof of this may be found in the remarkable regularity with which the inebriates reappear, time and time again, at the police court. These persons are not responsible for their actions, and the law of the state should recognize the fact and act accordingly. They are as helpless to



fight against the craving for alcoholic drinks as is the sufferer from phthisis to fight against his cough, and their punishment is about as sensible as it would be to punish an epileptic, for creating an obstruction by falling down upon the sidewalk. Our condition will not be materially improved until habitual inebriates, instead of being fined, or sent to prison, being permitted to propagate their species when they are at large, are confined in an institution where they will be able to do useful work and to enjoy themselves as they choose, but where indulgence in alcohol and narcotics will be impossible. The sexes will, of course, be kept apart.

The craving for alcohol takes one of two forms. Either habitual drunkenness, in which case the victim is never really sober if drink is by any possibility obtainable, or dipsomania, in which the disorder takes a periodic turn, appearing at intervals — long intervals at first, which become shorter and shorter by degrees. In the latter case the drinker is quite irresponsible while the attack lasts. For a time the forms of the disease are very different, but as the dipsomaniac's periods of rationality become shorter, the differences between the disorders become much lessened or disappear altogether. Nevertheless, I think that the dipsomaniac is generally an excitable, impulsive, and active individual, while the chronic "soak" is a slow, lethargic, and obtuse specimen of humanity. The latter is most likely to die from disease of the liver, kidneys, heart, or brain. The former will probably die of delirium tremens, or will meet with a violent end. If life is sufficiently prolonged, gradual weakening of the mental faculties, terminating in complete dementia, may be anticipated. Attacks of maniacal excitement or delusions sometimes precede actual dementia. I shall return to the diseases produced by alcoholism and shall try to give an account of some of them.

I have expressed the opinion that the state should provide suitable "state hospitals" for drunkards, in place of punishing them as criminals. But until that is done, the physician must do all that he can — often gratuitously — to cure

these unfortunates. It is hardly necessary to say that wealthy drunkards would, in any event, always be placed in a competent physician's hands for treatment, if the relatives could control the matter. As a rule, they cannot.

In every form of insanity, the disease is more dangerous in the mother than in the father, as far as the next generation is concerned. This is a good and sufficient reason why the daughter of drunken parents, very often attractive to some men by reason of their excitable, vivacious, neurotic manner, should be carefully avoided by young men in search of wives. The man who marries the daughter of an inebriate, not only endangers his own happiness, but runs the risk of entailing upon his children an inheritance of degradation and misery.

No woman should marry a man who, even occasionally, drinks to excess. Further, the disposition of the sons of drunken parents ought to be investigated before any girl becomes engaged to one of them. This is one instance in which long engagements are not to be condemned, for, if the man has inherited the alcoholic craving, it may become known in time, and his fiancé may be saved from the most terrible fate that I can think of — becoming the wife of a drunkard.

One word more before I leave this aspect of the subject. As the majority of inebriates are sufferers from a disease which is partly the result of hereditary predisposition, it is foolish for any woman to marry a drunkard in the belief that she can reform him. If women would realize that alcoholism is a disease and not a vice, they would understand that, while the spirit which prompts their devotion and self-sacrifice is praiseworthy, yet the probability of its success is very remote. No doubt there are women who have made this experiment and who have managed to "reform," as it is called, confirmed inebriates; but such cases are by no means numerous. While it might not be right to attempt to interfere with any effort to benefit any representative of suffering humanity, it must be remembered that the fate of the next generation is at stake and that unborn children certainly have rights although we

are very apt to disregard them. Admitting, then, that anyone is at liberty to risk everything, even life itself, to benefit another, nevertheless it cannot be said that anyone has a moral right to jeopardize the future of a family to satisfy any instinct or feeling of affection, however noble it may be. If what I have written is true, no woman is justified in marrying a drunkard.

The diseases caused by the consumption of alcoholic drinks now claim attention. Two points must be remembered: The first is that every member of the alcohol family, if used regularly every day as a beverage or as a food, will cause disease, unless the quantity is quite small. For example, beer contains from four to nine per cent. of alcohol; the consumption of more than four glasses of it regularly every day is likely to produce disorder of the digestive system, followed by more serious diseases. The second point is that, between the man who has saturated his system so as to be able to drink a dozen glasses of beer at a sitting without becoming incapable, and the man who becomes "dead drunk" on half that number, there is no scientific difference; both are inebriates in the true sense of the term. The alcohol here referred to is ethyl-alcohol, and the first result of its baneful action is, as is quite well known, dyspepsia. The symptoms are as follows: The action of the bowels is irregular, in some cases constipation, in others relaxation being a prominent feature. The appetite is capricious, and the skin, from being hot, becomes suddenly cold. Sleep is difficult to obtain and the mind is irritable. Such is alcoholic dyspepsia, a very common disorder among persons of both sexes who would be horrified at being classed as narcomanics, though that is exactly what they are.

Dipsomania is another — a much more serious complaint, due to alcohol poisoning. It is a craving for the poison until that craving becomes a mania. The most depraved animal tastes are developed and complete annihilation of all moral faculty appears. There are two forms of dipsomania, as I mentioned in the earlier part of this article, the continuous

and the intermittent. Without abstinence from all alcoholic drinks, recovery is impossible. The end is usually nervous degeneration, followed by mental and physical death.

Delirium tremens is an acute delirium brought on by the drinking of alcohol. Its symptoms are known to everybody. Terrible apprehensions and the images of various spirits, especially the devil, are often present. Thirst, and craving for drink, maniacal raving, at last coma, all come in turn. Through all this there is present an uncontrollable action of the muscles, increased by an external irritation. The presence of other alcohols, in addition to the ordinary ethyl-alcohol, is believed to assist in bringing on an attack of delirium tremens.

The heart and other organs are injured by alcohol, both functionally and organically. Whenever a distinct effect is made upon the system by alcohol, the fact is always indicated by the pulse. The action of the heart is quickened for a time, afterwards becoming enfeebled until another dose of the poison is taken to revive it. Alcohol narcomaniacs, therefore, usually present an irregular state of the circulation, which is at one period jaded, at another excited. In time this becomes the ordinary condition, supplemented by a persistent functional derangement which extends throughout the vascular system. This functional disorder of necessity leads to organic changes of the heart and the circulation. The heart from continued over-action becomes dilated, and its valves are relaxed. The membraneous structures which envelop the organ are thickened, rendered cartilaginous, and occasionally calcareous. The valves, which consist of folds of membrane, lose their suppleness, and valvular disease has "come to stay." The muscular fibre of the heart is replaced by fatty cells so that the power of contraction is greatly reduced. These derangements are liable to cause death from sudden failure of the heart itself, from rupture of the blood-vessels, from effusion of blood into the brain, producing apoplexy, or from effusion of blood into the kidneys — or lungs — causing interference with the func-

tions of those organs. There is always danger of the heart failing to do its work, for alcohol has made it inefficient.

Alcohol has an injurious influence upon the blood, since its presence interferes with proper oxidation. The corpuscles undergo pathological changes, such as becoming irregular in shape or notched at the edges. The plastic portion of the blood is subjected to two distinct modifications. When it is freely diluted with alcohol, the plastic part of the blood flows too easily from the vessels and injects the surface of the body, giving the skin a mottled appearance, which, in cold weather, through the relaxation of the vessels, turns to blue, or lead color. When the blood is strongly charged with alcohol, the plastic part of it, instead of being reduced, may undergo coagulation, which impedes the course of the blood in its circulation through the finer vessels and, perhaps, through the heart.

The nervous system cannot escape injury from the ingestion of alcoholic drinks. It fails to receive correct impressions; it fails to send out correct orders — it fails to receive proper rest. As a result it is, at times, hypersensitive. It hears murmurs, or other sounds; it sees spots and shadows — unless it is so blunted by excess as to be oblivious to impressions to which it ought to be thoroughly alive.

A common functional derangement of the nervous system due to alcohol is insomnia. The action of the poison is to keep the vessels of the brain relaxed, and no inebriate is, therefore, a natural sleeper. What usually happens to him is as follows: Either his brain undergoes an unnatural activity, sleep coming and going, or a drink of alcohol being consumed, a congestion of the brain is produced, resulting in a sort of modified apoplectic condition which is recognizable by reason of the deep snoring and the frequent “startings.”

Alcoholic hysteria is more common in women than in men. Its symptoms are quite well known — emotional excitement from slight causes, ringing noises in the head, spots before the eyes, uncertain action of the mind, loss of will-power.

The continued use of alcohol causes the nervous centers to

undergo degeneration, and the most serious diseases known to medical science ensue. Apoplexy is one of these, epilepsy is another, which is usually in a decided form, and often proves fatal in a very short period.

Alcoholic paralysis is known to every physician. When a person gets drunk for the first time, he passes through stages of moderate excitement, of extreme excitement, of depression, and, at last, enters a state of temporary paralysis of both mind and body. In a similar manner when a person indulges in alcoholic drinks for a period of years, he passes through a series of stages — first, excitement; second, excitement, followed by depression; third, marked depression; finally, paralysis. Alcohol is the chief cause of the general paralysis which is to be found in lunatic asylums. I think that there is little doubt that the action of the poison is chiefly upon the membranes which cover the great centers of the brain and spinal cord. There are two forms of alcoholic paralysis. In some cases it is local, one limb or one side of the body alone being affected, the mental faculties being, at first, quite normal. In other cases it commences with a stage of muscular feebleness, followed by mental incapacity and by loss of all volitional power. The muscles may retain some irritability, but the will is unable to control them.

Any one who is suffering from alcoholic disease is specially liable to the rupture of a blood-vessel of the brain; first, because of the weakened state of the vessels; secondly, because of the pressure to which the vessels are subjected during periods of alcoholic excitement.

Alcohol produces disease of the liver and of the kidneys, because these glands are most concerned in the elimination of any poison, and are always, until they are structurally deranged, engaged in removing it from the body. Cirrhosis of the liver requires no description. It affords a most striking illustration of a structural disorder induced by a known specific cause.

The numerous diseased conditions of the kidneys known as

“Bright’s disease,” are quite frequently due to alcoholic poisoning. Calculus is, in very many instances, the result of excessive indulgence in malt liquors.

Alcohol, of course, renders the individual specially liable to the attacks of the bacillus tuberculosis. This disease demands no attention, being quite well known.

The skin disease called *acne rosacea* is common among drinkers of middle age.

Everybody knows that the lunatic asylums are filled with persons who, but for alcohol, would be quite normal. Most educated men are equally aware that many inebriates are sterile, or that their children are puny and emaciated, in addition to being liable to attacks of almost every known disorder.

Ethyl alcohol, I have shown, produces a large number of diseases — probably twenty; to describe them all in detail would require a book of considerable proportions.

Even those of us who believe that “acquired characteristics” are transmitted, are not foolish enough to imagine that the process of evolution will produce a race that can tolerate alcohol. We knew too well that families in which there are inebriates have a marked tendency to die out.

There has been in the past a very strong belief that alcoholism was an incurable disease. This belief is passing away, although there are cases for which the physicians can do very little. As I have previously suggested, these are cases in which “the doctor should have been called in a hundred years earlier.” According to Von Ziemssen, “we possess no medicine which can act as a direct antidote to alcohol or neutralize its pernicious effects.” Dr. Hammond, in the *North American Review* for September, 1891, wrote: “It may be asserted, with perfect confidence in the absolute correctness of the assertion, that there is no medicine or combination of medicines that will cure a person of the habit of drunkenness; that is, that will destroy his or her habit or appetite for alcoholic liquors. It may be incidentally stated with equal positiveness, that there is no habit, whether chloral, opium, hashish,

or any other intoxicating substance that can be cured by medicine; and even further, that there is no habit or appetite whatever to which mankind is subject that can be got rid of by drugs, whether it be drinking coffee, or smoking tobacco, or taking a walk every day at a particular hour, or going to bed at a certain time."

The accuracy of the above statement is, I think, generally recognized. Indeed, the medical profession is beginning to realize that drugs alone cure very few diseases. Insanity and kindred complaints, such as a desire to commit suicide and a craving for some poison, are much too deeply rooted to be removed by mere ingestion of medicine. It is possible, of course, that in some instances the incessant thirst for alcoholic drinks can be temporarily satisfied by the use of some substitute; but two questions necessarily arise. First, is not this temporary "cure" as bad as the disease? Secondly, how long will the "cure" last?

An alcoholic debauch closely resembles an attack of insanity. The course of a "spree," as well as the symptoms, is similar to the course of insanity. Inebriates are seldom conscious that they are drunk, any more than lunatics are conscious of their insanity. Let us trace the disease known as dementia paralytica. First come the visions of personal grandeur, then mental perversion, finally, coma and paralysis. No medical knowledge is required to see how closely this corresponds with the progress of the drunkard's disorder, whether you take a single debauch or the inebriate's whole life. An eminent alienist — I forget whether it is Esquirol or Krafft-Ebing — defines insanity from the anatomical point of view, as a diffuse disease of the brain accompanied by nutritive, inflammatory, and degenerative changes. To this I want to add a definition of the insane diathesis, viz.: an unstable condition of the nervous organization, characterized by a desire for personal gratification and an entire disregard of the welfare of the rest of the community. Now, I do not say that all narco-maniacs are insane; but I do say that many of them are, and



that very, very few men have become drunkards who did not possess the insane diathesis.

If my opinion, as expressed above, is accurate, it is as absurd to expect medicine alone to cure alcoholism, as it would be to suppose that bichloride of mercury would cure delusions.

The inebriate should be under the personal supervision of the physician, who should have complete control of his patient during the entire course of treatment. If this plan be adhered to, and the physician understands, not only the disease, but also the temperament of the individual patient, moral suasion and the judicious use of hygienic measures, aided by medicines, will, in the majority of cases, effect a cure. The prescriptions suggested in the works of Drs. Norman Kerr and Crothers will be found of assistance, although, by themselves, they would accomplish very little. I am anxious not to be misunderstood. The authorities named realize, just as well as I do, that the drugs themselves will not cure inebriety, and they merely recommend certain medicines as an adjunct to the moral and hygienic treatment.

In conclusion, I would say that the employment of the physician in aiding the drunkard is something comparatively new. Until a few years ago the subject was not supposed to be within the province of anybody, except the drunkard himself, his relatives, and the religious minister. As a result, inebriety increased almost all over the world. Since the medical profession took hold of this remarkable disorder, its physiology and a modicum of its pathology have been gleaned; we are now trying to learn its therapeutics. My belief is that the prospects of the slow but steady decrease of alcoholism are by no means remote.

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 WHY DO MEN DRINK? \*
 

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 BY **STEPHEN LETT, M.D.**,
 

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*Medical Superintendent, Homewood Retreat, Guelph, Ontario, Canada.*


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In reply to this question the moralist will probably tell you that men drink because social custom has instituted drinking as a mark of friendship and hospitality. He will also enumerate a number of causes leading men to imbibe alcoholic liquors, such as joy, grief, business transactions, good fortune, bad fortune, extremes of temperature or inclemency of the weather, etc., and so far as the vice aspect of the question is concerned no one can gainsay these causations. But I ask the question from a physician's standpoint, and science answers, "Because there is pain."

And what is pain? It is a feeling of disturbance within us. The perfectly healthy man has no pain. As he departs from the standard health, in like proportion does a feeling of disturbance or pain within him manifest itself. In alcohol we have a drug that temporarily paralyzes sensation and consequently deadens pain. Therefore, when this disturbance, this unrest, this pain is present, large doses of alcohol are consumed and temporary relief is obtained.

When pain returns, as it surely will when the paralyzing effect of the alcohol passes off, the natural impulse is to again invoke the god that spirited it away and once more revel in the profound pleasurable and satisfactory sensation derived from the relief of pain. But at what a cost is this elysium of happiness thus obtained purchased! Alluring, subtle, deceitful, and destroying, seeming to cure while it only masks

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\* Read at the July meeting of the English Society for the Study of Inebriety, London, Dr. Norman Kerr, president, in the chair.

a poison pleasing to the senses, yet slowly, surely, and secretly working destruction. Thus, then, pain from a scientific point of view is a prolific cause of inebriety; it is a physical cause, which, if we rightly understood and could successfully combat, we would then be able not only to cure, but also prevent much of the inebriety of the present day.

Whence comes this pain? There are many sources and kinds of pain, some of which the individual is responsible for, and some of which he is not. Could I enumerate its origins and varieties the list would be long and tedious; but there is one source of pain, disquietude, unrest, which it is important to realize. It comes from a secret hidden source and is of a nature that few understand or take into consideration; when present it is seldom recognized, or, if perchance the enemy is observed, one's eyes are shut to the danger and arguments are adduced to try and demonstrate that in the particular case under consideration it is a myth; nevertheless, it stands forth in all its hideous reality, like a sword suspended overhead ready to drop on its victim at any moment. I refer to the unstable nervous organization — the hereditary taint which intemperate parents bequeath to their unfortunate offsprings.

Hereditary transmission and its relation to causes and effect in the production of inebriety is most intimate; it has been shown to be a prolific factor in the production of this disease, a factor which the unfortunate offspring is not responsible for, one which he cannot get rid of, and one which entails upon him a lifelong struggle. The man who is loaded down with a burden of this nature, whose nervous system is constructed with the impression of alcohol indelibly stamped upon it, is truly to be pitied; he stands in need of our sympathy and aid, and should he successfully do battle with his ever-tormenting foe, assailing him on all sides and crying out in the voice of pain for stimulants, he is indeed a hero and is deserving of as much praise as the general who conquers his country's enemy.

Dr. Willard Parker thus refers to this subject. He says: "We must not omit to speak of the offspring of the inebriate.

His inheritance is a sad one; a tendency to the disease of the parents is indeed as strong, if not stronger, as is the case with that of consumption, cancer, or gout. This tendency," he goes on to say, "has its origin in the nervous system. The unfortunate children of the inebriate come into the world with a defective nervous organization."

Dr. Echiverria, of New York, in the *American Journal of Mental Science* for January, 1881, gives the following statistics, in reference to the histories of 68 males and 47 females, who had experienced alcohol in some form: The number of children born to these parents was 476, and of this total 23 were stillborn, 107 died from convulsions in infancy, 37 died from other maladies, 3 committed suicide, 96 were epileptic, 13 congenital idiots, 19 maniacal, 7 general paralytics, 5 had locomotor ataxia, 26 hysteria, 7 partial paralysis, 9 St. Vitus' dance, 7 crooked eyed, 3 deaf, and 19 scrofulous or crippled; of these children, 205, or nearly 50 per cent., have exhibited drinking tendencies.

Bearing upon this condition of affairs, the Rev. Mr. Horsley, late chaplain to H. M. Prison at Clerkenwell, testifies that, "at one time there were in separate cells for being drunk a grandmother, a mother, and a daughter, the latter nursing a baby." "What chance," he asks, "had the baby of escaping the scourge her progenitors had twisted and applied?"

From the above data, which could be easily supported by further and abundant testimony not only by the published statements by those who have made a study of alcohol and its effects, but also as furnished by the records of my own and kindred institutions, you cannot fail to note what a fearful factor in the production of disease and suffering intemperance is. Of all the nervous diseases which may be inherited there are none more surely disastrous in their results than that produced by alcohol. How can children so brought into the world be called "healthy"? How can it be said of such that harmonious action is going on everywhere within them. Is there not a condition of disquietude, unrest, pain?

Closely allied to the hereditary taint of inebriety, and almost as certain to engender a craving for alcohol in the child is the practice so common of feeding children on nourishment surcharged with alcohol. Many mothers believe they cannot do without a glass of ale at bedtime, and frequently imagine it is necessary for them to take several during the day. It is unnecessary to point out to this meeting the fallacy of such a belief.

A most painfully interesting communication was read at one of the meetings of the British Medical Association by Dr. T. M. Madden, Physician to the Hospital for Sick Children, Dublin, entitled, "Alcoholic Diseases in Children," in which he gave particulars of a marked case of delirium tremens, in a boy aged eight. In the discussion which followed Dr. Barlow recited some powerful facts as to infantile alcoholism, gathered from his experience in the Children's Hospital, Great Ormond Street. He had seen the evil of small doses of gin given to nursing babies for flatulency. He also found it customary among the poorer classes to give young babies a daily quantity of beer. He had seen several well-marked cases of hob-nailed liver in children of tender age from this cause and gave particulars of a very clear instance. It was that of a young child of an apparently healthy mother who was able to nourish it and in good circumstances. From six months old the child was given a tablespoonful of beer twice daily, and from nine months old a teaspoonful of gin in water daily. The child died, and post-mortem examination revealed the most typical hob-nailed liver that Dr. Barlow had ever seen.

Having thus briefly glanced at a few of the evils of alcohol and its deleterious effects when administered to young children, having also briefly noted the disastrous results consequent upon intemperance in the parents, why, then, we may ask, should children of such tender age be submitted to the impress of alcohol? An age at which growth and development are in active progress, and consequently the very time when impressions are most readily received and lasting. Is it any wonder

that such children so brought into the world and so fed are stunted in physical, moral, and intellectual capabilities? How careful, then, should parents be to hand down to their children a pure, healthy, untainted inheritance, and, having done so, to as far as in their power lies see that such an inheritance is preserved in all its integrity, purity, and loveliness.

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*Discussion.*

Dr. Hazell expressed his gratification at the teaching in the paper just read. Especially could he support what Dr. Lett had stated as to inebriate heredity. Heredity played the greater part in the development of the disease of inebriety. Even in young children he had repeatedly seen evident marks of alcoholic transmission. Such alcoholized children were the subject of nervous ailments, skin diseases, dyspeptic symptoms. Infants were too apt to be poisoned by alcohol at the breast. One infant, four days old, directly after the mother took stout, was seized with colicky pains and kept shrieking.

Surgeon-Major G. K. Poole, M.D., agreed with Dr. Lett that pain was a great cause of inebriety. People craved for relief, and they secured it for the time by drinking intoxicants, till the vice became a confirmed disease. They ought to redouble their efforts to remove temptation, and to teach the poisonous character of narcotics. Even in gouty paroxysms alcohol soothes the pain, and thus gouty subjects are liable to fall into drunkenness. Thus physical causes lead to inebriety, frequently making habitual drunkards.

Mr. F. J. Gray said, that at his establishment, he was struck by the quick recovery, from the entering state of wretchedness, of the worst and most distressed drunkards. Abstinence was the cause of this rapid improvement. Many causes contributed to inebriety. Strong drink was fascinating and cheap, and to be had everywhere. The wife of one inebriate had allowed her husband only 2/6 per fortnight, yet he had been continually drunk, he finally becoming semi-

delirious, with inability to work, and brain softening. The drink should be removed. Bands of Hope should be multiplied, and they ought to impress on the government the need for industrial homes for criminal inebriates.

Mr. Raper asked if the doctrine of alcoholic heredity were true, as its existence had recently been denied, and did the knowledge of it, if true, not tend to discourage the inebriates. He however saw great encouragement in the increasing attention now being paid to the whole subject.

The president, Dr. Kerr, replied that for him to doubt the existence of the law of inebriate heredity would be as impossible as to doubt the law of gravity. Skilled observers saw the law in operation every day. About half of his inebriate cases had exhibited this feature; and he had no doubt that, if the family history could have been accurately traced, a much greater proportion of inebriate transmission would have been found. He had not found an intelligent explanation of the fact depress any patient, nor need it. Ignorance was the mother of superstition with all its terrible depressing influences, while knowledge cleared away the fears and forebodings of the fog of obscurity. To explain, especially in the earlier stages of inebriety, to the subject that he had certain predispositions, and that with this information he could so live as to counteract these tendencies, was to arm him for the struggle with weapons of precision and value. Dr. Lett had spoken sober truth, and had used the word "pain" in its comprehensive sense, inclusive of restlessness and unrest from any pathological condition. They gladly welcomed light on this difficult subject from all parts of the world, especially from our colonies, and Dr. Lett spoke from experience in the treatment of this class of cases. On the proposition of the president, it was unanimously agreed to give a cordial vote of thanks to Dr. Lett for his valuable and suggestive paper.

EMPIRIC AND CHARLATAN EFFORTS TO CURE  
INEBRIATES.\*

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BY N. ROE BRADNER, A.M., M.D., PHILADELPHIA, PA.

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At the annual meeting of this association for the year 1889, held in the city of Brooklyn, in November of that year, you did me the honor of appointment as chairman of a committee to investigate a serious and growing evil, resulting from the sale of pernicious, fraudulent, and dangerous compounds, under the fair name of medicine.

I immediately entered upon the work with enthusiasm, and determination to do it justice, and the results were such as to astonish every person who was interested in the developments, including the writer himself, and some brief mention of, and reference to, the disclosures then made will necessarily be made at this time. To indicate how eminently important the subject was considered, even at that early stage of specifics for inebriety, permit me to here quote the opinion of one or two of the large number of eminent professional men, who wrote to me at that time.

Dr. Cyrus Edson of the Health Department of the city of New York, wrote as follows:

“DR. N. ROE BRADNER, Chairman: You have a splendid field for good work against a species of fraud that is nowhere so extensive as in this country. We have a host of these things on our market, some of which are only frauds, others, however, are worse, and I believe it should be made a felonious act to put such things on the market. I have no official charge over such matters, and cannot give you authoritative state-

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\* An address before The American Association for the Study and Cure of Inebriates, at a memorial meeting held at the New York Academy of Medicine, on November 20 1896.



ments. I am, however, entirely in sympathy with you, and will aid you to any extent in my power.

Yours faithfully,      CYRUS EDSON."

From Dr. E. A. Craighill, president of Virginia State Pharmaceutical Association, we received valuable information, including the following:

"DR. N. ROE BRADNER, Chairman: In my experience I have known of men filling drunkards' graves *who learned to drink* taking some advertised bitters as legitimate medicine. It would be hard to estimate the number of young brains ruined, if not destroyed, and the maturer opium wrecks from nostrums of this nature. I could, if I had time, write a volume on the mischief that is being done every day, to body, mind, and soul, all over the land, by the thousands of miserable frauds that are being poured down the throats of not only ignorant people, but alas, intelligent ones, too. I will be glad for you to command me. I would like to contribute by best effort, though feeble, to destroy what I honestly believe to be one of the curses of our day and generation.

Yours truly and respectfully, E. A. CRAIGHILL."

The report that I had the honor to submit to you after some months of investigation, concluded with two remarkable catalogues, the first comprising fifty (50) different proprietary preparations, sold for special usefulness in the reformation of intemperate habits, all and each one of which contained alcohol itself, and in enormous proportions, while the second catalogue comprised twenty (20) so-called opium cures, all of which, with a single exception, contained sulphate of morphine. Be it remembered also that these very samples which were analyzed for us by eminent chemists, with the above astounding results, were all obtained as for persons who had acquired the morphine habit. When it is thus remembered and realized that these nostrums were to have been administered as recommended for the cure of inebriety or the opium habit, the snare is seen, and becomes at once the most stupendous, insidious, and dangerous frauds ever imposed upon humanity, one of these very nostrums actually containing 35 per cent. alcohol

and one-fourth grain morphine to the ounce. This article is sold as a cure and preventive of both the whisky and opium habits, and, as here shown, and abundantly proven, is a vile mixture of both those deadly drugs,— a more satanical trap for innocent unfortunates than we have ever before known or heard of.

Certainly, a course more likely to produce addiction to either, or both, alcoholic or narcotic inebriety, could not be devised than the use of this concoction, under the circumstances, and according to the direction of the proprietors of this, the most hellish of all nostrums.

And now we have met together on this occasion to commemorate the organization of this association a full score of years ago, namely, on the 30th of November, 1870. In looking backward over twenty years of the past, we are constrained to pause and sometimes to fairly tremble as we are compelled to remember those things we fain would forget. In the history of the world, the past twenty years will ever occupy a most important page, even for the discoveries in electricity, — but, the great progress of the world in general, nor even as applies to our own profession, claims not our consideration now. One of the changes, however, that have been accomplished within the last twenty years, a most important one scientifically and professionally, and a change that is largely due to the influence of this society, is the status of the inebriate.

When Dr. Joseph Parrish and handful of kindred progressive spirits met in this city just twenty-six years ago to organize this association, inebriety was undefined. By some it was regarded as a sin, by others the influence of evil spirits, but most generally as an unmitigated vice. But our honored and enlightened predecessors then declared, and afterwards maintained, that inebriety is a disease. This doctrine was at first openly and persistently ridiculed by members of the medical profession; but that period of obscurity is passed, and today, and I think I am safe in saying that the important advance is chiefly due to this society, of establishing beyond con-

troversy the fact that inebriety is a disease. Had we done no more than this, our work would be far from vain or fruitless. We have shown to the satisfaction of the enlightened world that, like insanity, which was formerly and equally regarded with awe, as if it was the work or influence of evil spirits, so has inebriety. The great misfortune men have had to contend with since history began, by and through the diligence of this association, has been shown to be also disease, and, as such, amenable to treatment and susceptible of cure, just as insanity is. This, gentlemen, brings me to the very battleground of a warfare I would wage with certain men, if, indeed, they are worthy the name of manhood.

All professions have their scamps. The hypocrite invades the walks and the very pulpit of the ministry. The lawyers have their sharks, and we have our quacks. It is not, however, the ordinary, unimportant quack that we are after just now, but a special type, a sort of parasite that would both degrade and devour whom they profess to serve. Dyed in the deepest colors of villainy, but of prodigious dimensions, and alas, vast resources. All quacks are not all fools, neither are all well-informed men walking in the paths of rectitude. Would that it were so! But nay! some of the most wicked schemes to ply these nefarious ways have been invented and practised by men of culture, members of our own profession, men who had previously occupied honorable places among their fellow men. "Alas, how the mighty have fallen!"

This is truly sad; but, being true, let us not deceive ourselves concerning the power and character of the enemy with whom we would wage war. Now, if it were the work of a fool or some man of insignificant mental calibre, it would be but another instance of old-time quackery, but the case in hand is different.

We have already related how through the influence of this society and kindred organizations of professional men the doctrine is established that inebriety is a disease, and there is probably no one in this room who does not know that so soon

as that theory prevailed there sprang up a herd of creatures professing to be able to cure that disease.

Some of them, indeed, go so far as to claim to and for themselves the credit of discovering the disease character of inebriety, and that they, and they alone, possess the wisdom, knowledge, and power to effect a cure. To-day our land is flooded with these vile nostrums and institutions for the cure of inebriety by means of these so-called specifics, each one claiming to be the one real antidote to the poisonous cause of the disease. How these institutions have prospered and enriched their proprietors is too well known to require comment at this time. That they have succeeded in so far as to delude thousands of people, not only inebriates themselves, but their friends and others, is a marvelous fact — marvelous, but not inexplicable. Were it not, however, for the influence of the press and especially the pulpit, I believe the delusion would have vanished long ago. Let us reason among ourselves how this great patronage has been obtained by these nostrum venders. It is well known to all of us who have had the care of such unfortunates that they are a peculiarly susceptible people, particularly craving for sympathy — childish, indeed, in their appeals to those about them for pity, kindness, and sympathy. I feel confident that this gives us the first clue. Next, we all know that the disease is curable in many cases, particularly those in which the patient retains sufficient moral courage to give his help. In such cases, I say, a cure may be effected without any specific, and I honestly believe that these wonderful miracle-workers know this and make it their fortress of opposition, while the poor deluded patient and their more inexcusable friends, believing in the theory, "*post hoc, propter hoc*," think, as a matter of course, that the specific, even though it was in reality some inert substance, was the great and powerful means of reformation.

What is this but fraud? It is the worst kind of fraud, for it is presuming upon the innocent confidence of frail humanity in its frailest weakness. No enemy is so dangerous

as the so-called false friend: one coming clothed in the sheep-skin of friendship, with nothing but black avarice in his heart, to rob the poor inebriate who blindly trusts him of whatever means he may have, that is sure to be greatly needed by his much-to-be-pitied family. But this is not all. Nay, the half has not yet been told. Was it but robbery of his wealth to enrich themselves, there would be less in them to be despised, but it is worse, and yet worse.

We have said it may be an inert medicine that is used, and doubtless is so in some cases. But that would not serve their purpose in all cases, and we all know that powerful and most dangerous drugs have been so employed, and with what result? Insanity, crime, and death have all been attributed to the treatment received at the Keeley Institute. The records of our court bear witness to criminals of the worst type, confessing to the crime with the explanation and excuse that their brains had been maddened by treatment at a Keely institute. And yet ministers and philanthropists are still praising the wondrous discoveries of the Keeley Gold Cure. How long, oh Lord, how long!

For the benefit of those who have not read my report on nostrums, made to this association some years ago, I will append to this paper a full list of the seventy (70) nostrums already referred to, but right here wish to remark that the one exception herein referred to was concerning the Keeley Gold Cure, and to his report the chemist further clinched fraud upon that article by declaring that it did not contain even a trace of gold.

And yet the wonderful gold cure has its thousands of votaries.

#### Appendix "A."

State analyst of drugs, showing that fifty different proprietary preparations sold for special usefulness in the reformation of intemperate habits, all and each contain alcohol itself in the following proportions:

276 *Empiric and Charlatan Efforts to Cure Inebriates.*

	Pr. ct.
Dr. Buckland's Scotch Oats Essence, . . . . .	35.
(Also $\frac{1}{4}$ gr. morphine to the ounce.) A more insidious and dangerous fraud can scarcely be imagined, especially when administered as this is recommended, for the cure of inebriety or the opium habit.	
The "Best" Tonic, . . . . .	7.65
Carter's Physical Extract, . . . . .	22.
Hooker's Wigwam Tonic, . . . . .	20.7
Hoofland's German Tonic, . . . . .	29.3
Hop Tonic, . . . . .	7.
Howe's Arabian Tonic. "Not a rum drink," . . . . .	13.2
Jackson's Golden Seal Tonic, . . . . .	19.6
Liebig Co.'s Coca Beef Tonic, . . . . .	23.2
Mensman's Peptonized Beef Tonic, . . . . .	16.5
Parker's Tonic, . . . . .	41.6
"A purely vegetable extract. Stimulus to the body without intoxicating. Inebriates struggling to reform will find its tonic and sustaining influence on the nervous system a great help to their efforts."	
Schenck's Seaweed Tonic, . . . . .	19.5
"Distilled from seaweed after the same manner as Jamaica spirits is from sugar-cane. It is, therefore, entirely harmless, and free from the injurious properties of corn and whisky."	
Atwood's Quinine Tonic Bitters, . . . . .	29.2
L. F. Atwood's Jaundice Bitters, . . . . .	22.3
Moses Atwood's Jaundice Bitters, . . . . .	17.1
H. Baxter's Mandrake Bitters, . . . . .	16.5
Boker's Stomach Bitters, . . . . .	42.6
Brown's Iron Bitters, . . . . .	19.7
"Perfectly harmless. Not a substitute for whisky."	
Burdock Blood Bitters, . . . . .	25.2
Carter's Scotch Bitters, . . . . .	17.6
Colton's Bitters, . . . . .	27.1
Copp's White Mountain Bitters. "Not an alcoholic beverage," . . . . .	6.
Drake's Plantation Bitters, . . . . .	33.2
Flint's Quaker Bitters, . . . . .	21.4
Goodhue's Bitters, . . . . .	16.1
Hartshorn's Bitters, . . . . .	22.2
Hoofland's German Bitters, . . . . .	25.6
"Entirely vegetable and free from alcoholic stimulant."	
Hop Bitters, . . . . .	12.
Hostetter's Stomach Bitters, . . . . .	44.3

*Empiric and Charlatan Efforts to Cure Inebriates.* 277

	Pr. ct.
Kaufmann's Sulphur Bitters, . . . . .	20.5
"Contains no alcohol." (In fact, it contains no sulphur, but 20.5 per cent. alcohol.)	
Kingsley's Iron Tonic, . . . . .	14.9
Langley's Bitters, . . . . .	18.1
Liverpool's Mexican Tonic Bitters, . . . . .	22.4
Oxygenated Bitters, . . . . .	Acid,
Pierce's Indian Restorative Bitters, . . . . .	6.1
Z. Porter's Stomach Bitters, . . . . .	27.9
Rush's Bitters, . . . . .	35.
Dr. Richardson's Concentrated Sherry Wine Bitters, . . . . .	47.5
"Three times daily or when there is sensation of weakness or uneasiness at the stomach."	
Secor's Cinchona Bitters, . . . . .	13.1
Shony's German Bitters, . . . . .	21.5
Job Sweet's Strengthening Bitters, . . . . .	29.
Thurston's Old Continental Bitters, . . . . .	11.4
Walker's Vinegar Bitters, . . . . .	6.1
"Free from all alcoholic stimulants. Contains no spirit."	
Warner's Safe Tonic Bitters, . . . . .	35.7
Warren's Billous Bitters, . . . . .	21.5
Wheeler's Tonic Sherry Wine Bitters, . . . . .	18.8
Wheat Bitters, . . . . .	13.6
Faith Whitcomb's Nerve Bitters, . . . . .	20.3
Dr. Williams' Vegetable Jaundice Bitters, . . . . .	18.5

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One person in every thousand is arrested for drunkenness and fined and imprisoned every year in England. These are termed the criminal inebriates who are lawless whenever under the influence of spirits.

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Fouillee in the *Revue des Deux Mandes* asserts that eighty per cent. of young French criminals came from parents who were inebriate criminals.

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The reformed man who was to endow a great gold-cure asylum at New York has died suddenly from alcoholic delirium. The cure he was so confident would cure others failed in his case. The danger of rapid cures of inebriety is not realized by the public.

THE FIRST HOME FOR INEBRIATES AND ITS  
WORK.\*

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BY V. A. ELLSWORTH, M.D.,

*Superintendent Washingtonian Home, Boston, Mass.*

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Dating from the book of Genesis we find that intemperance has existed in a greater or less degree down to the present time; we find all through the ages that different methods have been employed to overcome the fell destroyer. We also find that inebriety was recognized as a disease five centuries before the Christian era, and so on all along down the centuries among the Greek, Romans, Germans, Spaniards, and French, the disease character of inebriety was recognized.

Within the past few years there has been much agitation as to whether the drunkard is sick or sinful; the outcome of the discussion is a more complete confirmation of the fact that inebriety is a disease and needs medical care and treatment.

After the notoriously drunken presidential campaign of 1840, came the great Washingtonian movement that was felt everywhere; it swept like a great wave all over the continent. Since then many temperance societies and organizations have come into existence and are each and all working in their own way to banish intemperance from the land. All of these various methods of work help to educate public sentiment to a higher standard.

Prominent among the earlier temperance organizations was the Washington Total Abstinence Society, organized in 1841, in the city of Boston. This society early recognized the need

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\* Read before the Association for the Study and Cure of Inebriety, at the memorial meeting at New York city, November 20, 1896.



of a room where the unfortunate victim of strong drink could be taken and cared for, conversed with, and induced to sign the pledge. The society boarded the unfortunate man, looked after the immediate needs of his family, and assisted him in finding employment when able to work and support himself. They relied wholly upon moral suasion to effect a reformation. Delegations were sent into many towns in Massachusetts, New Hampshire, Maine, Vermont, and Rhode Island, with wonderful success. So great was their enthusiasm and faith in their work that they looked forward to the time when the rumseller, for lack of patronage, would be obliged to seek some other employment. But, alas! the fulfillment of their early hopes is still far in the distance.

In 1845 a lodging-house for inebriates was opened in Boston, Mass., called the Washingtonian Hall. This was the first inebriate asylum in the world, out of which has grown the Washingtonian Home of to-day. In 1857 the Washingtonian Home first went into operation; for the first two years of its existence it was known under the cognomen of the Home for the Fallen. In its early years its plan of treatment was very similar to the one pursued by the Total Abstinence Society. In 1858 the late Dr. Day was elected and installed as superintendent, and held the position almost continuously from that date until 1893, a period of thirty-five years. Upon first taking charge of the institution he solicited the opinions of all friends of temperance, and particularly the views and opinions of the medical fraternity, desiring to ascertain whether they considered intemperance a crime or a disease. From the principle of practice adopted it would indicate that the drunkard was looked upon as a sick sinner. However, for a number of years much more stress was laid upon the moral and religious teachings to effect a reform than upon medical treatment. Morning and evening prayers were offered in the hall; one evening each week a temperance meeting was held, with good speakers in attendance, after which came a testimonial meeting, when the patients and former inmates of the institu-

tion related their experiences and testified to the great good they had received through the influence of the Home and its worthy superintendent. While no compulsion was used, it was desired and expected that all inmates would attend the meetings held in the Home, and also that they should attend some church on Sunday. The patients were not questioned as to their religious views, the institution was and is strictly non-sectarian.

The following is a facsimile of the pledge the inmates were requested to sign:

**TOTAL ABSTINENCE PLEDGE.**

Believing that the use of intoxicating drinks is not only useless, but injurious to health and destructive to peace and happiness; therefore, being sober and in my right mind, I do, in the presence of God, solemnly pledge myself, that I will not use any intoxicating drinks as a beverage, during my natural life.

This pledge was in use in 1876, whether it was used later than that year I have been unable to ascertain. It undoubtedly was abandoned about that time. In the early years of the existence of the Home a journal was kept, with a short report of each patient admitted. I find records from 1857 into the early months of 1861. I have copied a few of the reports, thinking they might be of some interest, and also help in showing the methods of work in the institution at that time.

Nov. 19, 1857, W—— E——, born in Ireland, twenty-nine years of age, and has been a temperance man thirteen years, but is now a moderate drinker. Came in a destitute condition. He had lodging and breakfast, signed the pledge of total abstinence, and promised to reform.

Nov. 22, 1857, J—— L——, mariner, 53 years old. Born in Pa., and has been a drunkard 30 years. Said by God's help he was determined to become a sober man. In the morning signed the pledge and left.

March 9, 1858, S—— S—— W——, came to the Home in September last. We find the following report of him at that time: "A man by the name of W—— came to the Home, having been through a long course of dissipation, which had left him destitute and in rags. He was evidently a man of good education and represented himself as being a lawyer by profession, and as having held the position of private secretary to one who had held a high political station." These representations were found to be true. His wants were properly attended to and he has remained in the institution until now (with the exception of about four weeks), in the hope that his superior advantages would enable him to fully realize his situation and cast off his evil habits. March 10. He obtained employment as a canvasser, and left the Home on the 9th inst., without giving the superintendent notice of his intention to do so. His abilities, properly directed, would reinstate him into society, but it seems that he is determined to prostitute them to his inevitable destruction, as he had no sooner left the institution than all his professions of reformation vanished, and with the blackest ingratitude he violated his pledge, thereby forfeiting all claim to further sympathy. . . .

Feb. 15, 1860, B—— L—— F—— came to the Home a few days ago and wanted to be put right and sober again. He was at the Home last summer and had delirium tremens, and has kept perfectly sober up to a few weeks ago, when he was taken sick. His doctor told him to take gin, which he did, and the consequence was he got drunk and could not get sober. This fact should have been known to the medical gentleman, but it is not generally known to them, and they are doing more harm to such men than the runsellers can do. He is now recovered, and, when he is sick again, he has promised never to go to such a doctor again.

This is only one case showing the harm done by alcoholic medication. While the case just cited occurred in 1860, nearly thirty-seven years ago, still such cases are of far too frequent occurrence to-day. The medical profession, as a body,

are too prone to laud alcohol as a "supporter of vitality." One of the most powerful obstacles in the way of temperance reformation is the abuse of alcohol as a medicine.

Since the first organization of the Washingtonian Home 11,946 patients have been admitted for treatment. The per cent. of permanent recoveries compare favorably with other institutions for the treatment of inebriety.

As the years went by and the fact became more firmly established that inebriety is a disease and amenable to remedial treatment, more medicine was used and less dependence placed upon moral and religious treatment to effect a cure, until to-day the Home stands upon a medical basis.

Moral suasion is good as far as it goes, but it will not reach the unimpressive or demented inebriate. The people to-day are looking to the medical profession for relief. The times are changed and upon the whole, I believe, for the better. Inebriety is a complex insanity and involves questions and causes not thoroughly understood by the most learned students of psychology and medicine. Exact theories and remedies are as yet unknown.

In arriving at satisfactory results in scientific exploration, there are no royal roads or short-cuts, but it takes patient research along the great trunk lines to finally reach the desired goal, but the world moves and everything is possible with time.

I give records of a few cases as they appear on the notebook of those early days:

Sept. 21, 1858. Rev. J——— I———, born in Scotland, and was on his way from Canada to New York. On his arrival in this city he thought he would try a glass of brandy for the stomach's sake, intending, perhaps, to be faithful to the instructions of Paul to Timothy. But not knowing or caring to know the difference between Timothy's wine and Yankee brandy, he, before he was aware, imbibed so much that it caused a sudden flow of blood to the head, and caused him to fall in a fit somewhere at the north end. He was taken to the first police station, and by blood-letting and restoratives

of other kinds he was wrested from the jaws of death. The officers found on his person evidence of his being a clergyman, and sent for Rev. P. Stowe, who procured a coach and brought him to the Home, about eleven o'clock in the evening of the 16th inst. He was very much excited and for two days was very restless and very much alarmed about himself. He has a wife and two children in Canada, and is about thirty-two years of age. He has been on this side of the Atlantic about one year, and tells us that he has not drank any intoxicating liquor for nine months; previous to that time, however, he had been in the habit of taking liquor in small doses, of course. He is a short, fat, red-headed man, and we are of the opinion that he is fond of that which steals away the brains. I feel it my duty to record the fact that he has not conducted himself like a Christian man. He rather chose to go into the back yard and smoke his pipe than attend the religious services of the Home. He would not attend the regular meeting on Sabbath evening when requested so to do. He was all the time much alarmed for fear his conduct would be found out and prevent his getting employment at his profession. I do not think his conscience was any troubled for the reproach which he had brought on the cause of Christ. He tells us he is a Presbyterian clergyman, and has been a teacher of a high school in Scotland. He signed the pledge and left to-day for New York, thanking us for the many kindnesses received and services rendered.

Oct. 13, 1858. H—— W——, born in the West Indies, has been residing of late in New York. He calls himself a silversmith, but I think he has no particular occupation. He was sent to the Home Sept. 2 by his cousin, Dr. George H. Dodd, who promised to call and see him and make arrangements for his board, but never called and presume never will. Mr. W—— has given us much trouble. When he came he was a perfect picture of wretchedness. He was too filthy to live among the swine, and, in fact, as far as filthiness is concerned, he is not much better now. He would squirt tobacco

spittle all over the house from the cellar to the attic. We think he has abstained from intoxicating drink, however, and has improved a little. He has recently been peddling some kind of furniture polish. No one could sleep near him; he made noises all night and would sometimes alarm all in the house. His trouble appeared to be something like the *nightmare*. Last night he kept me awake about all night, and I told him I could not put up with it any longer, and he left with a promise not to return again, consequently we all feel very much relieved.

This man is a perfect *nondescript*. He may do well if he is not too lazy. He will, for he has some talent and can get a living.

Oct. 20, 1858. H—— F—— R—— came to the Home last evening and told us that Mr. Stone sent him here to stop for the night. He belongs in Conway, Mass., and said he came to Boston on a very important mission. He holds himself out as a pioneer in the true temperance reform, and goes the "*whole swine*" in the matter. His plan is this, to raise ten thousand dollars in Boston, and buy a lot of land and build a store on it, and keep nothing but temperance goods, and sell only to temperance people. But the main lever to overthrow the vile monster, intemperance, and introduce a new era in the world's history is *Sap, yes, Sap*, and it is to be introduced and managed on this plan: After the store is erected and in full tide of successful operation several branches are to be established in the city for the sale of *sap*, and Mr. R—— is to be located in Conway and gather the sap at two cents per gallon and put it into two-gallon kegs, and send it to the city to supply the stores, and the kegs are to be returned to Conway full of *brown Havana* sugar. It would be well for us to state that the only prohibited articles are to be rum, tobacco, and opium.

This individual is a *moonstruck* theorist, and no wonder he has hit upon *sap* for his hobby. We tried to open his eyes by ridiculing his ideas, but it was of no use. *Sap* was the only

article that would remove this vice from the land. We, however, shook his faith a little in relation to the probability of his raising *ten thousand* dollars, and this morning he left for *Taunton* for the purpose of bringing the *sap* question before that *dark and benighted people*.

Jan. 13, 1859. E—— P—— B——, born in Massachusetts, resides in Pawtucket, R. I., aged 30 years; occupation, tailor. He came to the Home October 31st, accompanied by his sister, who is extremely anxious to have him reform. He had been in the habit of habitual intoxication, and would even sell his clothing to procure liquor. He done very well for several weeks, and we gave him work to do, and found him a room to work in and encouraged him all we could. About four weeks ago I discovered he had been drinking. The next morning I took him before all the inmates at prayer time, and laid it to him. He undertook to deny it, but at last he owned up and asked the forgiveness of all, and begged me not to write his friends about it, and he promised never to touch liquor again. I, however, discovered last Tuesday evening that he had been drinking, and I then told him of it, but said nothing more. He had been out that P. M. and obtained employment, and promised to go to work the next morning. He left the house very early without seeing any one or taking his breakfast. Thursday, at noon, he was picked up in the street and brought home *minus* his own dress coat, overcoat, hat, etc. He had on an old thin coat and cloth cap. His overcoat was a new one, sent by his brother a few days ago. When he was brought in he looked miserable enough. His face was stove up and he was stupid drunk. His conduct has been shameful and I would not keep him, consequently, I sent him home. He has been borrowing money of different individuals under false pretenses. On the whole he is a miserable fellow.

Sept. 30, 1858. S—— D—— was brought to the Home Sept. 15th by the police of Station Four. Previous arrangement had been made by Mr. John Clapp and Mr. French to have him brought to the Home. He was very

much intoxicated and began to beg for liquor when he first came to the Home. He begged to go out, and every time he went out he would drink liquor. This he continued to do for several days, and, at last, we forbid his going out at any rate, and, in order to keep him in, we locked up his clothes and kept them until he was sober, when he was permitted to dress and go out again, and, subsequently, we are of the opinion he did not drink anything intoxicating. He was all the time bringing little things into the house to eat. He took his meals by himself, and bought things and had them cooked to suit himself. He became very benevolent while stopping with us. He gave the Home a United States Dispensatory, a very valuable book. He also visited several of our friends, and all families of drunkards, and urged them to come to the Home and reform. He was also very religious (or pretended to be), but he could not join us in any of the devotion of the Home, but would keep away if possible during prayer time and the public meetings. He left this morning, since which time nothing has been seen of him. We have been informed to-day that he has been getting money under false pretenses, and is liable to prosecution. His employers have been swindled by him and he has used the name of the firm to procure money, and was discharged before he came to the Home. He was employed by the Boston Carpet Company. He is unmarried and about forty years of age. He is a man of fine appearance, and is a member of Rev. Dr. W. Adams' church. He is a periodical drunkard, and has been sober a year previous to this spree. His father was John D——, an old Boston merchant, and the oldest carpet dealer in the city. He died a short time ago. The only charitable construction we can put on his recent conduct is that he is insane, and our opinion is that he is laboring under a fit of that terrible disease, insomnia, and only will recover by being restrained and kept from intoxicating drinks. He has given us much trouble, but his conduct outside of the Home has caused us more trouble and grief than his personal trouble to us. What his end will be we cannot tell.



## Abstracts and Reviews.

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### EFFECTS OF ALCOHOL ON THE NERVOUS SYSTEM.\*

BY DR. E. N. BRUSH, OF SHEPPARD ASYLUM, MARYLAND.

Dr. E. N. Brush said that he regretted very much the absence of Dr. Berkley for he felt that after Dr. Berkley had talked of the pathology of alcoholism and Dr. Preston had given a statement of what neurologists observed in persons addicted to the inordinate use of alcohol, the ground would be so well taken that there would remain little for him to say. He believed that a description of the conditions observed clinically by neurologists were in many instances very readily applicable to those observed by the medico-psychologists, and certainly there was nothing different in the pathology of the nerve and cell changes between those observed in diseases of the peripheral nerves and the pathological effects which come under observation of those who deal mainly with the mental effects of alcoholism.

It was unnecessary, he believed, to enter upon the effects of alcohol upon the mental operations as observed either in ordinary intoxication or in delirium tremens in a discussion of this character. Aside from these we might next consider two varieties of those who use alcohol to their detriment; these are the inebriate and the dipsomaniac. The difference between these might be characterized as one of the resistance and the desire to resist. In the inebriate, before there had resulted those mental and moral changes which almost always, to a degree, follow the constant use of alcohol, there was com-

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\* Report of a Discussion on a Paper read by Dr. Berkley.

monly the ability to resist a temptation to drink without, however, the desire, while in the dipsomaniac there was the desire very commonly to resist periodically giving away to temptation without the ability to self-control. The inebriate had commonly a low or deficient moral sense or sense of shame, while the dipsomaniac was usually wholly conscious of his unfortunate condition, but did not seem to possess the power to resist sufficiently developed to escape the unfortunate tendency which afflicted him. In the dipsomaniac there were commonly found other neurotic conditions and not infrequently a history of marked mental and nervous heredity. Cases were cited by the speaker which illustrated this point.

Aside from these cases, and inclusive of them, there were numerous instances observed by physicians both in institutions for the insane and out of them in which as the result of alcohol there seems to be a distinct loss of mental and moral tone. Individuals who previously were active mentally, careful and scrupulous in all the relations of life and neat in appearance and correct in behavior, became dull and forgetful, indifferent in matters of veracity, careless in dress and personal appearance. These cases form the advance guard, as it were, of the next class of cases in which there was more marked mental disturbance, a condition of actual confusion with more or less dementia, resembling in some respects the mental condition of extreme senility. These patients at times lose their senses of identity, they were unable to recognize where located, the passage of time made little impression upon them; they were unable to remember the time, day of the week or of the month, could not tell in the middle of the morning whether or not they had breakfast, would be able to talk with the visiting physician concerning their symptoms, but within a very few moments after he left forgot that he had made a visit. Sometimes these mental symptoms were ushered in by a convulsion, and occasionally the course of the case was interrupted by a seizure resembling in many respects epileptiform attacks.

Next in order to these cases would come those forms of insanity which more or less closely resemble ordinary attacks of melancholia and mania. In the melancholic attack there were usually associated symptoms of marked hypochondriacal tendency, while the maniacal attacks were commonly of the delirious order. Another form of mental disturbance which had a more constant clinical picture was characterized by delusions of persecution, by hallucinations of hearing and occasionally of sight, and these cases were not only very difficult to manage, but were frequently dangerous by reason of their sudden and unprovoked assaults on persons whom they believed were persecuting them. These assaults were not commonly made upon members of their own family. Very commonly these patients had delusions regarding their wives, believing them unfaithful. There is another form of alcoholic mental disturbance resembling general paresis or progressive general paralysis of the insane, the pseudo-paresis of alcohol. The speaker related a case of this character, recently discharged recovered from the Sheppard Asylum, which upon admission in both the physical and mental symptoms resemble general paresis. There were unequal pupils, tremor of the extremities and of the lips and tongue, paretic speech and absence of reflexes. There were in this case no extravagant delusions, but on the contrary, as in true paresis, occasionally, the delusions were of a melancholic and hypochondriacal type. It is very difficult to say to what degree alcohol is responsible for attacks of mental disturbance in proportion to the entire number of cases of insanity in the community. Statistics upon this point vary exceedingly and depend somewhat upon the bias of the person who compiles the statistical table. Moreover, there are associated with cases in which alcoholic excess plays a prominent role conditions of disturbed health, family history, etc., which may cause the observer to lose sight of the alcoholic history. It is, moreover, often the case of chronic alcoholic insanity, with ideas of persecution and hallucinations, that the

patient has been a secret drinker, going about his business in a regular and methodical way during the daytime, but rarely retiring sober at night. This course, in time, resulting in mental break-down while the physician in charge of the case does not have any intimation of the real history of the patient's life.

Dr. Brush then referred to some statistics from English asylums for ten years, 1878 to 1887 inclusive, which showed that alcohol was the cause attributed in 19 8-10 per cent. of the men admitted to the asylums of Great Britain for that period and in 7 2-10 per cent. of the women or in 13 4-10 for both. In New York State, from 1888 to 1893 inclusive, 12,207 cases were admitted, in 10 8-10 per cent. of whom alcohol was assigned as the cause of insanity. The statistics of the asylums of Pennsylvania show the same percentage of cases in which alcohol was assigned as the cause as in New York. In the opinion of the speaker, this percentage was below the actual number. Dr. Brush referred to an article which he had just seen on the day of the meeting, by Dr. Bond, pathologist and assistant medical officer of the London County Asylum, Banstead, in the *British Medical Journal* of March 2, 1895, in which Dr. Bond attempted to show by the much larger percentage of cases of renal disease found in the autopsies in the asylums of London than in the general hospitals drawing patients from the same district that the percentage of cases in whom insanity was in a measure traceable to alcohol was much higher than represented in the statistical tables. Dr. Bond, in conclusion, stated his opinion that at least more than twice the number than at present enumerated in statistical tables owed their entrance to the asylums of London partly at least to alcohol. Dr. Bond's statistics were drawn from the asylums at Hanwell, Conley Hatch, Banstead, and Cane Hill. Dr. Brush did not quote these statistics with a view of endorsing them, but as affording some interesting and suggestive facts.

Dr. John Morris said: My experience in alcoholic insanity

has been chiefly among the depraved and criminal classes. This experience has been gained as a commissioner in lunacy. More than thirty per cent. of the criminals in our prisons and in the various asylums and almshouses of our state suffering from insanity owe their condition (leaving out the law of inheritance) to the excessive use of alcoholic drinks. There is a form of acute insanity not fully recognized by writers on jurisprudence or by courts of law in which men and women become thieves and kleptomaniacs. There is a total loss of memory in these cases, and crimes are committed of which there is no recollection when reason is restored. Cocaine and morphia more particularly bring about this condition. The courts hold that excessive indulgence in alcoholic stimulants only aggravates a crime when committed under their influence. This, in my judgment, is bad reasoning and not founded on experience and observation. Of course, if a man, as occasionally happens, prepares to commit a crime, to obtain "Dutch courage," as it is vulgarly termed, his offense is doubly serious and should, if possible, receive double punishment. Cases of this kind are not frequent, but the class of cases which I have termed acute alcoholic insanity are very numerous and must have come under the observation of every medical man in general practice. It must be understood that I do not include cases of delirium tremens in this classification, for men suffering from this trouble do not, as a rule, commit crime. Of course they are insane, but this insanity, while of an acute character, lasts for many days. The symptoms, in the case I first described, in which crime is committed in a condition of apparent unconsciousness, do not last more than a day or two at the furthest. As a state expert in the criminal courts during the past thirty years I have had several criminals acquitted on the ground that the offense was committed while suffering from insanity due to the use of narcotics. Two notable cases come to my mind at this moment. In the first, a lady, the wife of a physician and daughter of a gentleman with whom I had served in the legislature more than forty years ago, was in-

dicted for stealing books from physician's offices. These thefts were committed for the purpose of procuring opium which she had taken immoderately for years. She was acquitted on the ground of insanity and was placed in Mount Hope Asylum, where she remained more than a year and when released was apparently cured. The second was that of a young man indicted for stealing jewelry. When I visited him at the city jail he was violently insane. He refused to take food and was unable to sleep for four or five days and nights. His condition was such as we observe in delirium tremens. As he was not a drinker I was puzzled at first to account for the suddenness and violence of the attack, but, on consulting his family and investigating his history I found that he was a confirmed opium fiend and that he spent all the money he could procure in "hitting the pipe," as it is classically termed, and that his delirium was entirely due to the abrupt deprivation of the narcotic. Cocaine is the only drug the effects of which are more dangerous and more slavish than the inhalation of the fumes of opium. The young man was acquitted by the jury after hearing my statement. It would be well if this subject were more thoroughly studied by medical men who have the care of criminals.

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#### DALRYMPLE HOME, RICKMANSWORTH.

Report of Medical Superintendent, Dr. J. Welch Branthwaite,  
for the year 1897.

I have pleasure in again submitting some particulars of the internal working of our institution, together with statistics in tabular form relating to patients discharged and the results of treatment.

*Admissions.* — During the year 35 patients have been admitted, 14 under the provisions of the Inebriates Acts, and 21 as private patients.

*Discharges.* — 35 patients have been discharged, one from illness (a severe case of diabetes), and the remainder, in

the ordinary course, from lapse of the period for which they entered.

Twenty patients remain under treatment, adding this number to the total discharges, the result (462) is the total number of admissions since the opening of the home.

With regard to the difficulties of management under the present acts, and their inefficient application to all classes the same practical objections continue to be evident. Although our work has been and is eminently satisfactory, as far as it goes, still much more might be done by enlarging the scope and utility of the inebriates acts, so as to extend their influence to other individuals who are at present untouched by their provisions.

I almost daily receive applications from friends, in the interest of relatives, for information as to what, if anything, can be done to obtain care and treatment without the consent of patients themselves, which they are unable to obtain. I am powerless to advise in these cases, and can only reply — nothing. Another class, still more common, write at the instigation of patients desirous of entering a home, but unable to find the means — to these I can give no help. Again, some justices in London and the provinces have occasionally given the option, in cases criminally of minor importance, and distinctly due to alcoholism, of waiving all question of imprisonment if the inebriate will enter a special institution for regular treatment; in some instances this has been carried out, but in a large majority the question of means has interfered with such well-intentioned and scientifically correct procedure.

Throughout our whole experience, therefore, the want is urgently felt of some compulsory power to apply to cases too indifferent, or too unconscious of their condition, to themselves consent to restraint; some widespread organization to cope with the legion of destitute cases, and lastly some special public curative institutions for police-court cases, and instances of crime dependent solely on inebriety.

A few remarks concerning my statistics may not be out of

place here. They are now the result of between 13 and 14 years' work, reaching nearly 450 cases. With regard to *admissions*, those entering as private patients still exceed those under the act; this is easily explained and would exist in reverse order were it not for the unnecessarily formidable procedure of signature before two justices, often conducted in open court, and in country districts from a question of distance only it is by no means always easy to get two justices together. A great palliation of this condition would result and at least lessen the difficulty could one justice be considered sufficient to attest signature, instead of two, as at present. It is evident from our figures that, in addition to the legal control obtained over patients under the acts, there is also an advantage of being able to retain them longer under treatment, for, out of 211 under the act, 75 entered for twelve months, against 40 out of 231 private patients, making an aggregate of 115 entering for the full period. Turning, however, to one of the last tables in my statistics — "Terms of Residence" — it will be seen that 96 patients actually completed the twelve months; as a matter of fact only 29 of these were private, and the remaining 67 all patients under the acts. In other words, of all admissions under the acts, 31.7 per cent. remained for the full term, as against 12.5 per cent. of private patients.

Age relationship to admission has always remained fairly constant, the large majority, more than half of total entries, being between 30 and 40. This from experience also I have been led to look upon as the best age with a view to results. The very young are, as a rule, irresolute and generally without the fundamental necessities of an appreciation of their condition and a desire for reformation. Cases at the opposite extreme of life have not proved so bad, some at 50 to 60 have produced excellent results, but, as a mass, results are masked by a large number of individuals who have in their day been active, and even brilliant, business or professional men, and whose later excess may be ascribed largely to mental overaction and probably also to evidence of commencing decay;



or, on the other hand, such decay may have been induced prematurely by their excess; in either case the prognosis is unsatisfactory.

I am of opinion that in inebriety and its allied conditions it is impossible to place too much importance on the question of heredity as a predisposing cause of excess in the individual. Under "Family History" in the tables in question are important figures worthy of consideration. In 29 cases there was a history of *insanity*, and others, on close examination, revealed evidence of some allied neurosis, such as epilepsy, forms of eccentricity, hysteria, and vague "brain troubles," the diagnosis of which it was not possible to obtain from friends, mostly laymen, and consequently too uncertain to tabulate. The hereditary history of *inebriety* is still more marked — in no less than 211 cases a definite history was obtainable — 120 of these absolutely direct, 44 from grandparents, and 76 from parents. Therefore, taking insanity and inebriety together, there was a predisposing heredity in at least 240 cases out of 442, or more than 55 per cent., with a certainty of these numbers being considerably increased if reliable information could always be obtained from friends.

As heretofore, I have done all that lies in my power to make the particulars of results of treatment as complete as possible. Unfortunately, it is found impracticable to be certain of some final results, so many cases drop out of knowledge and are lost sight of, hence the heading, "Not heard from," becomes a necessity. "Improved" includes those I have reason to know are apparently right and conducting their business, of which, before treatment, they were incapable, but of whom the information is not of sufficiently reliable nature to consider as "Doing well." Of those "Dead" I know little; information of the majority was obtained from newspapers and other indirect sources, but, to my knowledge, 4 of the 31 under that heading died from "natural causes" and remained total abstainers until the end. "Doing well" numbers 149, and may be considered a reliable figure. This constitutes about

33.7 per cent. of total admissions, and I am of opinion that from this to 35 per cent. is about the result to be expected under existing circumstances. When our patients come to us at earlier periods of their conditions and do not wait until everything else has been tried and failed, and when we can eliminate those who come for periods utterly inadequate for the purpose in view, then we can reasonably expect these figures to show considerable increase. In the meantime I consider them worthy of thankfulness and congratulation, and as such venture to present them for your consideration.

Referring again to the year just closed, and excluding, as unavoidable, the usual results and complications of alcoholic excess, the general health of patients has been uniformly good. One case, however, required discharge for an illness which would probably have occurred under any conditions. . . .

ED. NOTE. — It is a pleasure to note the success of this most excellent institution, which has become the great leading pioneer asylum of England.

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### THE DANGERS OF ALCOHOL AND THEIR CAUSES.

In a recent lecture, M. Emile Alglave, professor at the Faculty of Paris, after describing the economic basis of monopoly of alcohol, the application of which seems very desirable in France, explained the hygienic aspect of this system as a weapon to fight against alcoholism. He recalled the classic experiments of Messrs. Dujardin-Baumetz and Audigé, which establish the relative degree of poisonousness of different alcohols mixed with ethylic alcohol, with "spirit of wine," as also the toxic or convulsive action of distilling impurities, such as aldehydes and ethers. These scientists demonstrated that the amount of amylic alcohol capable of causing immediate death is five times less than the requisite amount of pure ethylic alcohol. But, in fact, the difference is much greater on account of the variation in volatility of these two alcohols. What acts on the organism is the quantity of alcohol there ac-

cumulated at a given moment. Now ethylic alcohol, which boils at 79 deg. C., is introduced into the organism at a temperature sufficiently near boiling point to rapidly evaporate. This, in fact, occurs; the drunkard quickly exhales, in respiration, most of the ethylic alcohol he has taken, and which gives his breath that peculiar odor. Amylic alcohol, on the contrary, only boils at 142 deg. C., so that in the stomach it is at a temperature of more than 100 deg. less than boiling point. But it is a physical law well known that evaporation is less at a given temperature according as it is further from boiling point. Amylic alcohol, then, hardly evaporates at all in the human system; once there, there it remains. The amount taken to-day increases that of yesterday, so that daily drinking of very slight quantities eventually causes a great accumulation of amylic alcohol in the system, while ethylic alcohol would merely pass through. This comparison of the action of the two alcohols explains why alcoholism must be caused by amylic alcohol and inebriation by ethylic. Inebriation, in fact, is a transitory phenomenon, vanishing with the vapors of the liquor which have been its cause. Alcoholism, on the contrary, is a permanent modification of the organism which is gradually reduced, perfectly corresponding with the action of amylic alcohol as described. To cause immediate death of a human being, 130 grammes of amylic alcohol suffice administered once; this is not a very large amount. It is true that this very dangerous alcohol is only a slight proportion in most of the liquors sold, but accumulation of daily portions explains how it is they produce alcoholism. — *Revue Universelle*.

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### NICOTINE.

Every physician is familiar with the tobacco heart, the tobacco throat, and the general effects of nicotine upon the digestion and the nervous system. Dr. Schall, the house physician of the Hahnemann Hospital, wishing to test the effect of cigarettes upon the nervous system and the circula-

tion, obtained through a mutual friend the consent of Miss Pauline Hall, a distinguished theatrical artist, to submit to the experiment. If, Dr. Schall reasoned, a person of the almost perfect symmetry of form and robust health of Miss Hall showed the effect of nicotine on the circulation from a few whiffs of a cigarette, what might be expected in persons of less vitality among her own sex?

In a quiet room in the Hahnemann Hospital, in the presence of two or three physicians, the sphygmograph was attached to the wrist and a tracing taken of the heartbeats. The tracing showed not one particle of variation from perfect health. The whole venous and arterial circulation was perfectly normal. At the end of fifteen minutes, after having smoked the half of two cigarettes, the tracings showed a manifest disturbance of the heart's action, and, at the end of forty-five minutes, after parts of six cigarettes had been smoked, the tracing showed the beat of the heart to be unequal; at times rapid, at times in jumps, evidently under the effect of some powerful drug agent. From this fact alone may we not conclude that much of the neurasthenia, including a general disturbance of the digestive organs, now so common in that portion of the female sex who have ample means and leisure to indulge in any luxury agreeable to their taste, or which, for the time being, may contribute to their enjoyment, is due to narcotics, which should only be used medicinally? — Editorial in the *Medical Times*.

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#### SCHLANGENHAUSEN ON PROCEDURE WITH INEBRIATES.

Herr Director Schlangenhausen recently delivered a lecture in London, on "Psychiatric Institutions, the Austrian Law of Curatel, and Separate Asylums for Drunkenness." He stated that every person in Austria, poor or rich, who was suspected of being afflicted with any form of mental disturbance, before being certified as a person of unsound mind, must

be examined by a special commission, appointed by the courts of law, consisting of a legal adviser, two medical specialists in lunacy, with a clerk. The report, in writing, the testimony of the physicians (who have power to sift and test the evidence of the witnesses) is sent to the higher courts, which determine whether the person is irresponsible, and whether the curatel should be applied.

The curatel consists in a curator being appointed, who watches over the interests of the curatee, and administers his or her estate. The curatel can be annulled by the courts on proof that the person has regained sanity and a due sense of responsibility.

Schlangenhäuser recommends for Britain (1) a central authority; (2) psychiatric institutes or clinics, where alleged lunatics and inebriates can be temporarily detained for curative purposes prior to certification, and where physicians can study mental science and the law of curatel.

He remarks as follows:

“ I express my conviction and it accords with the experiences of others as regards these asylums, that when asylums for habitual drunkards have been sanctioned by the legislature, and when all those persons who are fit inmates for such asylums have been placed in them, the number of insane persons whose mental disorders have been brought about by abuse of alcohol will diminish; and those persons who at present are suffering from chronic diseases, and who consequently become inmates of poorhouses, will recover their health and become again useful members of society. Through abstinence from alcohol, without exactly becoming a member of a temperance society, and by the construction of asylums for drunkards, wherein all incurable drunkards are legally placed by compulsion and detained until they are completely cured, the chief cause for the continual increase of insanity will be considerably restricted. Tilkowsky says: — ‘ A solution of the question of asylums for drunkards can be delayed, but can be no longer evaded. The solution will come because it must come; it will

come in the spirit of science, of progress, and of humanity.' I concur entirely in this view, and am convinced that in Great Britain and Ireland, as well as in all other civilized countries, the construction of asylums for drunkards is only a question of time. The sooner this question is solved in the manner indicated, the greater value will the solution have for the general welfare."

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### DRINK AND INSANITY.

Dr. Clouston, in his last report, makes the following very significant remarks:

He speaks of nature cutting off bad stock "by killing it off in early life through mental or bodily defects." And then he says: "There were cases where the evil treatment of a man's brain by himself brought on pathological changes that no curative measures could cope with"; and as an illustration he speaks of a man pouring "such an amount of alcohol into his blood that it kept up a morbid stimulus and irritation, and his brain-cells and blood-vessels got charged thereby." The evil effects of this could be seen after death, "but by-and-by he hoped to see such damaging effects of alcohol on the brain demonstrable by teachers of schools and by preachers of social reform, so that he who runs may read, and all men and women may know them clearly in early life." Turning to the statistics of the year, and the facts they bring to light, he says: "One of the most striking facts was the universal prevalence of drink in both sexes." In seeking a cause he asks "Can it be that the hard winter of 1894-95 made work scarce and drink unattainable, while the open winter and good trade of 1895-96 made money plentiful and drink very attainable? He feared it was the common experience that we had in our cities a large class whose self-control was small and whose brain stability was not great, so that prosperity to them always meant self-indulgence, and self-indulgence meant to some of them an attack of alcoholic insanity and the asylum."

## RACE DEGENERATION IN INEBRIETY.

BY T. D. CROTHERS, M.D.

All authorities agree that from sixty to eighty per cent. of all inebriates have drinking parents or grandparents. In a very large number of cases the ancestors were excessive users of spirits, and poisoned to the extent of intoxication often. While it is difficult to explain exactly what is transmitted to the next generation, and what conditions make the children of inebriates more certain to use spirits, there is one general fact overlooked in all these cases. That is, family and race degeneration.

Certain families are dying out, and the use of alcohol in the ancestors precipitate death and extinction. Other families have reached a level from which they cannot ascend, and from slight causes deteriorate. Moderate drinking, or intemperance of any form, sends them down. The union of two families on the descending scale is certain to be followed by degenerates, both physical and mental. The children of inebriates are always of an exhausted race, rushing down to extinction.

Marriage with a robust race ascending in the scale of evolution and growth, may halt this decline, and in the next generation bring them back to a level from which ascent may begin again. Marriage with a race already declining is often followed by a great fecundation or barrenness. In one case a numerous family follows, as if nature was making a supreme effort to keep alive the family by multiplying the numbers. In the other case the births are few and of low vitality, dying out early.

These sixty to eighty per cent. of all inebriates are the dying remnants of families and races. They have long ago passed the levels of growth and development, and are on the down track to dissolution and extinction. The parents, by alcoholic poisoning, have lowered the race-stock of vitality

beyond the power of ascent or possibility to rise above and overcome this downward tendency. Such parents not only destroy themselves, but cut off the race from which they sprung. It is a rule to which there are few exceptions, that extinction follows in the third generation from inebriate parents. In the exceptions, fortunate marriages, surroundings and conditions of living have checked the dissolution and started the race back to higher levels.

The practical question in every case of inebriety is this:

Did the degeneration of the present inebriate begin in the ancestors? Is he from a dying stock or race? Where is he at present? What are the present symptoms of mental and physical degeneration? How far has alcohol fixed and settled the lines of race and individual decay? What chance is there to stop this dissolution and bring back the vitality to a normal level?

These are the lines of treatment which involve more than drugs and specifics, more than the pledge or prayer, and comprises every means and rational measure that will build up and raise the entire man to higher levels of life and living. This great "drink problem," which we are so anxiously trying to understand, is a veritable disease and an organized march of dissolution, which is not checked by will-power, or means that are not radical and thorough.

The men and women who are bankrupts in health and intellectual power find in alcohol a most grateful "nepenthe" covering up the discomfort of oncoming dissolution. The young man and woman of low-grade vital power and defective, unstable brain control, although brilliant and precocious, find in alcohol the most delusive relief from the strain and exhaustion of life. No drug deteriorates so quickly these faulty, low-grade, irregular brain powers as alcohol. Practically, prevention is the highest possible attainment of science. Next, to halt this doomed class and help him back to levels of right living. Beyond this, to stop race degeneration, if pos-



sible, and save families and races from this inevitable dissolution, by bringing into operation laws of evolution and growth that will antagonize decay. Women can do more than men to bring about this new evolution of the race and clear away the mystery which shrouds the steady, slow death of over a million and half persons yearly in this country. — *Union Signal*.

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### THE TREATMENT OF ALCOHOLISM BY SUGGESTION.

BY F. A. BURRALL, M.D., NEW YORK.

In the *Tribune Medicale* of January 13, 1897, is a notice of an article by M. Tokarsky (*Wratch*, 1896, No. 31), on the "Treatment of Alcoholism by Suggestion," and which seems to me as likely to interest both the general practitioner and the specialist in nervous diseases.

The profession and the public have come to regard the victim of chronic alcoholism as a neurotic, under the influence of a nerve degeneracy, which implicates most readily that condition of nerve tissue of which instability is the prominent feature. These terms are, perhaps, somewhat vague, yet they are sufficiently definite to convey the idea. It is not the self-contained, vigorous constitution, with strong power of resistance and obstinate vitality, which yields readily to the baleful influence of alcoholic excess, but the sensitive and the neurasthenic; such material as goes to the formation of the "nervous" part of society. Since this view has become more generally adopted and alcoholism has been treated as a disease, my experience has been that more cures have been effected. It is not strange that this should be the case, and the result also indicates how much the continuance of cure of alcoholism depends on the improvement of the mental or "nervous" condition. A man who is regarded as a brute by his neighbors, and who is scoffed at for not using his "will-

power" and throwing off a disgusting habit, is in a deplorable and crushing condition. He is often refined and cultivated when not under the influence of alcohol, yet soon transformed into an impersonation of all the lower traits of humanity by the taking of a few glasses of an alcoholic stimulant.

The habit may have been formed by the protracted use of alcohol which has been prescribed by a physician; he may have inherited a predisposition to its use; at all events, the will-power has been overcome, and he feels that society does him a great injustice by treating him as a criminal when he knows that he would give anything to rid himself of the bands which seem stronger than adamant.

Now, for such an one to feel that he is not a criminal any more than the patient who when under ether, before the operation, fights in delirium, is a great aid in the restoration of self-respect and hope. If he is a sick man he can look for sympathy and medical treatment. In fact, society has often dealt with the inebriate most unjustly. It has placed all kinds of temptation in his weak path, and then punished and degraded him for having walked into them.

Since the view that alcoholism is a neurosis has been adopted, various plans of treatment have been brought forward and used in many cases with complete success. In estimating the value of these different methods, we come in contact with the same difficulty which encounters us in the study of most nervines, in fact, of most medicines which are given in neurasthenia. Where does the medicine *per se* show its effects, and where does what is popularly called "mind cure" exert its action? Often, discrimination is impossible. I have known the use of strychnin, atropin, and chlorid of gold and sodium in very minute doses, repeated at short intervals, to be followed by cessation of the liquor habit in several cases of alcoholic habitués. We may regard, as combining to produce this effect, the "suggestion" accompanying each dose, the substitution of one habit for another, the cumulative

effect of long-continued dosage and the *personal* influence of the physician. We see how difficult it is to say surely where the curative influence exists. To turn from a digression which was naturally suggested by the subject, the following extract is subjoined.

“The treatment is as follows: The patient is hypnotized (*endormi*), preferably when he has drunk nothing during the day. For chronic alcoholics the treatment is begun during a period of abstinence. From the first *seance* the “suggestion” is made to the patient that he should drink no more. Two days afterward the same experience is repeated. Usually after two sessions there is an improvement, and the third treatment can be deferred two or three days later. Gradually, the intervals between the visits are lengthened, until they are made every two, three, or four months. The treatment cannot be considered as complete under a year, since this length of time is considered necessary to observe all the variations to which the nervous system is subject. In favorable cases, patients stop drinking from the commencement of treatment. If they continue after the third *seance* or commence during treatment, it is regarded as a proof that good results are not to be expected and that ‘suggestion’ is unavailable as a remedy.”

With suggestion M. Tokarsky employs strychnin in combination with opium. The strychnin is given in doses of three milligrams, gradually reduced to one milligram, which is continued for six months. After strychnin, arsenic is used, or iron, etc. While the strychnin is used the watery extract of opium is advised in one dose of 15 milligrams.

In some cases of what he terms alcoholic neurasthenia, good results may be obtained by hydrotherapy. Still, all these therapeutic agents do not exert a satisfactory effect if unaccompanied by suggestion.

We believe, however, that there is an influence akin to suggestion, which is often exerted by the physician upon his unhypnotized patient, and which is very useful in the treatment of inebriety.

It is a question whether the use of opium in cases like those referred to in the above article is not attended with the danger of forming a new habit. It certainly should be used with care.

The subject of inebriety is one of such deep interest that it is at present engaging an unusual amount of study. It is of universal importance and intimately connected with human happiness and misery. — *Journal of Medical Association.*

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### ONE NECESSITY IN THE PROPER TREATMENT OF INEBRIATES.\*

BY H. J. HALL, M.D., FRANKLIN, IND.

No man who is addicted to the chronic use of alcohol or opium possesses a healthy body. And those medical men who have frequently witnessed post mortem examinations on the bodies of inebriates do not doubt that inebriety is a disease. The cirrhused liver, the hypertrophied kidney, the atrophied secretory glands, the degenerate cerebral nerve cells, pulmonary interstitial hyperaemia, etc., all indicate an unmistakable pathological condition.

In treating these chronic invalids, the physician has in the past had very unsatisfactory results. Why? There are more reasons than one, but the chief one that I wish to emphasize, is, that the physician has not had proper control of his patient. And the chief difficulty with the patient has not been so much himself as with his environments — and the retarding influence of his environments have exerted over his recovery. Seldom would you find a community that would sanction the arrest and imprisonment of a man because he had taken a narcotic dose of opium. But it is a daily occurrence in every city, to see men arrested and taken to prison, for no other reason than that they had taken a narcotic dose of some alco-

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\* Report of Committee on Inebriety to the Indiana State Medical Society.

holic preparation, that rendered their pedestrian equilibrium unsatisfactory to the police.

Humanity and science would both say that such cases should be taken to a hospital and treated for narcotic poison, in place of being taken to prison and confined with criminals. What this good state needs for the proper treatment of alcoholism is more hospitals and fewer jails. And much of the money that goes to policemen and jails should go to physicians for the proper treatment of these unfortunates. As the inebriate is a diseased man, he needs curative treatment. In the past he has not received much successful treatment. His surroundings have been overwhelmingly helpful to the continuation of the disease. As well expect to treat successfully typhoid fever in a community where the patients and well people all drink water impregnated with typhoid fever germs, as to expect to treat successfully inebriates when those persons are surrounded by saloons and saloon-drug-stores.

Much effort has been put forth in the past to remove the cause of inebriety from the man. This effort has not been very successful. Now, we propose to remove the man, that is, the diseased man, the confirmed inebriate, from the cause. As to the cause continuing and making more diseased men, we, as doctors, have to deal with that only as preventive medicine — a field that doctors have been permitted only slightly to occupy. But this much the doctor does demand — he demands an opportunity to treat his patient under at least favorable circumstances. With the inebriate it is necessary that he be removed from the cause of his disease. This is as necessary with inebriety as it is in septicemia. How is this to be done? My answer is, we must have the assistance of law. The doctor must call on the legislator to aid him in making his work more effective in the prevention and cure of disease.

When our country is threatened with cholera, the law-making power places a quarantine, keeping those affected beyond our shores, and the law is obeyed. When a city is scourged with small-pox, the law removes the afflicted to the

pest-house, and compels the inhabitants to be vaccinated. And all concede that this is a just law, and for the good of the public welfare and public health. So here is a class of afflicted citizens — diseased in body and weakened in mind. They can be cured, at least more than 50 per cent. of them, when placed under the best care of the medical profession, and under the most favorable circumstances. But the fact is, a very small per cent. of them are cured. When these inebriates are permitted to stay where the cause of the disease is fully operative, and where they are environed by influences that aggravate the disease, rather than aid their recovery, we need not expect valuable results. Hence, if the science of medicine ever cures this class of invalids, produced by alcohol and opium and other narcotics — as they are doing — they must have the aid of the law, like they now have in treating insanity and other diseases, in which the environment is of special importance, and where the health and public welfare is an important consideration.

Some states have good laws, and some nations have laws that are more or less effective. Massachusetts, and at least one other state, have quite effective laws, establishing hospital care and treatment of inebriates. And Great Britain and some of its provinces have made a small beginning in this direction. The Massachusetts state law, perhaps one of the best in this country, requires very much the same process for the commitment of an inebriate to the state hospital as is required to commit an insane person to the insane asylum.

As to this law: First, the certificate of two physicians being filed, that the person's condition requires his treatment at the hospital for inebriates — this, with oral testimony being submitted to the county or police judge, he passes upon the commitment of that person to the hospital.

Second, the time for which these persons are committed to the state inebriate asylum is two years. But if the condition of the patient and his home environments are considered safe by the superintendent and trustees of the hospital, he is

given a leave of absence, but may be returned any time within two years.

Third, such inmates of the hospital for inebriates as are able to pay for their board shall be charged for the same. The board of others shall be paid by the city or county in which they reside, and in case of no residence their board shall be paid by the commonwealth.

The other state of our Union that has a similar law, and even better in some respects than the Massachusetts law, is Connecticut. Great Britain has nine private inebriate asylums, Australia two, and Ontario one. Recently Switzerland passed a law establishing an inebriate asylum, and the minister of justice recently placed such a law before the Austrian parliament.

The natural inquiry arises, What is the result of the treatment in these hospitals or asylums? The Walnut Lodge Hospital of Connecticut, one of the oldest and most reliable institutions of the kind in the world, which is superintended by Dr. Crothers, an honored member of the American Medical Association, reports 54 per cent. cured, 32 per cent. improved, and 14 per cent. unimproved.

Professor Allbutt, M.D., who has large experience in caring for inebriates in Great Britain, says that more than 50 per cent. can be cured by proper treatment and stay in retreats.

Dr. Norman Kerr, who is, perhaps, as near up-to-date authority on this question as any other man in the medical profession to-day, says: "When inebriety is rationally treated, the cure is a reality in most cases."

As the Keeley Cure has been used in a number of our Soldiers' Homes, under the sanction of our government, it leads us to say a few words of the Keeley treatment. They claim to cure 87½ per cent. Undoubtedly, a number of inebriates have been cured by this treatment. Outside of soldiers they claim to cure 90 per cent., but they do not publish statistics to prove these surprising figures. My limited observa-

tion teaches me that they cure about 25 per cent. They claim to cure their cases in from four to six weeks, while the regular profession, in treating these cases scientifically, claim it takes from six to thirty-six months. No man who has a granular degenerated kidney or a fatty heart or a cirrhused liver from the use of alcohol, can have those organs transformed into a physiological condition in four to six weeks. And herein lies the great weakness and fallacy of the Keeley Cure. You cannot cure a chronic inebriate in five weeks and make him a safe man for society and business.

If we desire growth in any department of our profession we must face facts. And one of the facts in this question is that Dr. Keeley has induced four legislatures to pass laws sanctioning and assisting his secret unscientific treatment of inebriates; while the regular medical profession has secured the sanction and assistance of only two state legislatures for the scientific treatment and cure of inebriates.

This, ladies and gentlemen, is because the members of the medical profession are too slow in asking the law-makers of the various states for the aid they need to properly treat this class of patients. Think for a moment — 800,000 diseased men in our nation, as shown by the number of arrests for drunkenness in one year, and over 20,000 in our own state — and this, too, when the firm conviction abides in the minds of our doctors, that these chronic invalids, or a large percentage of them can be cured with the aid of the law and a hospital home.

We believe the time has come for the physicians of Indiana to ask their legislature to make provisions for the proper medical treatment and care of the inebriates of our state.

Your committee on alcohol and opium closes its report, therefore, with this recommendation:

That a committee of five members of the Indiana State Medical Society be appointed to endeavor to secure the passage of laws by the next legislature to aid in the proper treatment



and care of chronic inebriates, and those addicted to the opium, chloral, and other drug habits.

Respectfully submitted by your committee,

Homer J. Hall, Chairman,  
George C. Stemen, Secretary.  
G. C. Smyth,  
W. J. Fairfield,  
W. B. Fletcher.

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The Morphine Habit. — A work recently published in Paris gives some statistics of the morphine habit. From these it would seem that morphinomania is most prevalent in Germany, France, and the United States, although it has victims in Russia, Sweden, Turkey, and the remote East. The medical profession supplies 40 per cent. of the male morphinists, which is the largest proportion; after which follow men of leisure, 15 per cent.; merchants, eight per cent; while peasants, clergymen, and politicians occupy the lowest positions numerically on the list. Among the females addicted to the habit, the largest number, 43 per cent., are women of means, and these are followed in number by the wives of medical men, who make up ten per cent. of the list. It is said that there are entire villages in Germany whose inhabitants are all addicted to the use of the drug. — *Westminster Gazette*.

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Da Costa has found that the local anaesthetic effect obtained with cocaine is more rapid, more intense, and more lasting, if the solution is warm. The dangers of intoxication are thus much diminished, as the quantity of cocaine can be very much reduced if it is warmed. A solution at 0.5 or 0.4 per cent. heated will produce a powerful effect.

The *Scientific American*, by Munn & Co., grows more and more interesting as the field of science widens each month and year.

**THE HAIR, ITS GROWTH, CARE, DISEASES, AND TREATMENT.** — By C. Henri Leonard, A.M., M.D., Professor Medical and Surgical Diseases of Women, at Detroit Medical College, etc. Seventh edition. Illustrated Medical Journal Co., publisher, Detroit, Michigan, 1897. Price \$1.50.

The fact that seven editions of this work have been issued is sufficient evidence of its value and popularity. This work is written in a semi-popular style, and condenses a great variety of facts not well known to the profession, and of great value to laymen. The author has drawn his facts from a great variety of sources, and has the happy faculty for putting them in a clear, popular style. It is clearly the best single volume on this topic in the English language, and is one of the most valuable practical treatises that a physician can place in his library.

**EYE-STRAIN IN HEALTH AND DISEASE.** With Special Reference to the Amelioration or Cure of Chronic Nervous Derangements without the Aid of Drugs. By Ambrose L. Ranney, A.M., M.D., author "Lectures on Nervous Diseases," "The Applied Anatomy of the Nervous System," etc., etc., late Professor of Nervous Diseases in the Medical Department of the University of Vermont and of the Anatomy of the Nervous System in the New York Post-Graduate Medical School, etc. Illustrated with 38 wood-cuts. One volume, royal octavo, pages viii, 321. Extra cloth, beveled edges, \$2.00 net. The F. A. Davis Co., publishers, 1914 and 1916 Cherry Street, Philadelphia; 117 W. Forty-second Street, New York; 9 Lakeside Building, Chicago.

This work of ten chapters discusses the following topics: The bearings of eye-strain upon the duration of human life; the test of vision and ocular movements; eye-strain the cause

of headache and neuralgia; eye treatment of St. Vitus' dance; sleeplessness, some facts relating to its causes and cure; eye-strain the cause of chronic gastric and digestive disturbances; eye treatment of epileptics; the eye of nervous prostration and insanity; surgical treatment of anomalies of the ocular muscles; eye-strain as a cause of abnormal eye conditions. Each of these subjects is studied from a clinical point, and illustrated with numerous cases, which seem to make the conclusions very clear. The author is very enthusiastic and positive in his convictions, and gives the reader much of the evidence upon which they are based. Dr. Ranney has, undoubtedly, brought out a pioneer work, opening up a new field of treatment, which gives promise of doing much to alleviate many very intractable diseases. One merit which commends it to every reader is that it is easily understood, and very clear to the general practitioner. He does not require a dictionary to understand what the author means, or to comprehend his technic, and he is instructed to intelligently make the tests, and study these cases the same as the expert. While technical readers may differ with the author on many points, the general practitioner will feel grateful for the many new views and facts which give a larger comprehension of the obscure phenomena of the nervous system connected with the sense of seeing. The publisher has issued an attractive volume.

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#### SOME VALUABLE EXCHANGES.

*The American Journal of Psychology*, by Dr. Hall, president of Clark University; *The Journal of Comparative Neurology*, by Prof. Herrick of Granville, Ohio; *The American Journal of Insanity*; *The Alienist and Neurologist*; *The Journal of Nervous and Mental Diseases*; *The Medico-Legal Journal*; *The Monist*; *The Journal of Psychological Research*. Of foreign journals, *The Journal of Mental Sciences*, and *The Brain* are the leading ones.

A number of foreign journals devoted to alcohol and its abuses are increasing rapidly. Most of them treat the subject of inebriety from both the moral and physical point of view. It is a curious fact that one journal still continues alone in the field for the scientific study of inebriety.

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In the June number of the *Open Court* the editor discusses the Immorality of the Anti-Vivisection Movement. He regards certain features of the anti-vivisection crusade as extravagant and, in so far as the sentiment on which it is based is unreasoned, he views it as immoral; more than this, its narrow fatal ignorance is both obstructive and destructive to all growth of truth.

Five long papers on alcohol and the injuries which follow from its use, have appeared in separate numbers of Appleton's *Popular Science Monthly*, so far this year. In a purely scientific journal, which aims to reflect the teaching of exact facts, beyond theory and sentiments, this is significant of a great change. No other journal so fully covers the ground of general science, and is more valuable to all readers.

In the March and April numbers of Appleton's *Popular Science Monthly* are two very interesting experimental studies on the physiology of alcohol, by Prof. C. F. Hodge of Clark University.

In the June and July numbers of the same journal Prof. C. E. Pellaw of Columbia College gives a history of alcohol in the past, grouping together many very curious, interesting facts that are new to modern readers.

In the August number of this journal Dr. Crothers has a paper on new questions of jurisprudence concerning inebriety. These papers cover new fields of study and form a most important advance in our knowledge of these topics.

## Editorial.

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### THE INFLUENCE OF THE SEASONS ON INEBRIETY.

Some years ago I published an observation that inebriety was more marked and impulsive in the spring and early summer months. Since that time I have made many notes which appear to sustain this view. In a thousand cases, ninety-four drank to excess in April, May, and June, and were abstainers or very moderate drinkers during the rest of the year. No study of these cases pointed to any particular month of the spring, and no inquiry was made as to the condition of the weather at the time of the drink paroxysm. The following represents a typical case:

A. was a very active merchant who drank very moderately at meals, or dinners, and abstained for months at a time. For ten years he had a severe drink paroxysm in the month of May, and at no other time of the year. He tried repeatedly to prevent this, but always failed. With his family and a trained attendant back in the country, this craze was controlled, but with the slightest opportunity it broke out again. If he could abstain until after the fourth of July, the paroxysm seemed to die out for the year. In this case there were no exciting causes or conditions of life and living that would create this desire at this time of year. In another case a medical teacher of some eminence never drinks except about the first of June, and then to stupor for two days or more. The rest of the year he is a total abstainer. In the ninety-four cases noted, the history was about the same as the above. In two of these cases the drink paroxysm was preceded by chills and some form of fever, which subsided when spirits was used. In one case deep and sudden

melancholy preceded the drink storm. In a large number of cases, a form of mania appeared, in which cunning, intrigue, and skillful deception, were used to conceal the paroxysm, and make it appear to be some other condition. These being periodic cases were not studied except in a general way, and were not different from others, except as occurring at this particular season. My previous opinion that this season of the year, and early mid-summer, presents some favorable conditions and seasonal influences for inebriate paroxysms has been sustained by the police court records of arrests for intoxication in many cities. One reason has been advanced in explanation, that in the spring the organism is in a high state of tension and every function of the mind and body is more active, and there is more liability to explosions of nerve energy. Another is that the power of adjusting the body to the changing conditions of the season in the spring is weaker, and the will has less control. Still another theory has been mentioned: the atmospheric and electrical conditions favor explosions of nerve energy, and seeks outlets along lines where greater resistance exists at other times of the year. No doubt climate has some influence, but there is no satisfactory theory or explanation at present. My observation that persons under treatment are more liable to relapse in the spring, and require more care and watchfulness, is confirmed by others. Persons who come for treatment during these months are more restless and delusional, than others who come in the summer or later in the season. Persons who have been under treatment for some time and are supposed to be practically improved and benefited, frequently exhibit mental instability and a reckless egotism at this time that is very marked. Later in summer this is unnoticed and passes away. In a case under my care for four years, this peculiar mental condition of unrest and semi-delirium occurred every year in June, and passed away in two or more weeks, returning the next year about the same time.

I hope to take up this topic again in the future with some new facts, or at least new views of our present knowledge.

## INSANITY AND INEBRIETY.

The fact is startling that insanity has increased in proportion to the population over one hundred per cent. from 1870 to 1890. The feeble-minded, idiots, and epileptics have also increased. Inebriety as a disease has come into more and more prominence during the last quarter of a century, but whether inebriety has increased in anything like the same ratio as insanity is not certain. The opinion is sustained by strong evidence, that inebriety in modern times is obscure insanity. It is certain that many cases of inebriety become insane, and an equal number are classed with the insane in statistics. A certain number of cases of insanity have an early stage of excessive drinking, and a number of insane persons will turn to spirits for relief and become inebriates. A number of cases become insane when the alcohol is withdrawn, and a number alternate between excessive use of spirits, and strange erratic conduct, for which the term insane is the best description.

The intimacy of these two so-called diseases suggests that the increase of insanity is due largely to inebriety, the latter being unrecognized as a distinct disease.

The statistics of all insane asylums recognize alcohol as a cause of insanity, varying from five to twenty per cent. A study of cases indicates a much larger number whose first sign of mental defect was the use of alcohol. After a period of excess some form of well-marked insanity appears, and the use of spirits is not regarded of interest in the history. The recognition and treatment are surrounded with great difficulties. Most cases are not treated in the early curable stage, and, on the subsidence of the acute symptoms, they are often discharged as cured. The inebriate is never recognized as requiring physical treatment until the case has reached incurable stages, and then the treatment is largely moral and empirical.

Heredity is not recognized and the evils of both insanity and inebriety are permitted to go on unrestrained to succeeding generations. In all probability inebriety is a large factor in the increase of insanity, also that this growth of mental

disease will continue until inebriety and heredity are studied as causes which can be removed. The mere housing of an army of incurable insane is a very small part of the prevention and cure of insanity. In like manner forcing total abstinence on inebriates by law in jails and asylums or by pledges and prayers is not curative, nor preventive. The cure of these disorders, of which insanity and inebriety are only names of general symptoms, must reach further back, and begin earlier. The increase of both, means inability and failure to recognize the causes and provide for their prevention.

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#### THE USE OF ART TO INCREASE THE DRINK IMPULSE.

The modern bar, or place where spirits are sold, is arranged and fitted up by artistic experts, with the special object of appealing to the senses of the customers. Sight, smell, taste, and hearing are appealed to in the most adroit way, and along higher levels, to create a thirst and desire for fluids. This is now studied as an art, and trained men make a special business of fitting up bars to draw trade (so called).

The location and effect of light must be studied, and the entrance arranged so that the senses may be roused instantly. The flashing mirrors, the colored bottles, the works of art in delicate tints, and the polished imitations of silver and gold to arrest the eyes. Flowers which emit delicate odors, and spirit odors from the fluids that are used with highly scented liquids in open glasses, arouse the sense of smell. If the man is not a spirit drinker and calls for some acid or soda drink, it will be served in the most attractive way. Delicate dishes with condiments, spices, and cracker food are displayed most temptingly. In some bars fountains with water give out a musical murmur, and music from boxes or bands play at stated intervals. Some saloons cater to the political sentiments of their patrons, and have excellent pictures of the party leaders, and mottoes framed in the most attractive way on the walls. Other places display pictures of actors, or of horses, or sporting celeb-



rities, according to the taste of the customers. The treasures of art in every field are drawn on to make an impression on the senses. Fruits in reality and painted imitations are distributed in the most tempting manner. Statuary, exquisite clocks with melodious chimes, potted plants, aquariums, and antique curiosities all contribute to this sense suggestion. In both total abstainers and moderate drinkers a thirst is created for drink of some kind other than water. Sight and hearing with smell are roused, and taste demands a recognition. In wine and beer bars, this continuous appeal to the senses is so skillfully arranged that many persons cannot resist it, and should they do so in this place, a thirst has been created which demands gratification at once elsewhere.

The method of dispensing fluids so as to intensify the thirst is studied as a fine art, and the sound of the liquid as it is thrown from one glass to another is calculated to produce certain effects, and the foam and gas formed appeals to the sight. Every one who enters such places is subjected to the most powerful temptation of the senses, which culminates in thirst and desire to taste the liquids offered.

The man who has used spirits is unable to control his thirst in these places, and the man whose thirst has been satisfied before he comes to these places takes pleasure in rousing it again by the condiments and means at command. The neurotic and feeble-minded and persons who are dominated by the senses are powerless to resist. The acme of the art is to create a thirst and desire for drink in the mind of every person who enters the saloon. In some places well-dressed courteous men in the employ of the proprietors invite strangers to drink. The drink thirst roused in this way is overmastering. Thus art in the saloon holds a powerful sway from the highest down to the lowest places. This extends to the bottles in which wine and spirits are put up, and is growing more and more every year. The psychology of the saloon and the arts which increase the desire for spirits are unwritten, but a very wide field awaits occupation and study by some one in the future.

## INEBRIATE MOBS AND AGITATORS.

The inebriate may rouse up a mob, but he can never guide or direct it. The instability of the mind and the inability to follow a line of continuous thought or act for only a brief time make it impossible to lead long.

A mob of inebriates started to burn down a temperance printing house two miles away. Before they reached the place they turned into a saloon, and expended their energy in drinking spirits and finally burned the saloon. The purpose they started to accomplish was forgotten. An inebriate mob seldom acts in harmony for the reason the brains of such persons are in all degrees of palsy, and are not long affected by the contagion of the moment, or the personality of the leader. The man in the excited stage from spirits may respond to the contagion for a brief uncertain time, then become indifferent, and change often to the exact opposite act, or opinion. If the inebriate has passed this stage, he is more uncertain and fickle, and may for the moment manifest the wildest excesses of talk and conduct, then turn and defend what he condemned before. The more he drinks, the more imbecility follows. Cowardice, uncertainty, and sudden impulsive acts deepen into general palsy and stupor. A mob of men whose excitement depends on spirits which they use, may be reckless and brutal, they may suddenly burn property and do violence, but they are without purpose or concert of action, and extremely whimsical, cowardly, and uncertain, and soon expend their energies, dissolving as quickly as they are formed. The element of suggestiveness and contagion is always superficial, and never makes a strong impression on the mind. Mobs may attract inebriates by their unreasoning and credulous exaggeration of thought and conduct, and carry them along in the wake of their path, as camp-followers, rioting along in a petty way according to circumstances and opportunities; but mobs made up of inebriates are short, uncertain explosions of psychical energy, that disappear and leave no trace behind them. In politics

the saloon may seem to control a large vote of inebriates, and yet this is a very uncertain element. The inebriate is a moral dement, and brain action and function is never harmonious or certain, never steady and along lines of fixed purpose, and never uniform and normal.

The inebriate as an agitator is also abnormal. He may appear in his free intervals from drink to be clear, resolute, and strong of thought and purpose. Yet this is often a thin varnish of a crippled brain that struggles to conceal its real condition. Many of these men who pose as apostles of some new gospel are unable to discriminate and adapt themselves to the relations of the new ideas they preach. Their minds, broken loose from all settled convictions, drift in the currents of every passing wave. Every new ism is accepted and advocated, not by trial or rejection, but in the order in which they arrive. The old is rejected and the new accepted with suspicious credulity and unreasoning faith. When the mind becomes weary with the rush of thought, the drink impulse comes on, and a drink storm passes, leaving them weaker and more feeble. Thus the inebriate agitators, as reformers and teachers of new lights, go down in the darkness they are trying to dispel. The periodical inebriate and the reformed inebriate, or one who is supposed to have recovered, cannot be leaders. Like men in mobs they may rouse attention and concentrate thought for a moment, but beyond this they are powerless. The brain has lost its power for original work, for clear leadership, or clear discernment of the relation of events, and capacity to utilize the forces of life. The fads and isms and crazes of the day succeed each other in startling rapidity. Springing up in degenerate soil, fostered by abnormal brains (particularly in inebriates), then pass on to be repeated in the next age. When the delusion that inebriety is only a transient condition from which the brain recovers quickly is fully dispelled, then the defective minds from this source will be seen and recognized.

## A NEW PHASE OF INEBRIETY.

An inebriate forty-two years old, an army officer in the engineer corps, who was a thoughtful retiring man, suddenly became intensely egotistical. Delirium of grandeur and self-satisfaction, with intense ambitions to attain political prominence, came on. He had drunk steadily every day for years, and was never intoxicated or apparently confused, but seemed clear and rational on all matters. The egotism and delirium came on in a few hours, and he explained this as a sudden awakening to the realization of his latent talent. He resigned from the army, and entered upon a campaign for the mayorship of a small city. This he conducted with skill and judgment, but was defeated. He then became a candidate for Congress, and went about the district soliciting votes. He drank, but never exceeded the usual small amount of spirits every day, and talked incessantly of his ability to do what others could not, and was calm, good-natured, but intensely active. He was very proud of his personal appearance, and careful of all the little details of life, and only showed weakness in his intense egotism and delirious confidence in his brain power. He failed to secure the nomination to Congress, then he appealed to the Governor for an appointment as state engineer. His persistency created a suspicion of his mental soundness, and a commission examined him for lunacy, failing to agree. He then moved into another state, and began a colossal plan for a sanitarium. He succeeded in enlisting capital, forming a company, then he suddenly became profoundly intoxicated, and continued to drink to stupor until placed in my care. He made a good recovery, and relapsed into his former quiet ways. He went to work as engineer, and continued over two years temperate, modest, and retiring in his habits and living. Then he began to drink again, and egotism and deliriums of strength returned. He went West and entered upon a great mining scheme, and for twelve months was eminently successful, drinking sparingly, but steadily becoming more boastful, and entertaining most unusual theories of his powers of mind and

body. Opposition and ridicule made no impression, he was not irritable, or excited, but grew more delirious in his conceit of himself. His self-confidence in his schemes brought him a certain position among strangers, which enabled him to partially succeed. His mind continued in this abnormally exalted state. Sometimes he drank spirits to excess, then he would go to bed for a short time, then appear again and continue as usual, with the same exaltation of mind. He boasted of his ability to drink so much a day, and never exceed that amount, and in food and care of his body he claimed he had attained great success. No disappointment or trouble disturbed him, nothing was recognized or considered except success and his power to accomplish everything. He died from pneumonia, after three days' illness. His mental exaltation continued to the last moment of life.

This exaltation was a very unusual symptom, and came on suddenly after a long period of drinking. The subsidence when spirits were withdrawn and its recurrence on the resumption of spirits were also unusual. Certain brain centers must have been very seriously damaged, and their symptoms dominated all other conditions of degeneration. This was a very unusual case, and one in which a more careful study might have brought many new facts.

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The American Medical Temperance Association met at Philadelphia in June. The old officers were re-elected and arrangement for the publication of the Bulletin were made.

Dr. Grosvenor read a paper on alcohol before the Academy of Medicine, which meets a day before the regular session. This paper made a profound impression by its calm, scientific tone and accuracy of conclusion. In the section on state medicine, Dr. Quimby read a very significant preliminary report "On Collective Studies of Alcohol, in the Practice of American Physicians." Drs. Shepard, Crothers, Drayton, and other physicians read papers on alcohol in disease, and as a food

and stimulant. In the neurological section Dr. Crothers read two papers, on "Tuberculosis in Inebriety," and "Alcohol as a Causative Factor in Central Nervous Disease."

The Medical Temperance Association held a district meeting in Prohibition Park at Staten Island, on July 5th and 6th. A number of papers on alcohol were read by Drs. Quimby, Shepard, Drayton, Watson, Ellsworth, Crothers, Mattison, Arnold, and others, which will appear in the Bulletin. Dr. Kellogg gave a very instructive lantern lecture on the effects of alcohol which was highly appreciated. A meeting of the executive committee of the Association for the Study and Cure of Inebriety was held, and Dr. L. D. Mason was appointed a delegate from this society to the congress, against the abuse of alcohol, in Brussels in August, and also to the British Medical Society for the study of inebriety. Dr. Quimby was also appointed delegate to the International Congress at Warsaw. These items give some idea of the activity in the study of alcohol and its problems. Our society for years was alone in this field, now an army increasing rapidly every year are taking up this topic, and the subject is not condemned and sneered at as formerly.

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There are families in which at a certain time of life explosive neurosis breaks out. Hysteria, convulsions, unreasonable anger, excitement, depression, credulity, skepticism, and most unusual emotionalism, and faulty reasoning are some of the common symptoms of degeneration. Alcohol and drug inebriety are common symptoms of this central failure of brain and nerve power. The changes of mind and conduct are attributed to alcohol; in reality it is only a symptom and covers up the real conditions.

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The July *Open Court* opens with the first of an extremely important series of articles on the "History of the People of Israel," by Prof. C. H. Cornill, of the University of Königs-

berg, Germany. This series of articles has been specially written by Professor Cornill for the *Open Court*, and will not be published in German until after their appearance in English. The first article treats of the geography and original inhabitants of Palestine, of the race-migrations of the Orient in ancient times, of the early history of Babylon, Egypt, etc.

In the second article, illustrated from classical paintings and engravings, Dr. Paul Carus discusses "Eschatology in Christian Art," reviewing the doctrines of the destiny of the world and of man from their beginnings to the present day.

Prof. G. Flamingo, of Rome, Italy, gives a sketch of "Catholicism in Italy," seeking to analyze the fundamental religious sentiments and motives of the Italians, etc., etc. Correspondence, poems, book reviews, and notes follow.

(The Open Court Publishing Co., Chicago. Single copies, 10 cents; annually, \$1.00.)

The *Homiletic Review*, by Funk & Wagnalls, New York city, should have a place in the library of every scholar. It brings facts and studies of great interest along lines that are not familiar to the reading public.

The *Hypnotic Magazine*, edited by Sidney Flower, published at Chicago, Ill., is a most interesting and valuable journal, giving new facts and suggestions of great practical value to every physician. Send for a copy to the Psychic Publishing Company.

*American Journal of Insanity* will be transferred to Baltimore and published by the Johns Hopkins Press. The editorial control will be in the hands of a committee of the American Medico-Psychological Association, consisting of Dr. Henry M. Hurd and Dr. E. N. Brush, of Baltimore; Dr. G. Alder Blumer, of Utica, N. Y., and Dr. J. Montgomery Mosher, of Albany, N. Y.

All communications for the *Journal* should be addressed

to Dr. Henry M. Hurd, care of the Johns Hopkins Hospital, Baltimore, or to any of the editors. All exchanges and business communications should be addressed to the Johns Hopkins Press, Baltimore.

*Listerine* is one of the best antiseptics on the market, and has been thoroughly tested for years. It is also a valuable household remedy which can be relied on for all occasions.

The *Arethusa Spring Water*, of Seymour, Ct., is rapidly growing in popularity and demand, and it is safe to predict that this water will come into general use in the near future.

*Ferratine* is a new form of iron with remarkable therapeutic value. Some valuable papers have been written on its excellences by the following: Dr. Perekhan "On Ferratine as an Iron Tonic and Food;" Dr. Richardson "On a Therapeutic Test of Ferratine;" "Affective Tonic," by Dr. Baurman; "Will Iron Cure Anemia?" by Dr. Wolfe. "Iron in Organic Combination in the Treatment of Anemia," by Dr. Thompson. These papers can be had from Boehringer & Soehne, 7 Cedar street, New York city.

The *Acid Phosphate by Horsford* is one of the most excellent tonics for hot weather on the market. All neurotics should use this tonic daily. Inebriates and opium-takers find by experience that this tonic excels all others in its pleasing effects on the nervous system. We have used this for years with the best results, and heartily commend it to others.

Dr. Wheeler's *Tissue Phosphates* is an old established remedy, which grows more and more popular with the years. It has had great popularity in neurasthenia and general anemia.

For a long time we have used and mentioned to our readers *Fellows' Hypophosphites*, as a remedy of much value and



usefulness. As a nerve tonic its power seems to be in its reconstructive qualities and tissue-building properties. It has been on the market for years, and passed the stage of criticism, and may be said to have become a standard remedy, which can be used with great confidence.

It is a pleasure to call attention to *Bovinine* as a special food stimulant. No other substance is so clearly a food tonic and stimulant, and without doubt *Bovinine* will be accepted as a permanent addition to the standard remedies of scientific medicine. In the exhaustion from inebriety it is a superior drug, and should be used on all occasions.

*A Valuable Hypnotic in Pneumonia.*—The necessity of overcoming the insomnia attending certain cases of pneumonia, ought to be evident to every physician. Probably nothing known to the profession can alleviate the distressing symptom of sleeplessness so satisfactorily and with so few after effects as Bromidia. By the use of this reliable preparation we can obviate the effects of losing sleep, and at the same time feel that the heart's action is unimpaired, a dire calamity in a pneumonic process.—*Vermont Medical Monthly*.

February, 1897.

Edw. L. H. Barry, Jr., M. D., Jerseyville, Ill., says: "I have used *Aletris Cordial* with excellent results in the following: Miss H., 19 years of age, brunette, well-developed, but troubled with dysmenorrhea, called at my office, and after explaining her affliction said: 'Doctor, if there is anything you can prescribe to relieve my suffering do so, for life is a burden to me now.' I thought of the *Aletris Cordial* at once, and gave her a six-ounce bottle, directing her to take a teaspoonful three times a day, commencing four or five days before the regular period. Several weeks afterward she returned with the empty bottle remarking: 'I've come back for more of that medicine, for it's the only thing I ever had to give me

relief.' I can cheerfully recommend *Atetris Cordial* to the profession."

Dr. Nordeman, professor of surgery in New York city, has lately written in the *New York Polyclinic*, a very interesting and valuable paper on the value of a gold solution known as *arsenauro* and *mercauro*. He found them most valuable in sexual neuraesthesia and syphilis. In alcoholic neuraesthesia they are invaluable also, and heartily commend them.

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INEBRIETY AND THE PENAL LAW IN EUROPE  
AND THE UNITED STATES.\*

BY J. J. PITCAIRN, L.R.C.P., Lond., &c.

Deputy Medical Officer H.M. Prisons, Halloway and Newgate.

From the earliest times drunkenness has been regarded as exhibiting a greater or less degree of moral turpitude according to the special point of view of the individual observer, and the drunkard has been made the subject of special laws and regulations with all peoples. In this paper I propose to review the present state of the penal laws among the principal civilized nations, with regard not only to simple intoxication, but also as the degree of responsibility attaching to acts committed while in that state.

It will be found that the attitude of most communities towards drunkenness presents certain marked features of resemblance. The public drunkard is usually regarded as a public nuisance, which is sought to be abated by fine or imprisonment, or, perhaps, by both together. Again, although the habitual drunkard is of universal incidence, his existence has hitherto been almost entirely ignored. That this is the case is evident from the condition of the statute books and codes of

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\* Read before the English Society for the Study of Inebriety — July, 1897.

all countries, which, with the exception of Austria, and, in a modified degree, Germany, prescribe few or no adequate means of dealing with him, save the now discredited plan of imprisonments. In these two countries it is true a method exists for dealing with habitual drunkenness when it has occasioned prodigality or insanity. But then it is too late to save either the drunkard, his fortune, or his family. At best, the procedure is very cumbersome, and does not admit of the drunkard being placed under restraint while there is still hope of his reformation.

This comparative impotence of the law is, no doubt, due in many instances to a blind worship of so-called "liberty." It is a survival of the times when no special disgrace attached to intoxication, and when to get drunk was considered as natural an action as going to bed. That is to say, if the art and literature of the eighteenth century may be taken as trustworthy guides to the manners and customs of our forefathers.

I have been often struck, for instance, with the enormous extent to which drunkenness figures in Hogarth's works. It is true that the artist depicted a horrible scene of sordid dissipation in his "Gin Lane." But this work largely depends for its effect upon the squalid lives and surroundings of the men and women seen there. In the "Rake's Progress," too, other causes are apparently considered to be the reason of the hero's ruin, the drunkenness being regarded as quite a necessary event of everyday life. In fact, these pictures are in no sense of the word an attack upon drunkenness in the abstract, and it is very doubtful if even such a keen observer as Hogarth ever quite realized what an appallingly drunken set of people were those among whom he lived.

To look further afield, the habit of drinking in Germany appears until quite recently to have been associated with the very nationality of the people who raised tipping to the level of a fine art, if not of a science. They drank on every possible occasion and on the slenderest pretext, and the man who abstained was regarded among all classes as a simpleton.

Poet after poet sang the joys of imbibition, and Luther (himself an instinctive sensualist) was the author of an aphorism — “Who loves not wine, woman, and song will remain a fool though he lives to be a hundred.”

Among all civilized nations the last half-century has seen a great change. Inebriety is unanimously regarded by the continental psychologists as a mental disease requiring compulsory seclusion. The publicists, on the other hand, have demonstrated the relationship between crime and alcoholic excess. The habitual drunkard has thus assumed a national, as opposed to an individual, importance, and although it has remained, as I shall show, for Austria to take the initiative in seriously grappling with the problem, public opinion is now ripe for a similar reform elsewhere.

I commence the examination of the subject with our nearest continental neighbor.

*France.* The existing law concerning alcoholism was passed in 1873. By this, involuntary or accidental drunkenness, unless incurred with felonious intent, is considered to be an extenuation of a criminal act.

Scandalous drunkenness is punishable by a fine of one to five francs. If repeated within twelve months, the culprit may be sentenced by the correctional tribunal to a fine of sixteen to three hundred francs, and imprisonment from six to thirty days, a third offense entailing the maximum of these penalties. Any person who has been thrice convicted may be declared incapable for two years of exercising “civil rights,” which include that of the franchise, the serving on juries, or in any other public capacity, and the right to carry arms. This sentence is published in such manner and places as the court may direct.

Tavern and restaurant-keepers serving minors below the age of sixteen, or persons already intoxicated, are liable to a fine of one to five francs, and, on a second conviction to the extreme penalties and loss of civil rights incurred, as described above, by the drunkard himself. The latter heavy punish-

ment is at once visited on any publican, etc., who allows a minor below sixteen years of age to become intoxicated.

The effects of intemperance have of late years become accentuated in France, owing to the widespread consumption of *absinthe*. Alcohol in this form is gradually superseding the comparatively innocent native wines, and is considered to be an undoubted cause of epilepsy, paralysis, and even insanity.

There are at present no asylums for inebriates in France, but the question has latterly been forced upon public attention. It has been proposed by Dr. Muteau, President of the *Societe de Temperance* to treat inebriety in ordinary asylums on the ground of its being a more amenable form of mental disease.

*Germany.* The German beverages are for the most part light, hence the abuse of alcohol is not quite so disastrous in its effects as it is among other nations. Nevertheless, the government, as might be expected from the generally paternal nature of its legislation, has devised stringent measures for the suppression of intemperance. It has increased the taxes upon liquor and sought to prevent its adulteration. Public necessity for the establishment of new taverns must be shown to the satisfaction of the police who make local rules for Sunday and holiday closing, and drastic regulations to prevent the encouragement of drunkenness, gambling, or juvenile drinking.

By the common law responsibility does not attach to a criminal act if the offender was at the time in a condition of unconsciousness or derangement by which his free-will was suspended. Although intoxication is not specially mentioned other states of unconsciousness are difficult to prove legally. Voluntary and complete drunkenness, therefore, does not extenuate an offense, but if incomplete or accidental it may do so.

The penal code confines itself to provisions intended to discourage alcoholism, and to impress the drunkard with the shamefulness of his conduct. The 361st article decrees that those wholly abandoning themselves to gambling, drunkenness, or sloth, fall into a condition which obliges the authorities to interfere for their protection, shall be imprisoned for one to

forty days. Persons so sentenced may be employed at local gaols at work suited to their powers and social position. If the offender is a stranger in the locality he may be expelled the district on his release. Any person interfering with the public rest at night by creating a disturbance through intoxication may be similarly punished. Persons who become drunk while employed in an occupation requiring special care to avoid endangering the lives or health of others may be fined fifty marks or be imprisoned for eight days.

In some districts, notably Baden, the Prefect may formally caution drunkards who are a public scandal or who neglect their families. If this is ineffectual he may prohibit them from entering a tavern or obtaining liquor under pain of 150 marks fine and six weeks' imprisonment, together with a fine of 100 marks to any person supplying them.

Finally, habitual drunkards convicted under the section already cited may be "interdicted" or practically declared to be minors, and deprived of civil rights much after the manner of the French code. At the expiration of their sentence in the local gaol, they are transferred to a hard-labor prison, and there employed on works of public utility for two years or more.

Until 1891 jurists had regarded the legislative suppression of drunkenness as impracticable. But in that year the congress of German jurists recommended the establishment of compulsory asylums. The oldest inebriate asylum in Europe is that of Lintorf in Rhenish Prussia, which was founded in 1851. It receives an average of seventeen patients per annum, who are employed at agricultural pursuits. The cures are estimated at 25 per cent., although the directors complain much of patients discharging themselves before a permanent cure has been effected. This is the only purely inebriate asylum in Germany, other establishments which have since sprung up receiving cases of moral insanity, as well as dipsomania.

*Austria.* By the penal law an unintentional crime committed during intoxication is not punished, but the intoxication itself entails under these circumstances a sentence of six

months' hard labor, especially if the offender knew by experience that he was apt to become violent when in that condition.

The code punishes by a maximum of a month's imprisonment the inveterate drunkenness of workmen or those employed in dangerous trades. Any person found drunk in a public place is liable to a month's imprisonment or a fine of 50 florins. If three convictions occur within a year, the recidivist may be prohibited under the same penalties from frequenting taverns during a period usually of twelve months. The same law enacts that a debt contracted for the sale of drink cannot be recovered. Inn-keepers serving persons already drunk, or children unaccompanied by their elders, are liable to a month's imprisonment and a fine of 50 florins, and, on further conviction, to a loss of their licenses.

The "curatel" law, which has attracted much attention of late, only dealt indirectly with the drunkard as a "spendthrift" or an "idiot." In this respect it was identical with the German "interdiction," and was, of course, open to the same objections. But a law has recently been enacted for the compulsory detention of drunkards alone in special asylums. These will be organized for an average detention of two years. Voluntary inmates will be received on condition of their agreeing to rules identical with those applying to the convicted patients. The sentence of incarceration will be pronounced by the usual correctional tribunals and will be subject to appeal. The same authority will decide the fees to be paid by the patient and the date of his discharge, which may be conditional under a ticket-of-leave. A relapse under the latter condition will forfeit the claim to a definitive sentence. Three convictions for drunkenness during twelve months, drunkenness the cause of actions dangerous to the individual or others, or drunkenness which has produced mental deterioration, will alike be considered reasons for incarceration. Alcoholic liquors may be absolutely excluded, and their introduction punishable by six months' hard labor.

*Hungary.* The penal code decides that a person shall



not be responsible for acts committed during a state of unconsciousness or when his moral sense is obscured by the suspension of his free will. It follows then that an accused person ought to be acquitted if at the time of the act he was undoubtedly intoxicated, and negligence arising from a state of intoxication, as in the case of a railway servant omitting to make the proper signals, should be similarly excused. In practice, however, the determination of the exact degree of intoxication is of the least importance, and such a condition is seldom regarded as more than an extenuating circumstance.

Scandalous drunkenness in a public place is punishable by a fine of 25 florins, and double that penalty is incurred by any person causing the intoxication of another in a tavern or public place. An inn-keeper knowingly serving with liquor a drunken person, or one below the age of fourteen, is liable to a fine of 100 florins, with the addition, on a second conviction, of the canceling of his license for a year. The public intoxication of officers of the state, professional men, or the clergy, is visited with exemplary penalties. It is to be observed, however, that the foregoing regulations are not carried out thoroughly, owing to the scarcity of the police in rural districts.

By the civil code debts exceeding eight florins incurred for the supply of intoxicants are non-recoverable. No notorious drunkard may become a guardian or trustee, and persons of prodigal or dissipated habits may, on the application of their nearest relatives, be placed under the guardianship of the courts, which will, if necessary, administer their estates. This procedure is, in fact, a modification of the Austrian curatel.

Inebriate asylums are at present unknown in Hungary.

*Holland.* The penal code, although it does not expressly name drunkenness as an extenuation, absolves from the consequences of acts due to disease or insanity, or when the crime is unpremeditated and the culprit has been deprived of his reason by the act of another.

Drunkenness endangering the lives of others is punishable by at least six days' imprisonment and a fine of 25 florins.

Public drunkenness by a fine of 15 florins, and second or third offenses within six months by imprisonment for three, fourteen, or twenty-one days. Publicans supplying drunken persons, or children under sixteen, forfeit their licenses. This is a heavy penalty, as licenses being strictly limited in proportion to the population are of corresponding commercial value.

There is at present only one asylum for inebriates at Hooghullen.

*Belgium.* The penal code entirely ignores drunkenness as an extenuation of criminal acts.

Scandalous drunkenness is punishable by a fine of one to 15 francs, increased to 25 francs for a second offense within six months, and for a third offense in the same period to 75 francs fine and 7 to 21 days' imprisonment. Persons endangering the lives of themselves or others by their drunkenness are liable to fines of 15, 25, or 75 francs for repeated offenses, accompanied by 4, 7, or 28 days' imprisonment respectively. Innkeepers serving drunken persons or children under sixteen are fined 5, 10, or 50 francs for repeated offenses within twelve months. Any person causing the drunkenness of a minor may be fined 25 francs, or 50 for a second offense, the fines being doubled in the case of innkeepers, etc. Whoever causes by intoxication an illness preventing another from earning his livelihood is liable to two years' imprisonment and a fine of 1,000 francs, the penalties being quintupled should death ensue.

The payment of wages in taverns and the sale of intoxicants, except in licensed premises, are punishable by a fine of 25 francs. By the civil code, debts incurred for the supply of intoxicants are non-recoverable.

There are no special asylums for inebriates.

*Sweden.* Drunkenness does not exonerate from crime, the penal code only exempting a person from the responsibility for criminal acts committed in a state of insensibility due to no fault of his own. Should the offender incur the death-penalty, and although not in the fullest possession of his facul-

ties (from age, or disease of body or mind), be still considered partially responsible, the punishment is reduced to hard labor for six to ten years. Public drunkenness is punishable by a fine of twenty-six dollars and detention until sober.

The above penalties may appear trivial when compared with those enforced in other countries, but it is necessary to remember that Sweden is the home of the special legislation known as the "Gothenburg system," which claims to absolutely prevent drunkenness.

The manufacture of brandy has always been an important branch of Swedish agriculture, and until 1855 each landed proprietor possessed his own distillery. The evils resulting from the system at length induced the government in that year to suppress all but a few stills, which were placed under the control of civil officials, who were forbidden to sell a less quantity than 250 litres of spirit at one time. This is, of course, only sold to the innkeepers, whose retailing of it is controlled by severe licensing regulations.

The "Gothenburg system" was introduced in 1865 in order to do for the towns what the law had effected ten years previously for the country districts. The system acts through the agency of philanthropic institutions called *Bolags*, which buy up spirit licenses, and either extinguish them altogether, or place managers in charge of the taverns at fixed salaries, and with no pecuniary interest in the sales. The profits are handed to the municipality, which devotes them to purposes of public utility, chiefly for the benefit of the working classes. No person under eighteen years of age, nor one already intoxicated, may be served; high prices are charged for the spirit, which is reduced in strength and absolutely free from adulteration; no liquor can be obtained on credit. The taverns are closed after 7 p. m. on weekdays, and entirely on Sundays and holidays, and special attention is paid to their hygienic surroundings.

*Norway.* As in Sweden, offenses committed during a state of insensibility are punishable, unless the condition arose from no fault of the culprit.

The code contains no reference to drunkenness, and if occurring in public places, its treatment is simply an affair of local police. A revised code is now under consideration, which contains severe penalties for this offense, together with the legalizing of asylums for the compulsory seclusion of inveterate drunkards. At present there exist only two private establishments of this nature.

As in Sweden, private stills were at one time universal in the agricultural districts, but in 1840 the government suppressed the majority and assumed the direction of the remainder. In 1871, inspired by the example of Sweden, the "Gothenburg system" was introduced by societies called *Samlags*, and was carried to even greater lengths than in the land of its birth. Thus, the managers of the taverns are encouraged to push the sale of non-alcoholic liquors; they must be persons of the highest character; they are liable to dismissal should they allow drunkenness; customers are forbidden to smoke, talk loudly, or even to remain on the premises after they have once been served; no seats are provided — doubtless to render the observance of the latter rule less difficult — but to compensate for the absence of comfort the walls are plentifully hung with texts and moral maxims. By a law of 1894, the *Samlag* may be established in any district by a *plebiscite* of both sexes, above the age of 25.

But in spite of all these efforts secret drinking is very rife, and the working classes, unable to gratify their passion for alcohol otherwise, are large consumers of ether, naphtha, and even spirit-varnish!

*Denmark.* The code decides that a person whose reason is too enfeebled for him to understand the nature of a criminal act shall not be held responsible for it, but the courts decline to include alcoholism in this category.

Drunkenness is very prevalent, but the regulations concerning it being more fiscal than penal have little deterrent effect.

Licenses to publicans are issued by the state, subject to the favorable report of the local authorities as to the applicant's

character, etc. The latter also have the power of limiting the number of taverns in proportion to the population. They are closed at 11 p. m., daily, and altogether on Sundays and holidays.

The serving of children under sixteen or of persons already intoxicated is prohibited, and a drunken person may be conveyed by the police to his own home at the expense of the publican, at whose establishment he was last served.

No inebriate asylums exist in Denmark at present.

*Switzerland.* The penal codes of the several Swiss cantons regard the responsibility for acts committed during intoxication from different standpoints. Some only allude to insanity, others to involuntary unconsciousness, ignoring willful drunkenness, while others again appear to contemplate the latter when using the terms, "free-will," "settled purpose," or "criminal intent." Still others explicitly mention drunkenness as an extenuating circumstance, unless deliberately incurred for a criminal purpose.

Most of the cantons punish scandalous drunkenness by fine and imprisonment, and many of them prohibit the offender from entering a tavern or being supplied with alcohol, during a period varying from one to five years.

The purchase, importation, and sale of alcohol in bulk is a government monopoly, the proceeds being applied to the reduction of taxation. The purity of the spirit is thus assured while its sale is checked by the high price exacted. The individual cantons have absolute power in restricting or limiting the number of taverns, and the town of Basle has established a modification of the Gothenburg system." Although the consumption of alcohol has in consequence of these measures decreased enormously, there is still a very large illicit manufacture of the poisonous *absinthe*, of which, indeed, the "best" is said to be produced in Switzerland.

In 1890 the canton of St. Gall accomplished a revolution by the establishment of compulsory inebriate asylums open also to voluntary inmates. The period of detention is nine to eight-

een months, the communal council being the committing authority on medical evidence being furnished of the necessity of detention for effecting a cure in the dipsomaniac. If the patient is possessed of property it is debited with the cost of his maintenance, but in case of poverty the state defrays all charges, and will even support a family deprived in this way of its bread-winner.

There are in other parts of Switzerland six private asylums for inebriates, four being for men and two for women. Speaking generally, they are all organized on the plan of agricultural colonies.

*Italy.* Accidental drunkenness, if complete, confers absolute irresponsibility for a crime, and if incomplete ranks as an extenuating circumstance. Voluntary drunkenness, if complete, is an extenuation; if incomplete, it is still so, but in a less degree. Even the incomplete intoxication of an habitual drunkard is held at some exoneration, but as the degree is not specified, it is presumably not far removed from complete responsibility.

Scandalous public drunkenness is punishable by a fine of thirty lire (about 25s.). If habitual, by a month's detention in gaol or at the public works, at the discretion of the judge. Supplying liquor to drunken persons or to children below the age of ten entails ten days' or a month's imprisonment, respectively. The number of taverns are limited at the sole discretion of the municipal authorities.

There are no inebriate asylums in Italy, although an abortive attempt in this direction was made at Milan in 1886.

*Spain.* Intoxication is held to be an extenuating circumstance for a criminal act when it is not habitual, or if it occurs subsequently to the conception of the offense.

Scandalous drunkenness is punishable by a fine of five to twenty-five pesetas (four to twenty shillings). The native wines being consumed to the almost entire exclusion of spirits, intemperance is less common and does not cause the serious maladies observed in other countries.

*Portugal.* Drunkenness is regarded as an extenuating circumstance for a criminal act, if the crime is unpremeditated and the intoxication not induced for the purpose of committing it.

Scandalous drunkenness is punishable by eight days' imprisonment, increased to ten, fifteen, and thirty days for repeated offenses.

Neither in Spain nor Portugal do there exist any special asylums for inebriates.

*Greece.* By the criminal code no responsibility attaches to acts committed in a state of absolute drunkenness.

Drunkenness itself is not punishable in Greece, since it is a very rare vice, probably from the mildness of the climate, and the lightness and purity of the native wines.

As might be expected, there are no inebriate asylums.

*Russia.* The penal code decides that drunkenness caused by the offender himself is no excuse for a criminal act.

Scandalous drunkenness is punishable by a fine of one rouble (rather more than 3s.). Public functionaries are dismissed. Publicans serving children under eighteen or allowing drunkenness on their premises are fined two roubles, and for a second offense are deprived of their licenses. Inveterate drunkards who render themselves or their families destitute may be imprisoned in the local house of correction for an indefinite period.

Intemperance is very prevalent among the lower classes in Russia. For the last two years the government has taken the manufacture of *vodka* or corn-brandy under its own control, and issues it from crown stores with an official seal. A modified "Gothenburg system," with a moral rather than a benevolent object, has been introduced in many towns by the establishment of tea-rooms, and the keeping a watchful eye on the consumption of *vodka*.

There are no special inebriate asylums in Russia.

*United States.* The jurisprudence of the United States is largely modelled upon that of England, as the mother coun-

try. In consequence, voluntary drunkenness does not exonerate from the responsibility for a crime, although it is considered to exclude the idea of premeditation.

Scandalous drunkenness is throughout the states punishable by fine and imprisonment, and the illegality of serving minors or intoxicated persons, the non-erection of taverns near schools or churches, together with their closing on holidays and election days, is practically universal. In most states the habitual drunkard may be detained for an average period of two years in one or other of the numerous inebriate asylums.

The absolute prohibition of the manufacture or sale of alcoholic liquors has been adopted by the seven states of Maine, Vermont, New Hampshire, Iowa, Kansas, and North and South Dakota. The system was first introduced into Maine in 1851, and has since assumed the dimensions of a political question, largely owing to the influence of the female voters. In South Carolina alcohol can only be obtained at the so-called "Dispensaries," which may be established by local option in each township. In Ohio, under the "mulet law," no licenses are necessary, but a tax is levied on each liquor-seller. Simple local option exists in about half the remainder of the states.

It is worth noting that prohibition has not arisen in a country fired with the usual ardor of a convert to a new theory. Far from this being the case, America was the actual birthplace of the modern temperance movement. This was initiated in 1808 by Dr. Benjamin Rush of Philadelphia, sometimes styled "the American Sydenham," a man not more remarkable for his genius as a physician than for his patriotism and public spirit as one of the authors of American independence. To Dr. Rush we are also indebted for the idea of special inebriate asylums, although the first of these was only founded in 1864, in New York state. This aroused so much opposition at the time that it was soon after converted into a lunatic asylum. Since then, however, the idea has made so much progress that at the present moment there are no less than



forty of these establishments, the largest being situated at Boston, Brooklyn, and Hartford, respectively.

### *Discussion.*

The President, after ten years' personal observation, could assure Dr. Pitcairn that the latter had been misinformed as to the alleged failure of prohibition in Maine and some other states of the American Union. Wherever enforced it had been successful. Dr. Kerr's host in Portland, Maine, and nearly all his American friends, while he was in that country, were opponents of prohibition, yet his host, Mr. Consul Murray, reported to the British Government that the Maine liquor law was successful in five-sixths of the state. He, himself, in those ten years, had seen only two women intoxicated in Portland, both indoors, whereas every Sunday he saw at least a dozen in London, some indoors, some out-of-doors. The leading opponents of prohibition had always admitted to Dr. Kerr, that certainly the law had very largely diminished drinking. The Society did not meddle with legislation, except as dealing with inebriety as a disease, but he (Dr. Kerr) could never refuse to testify to the remarkable success which he had seen attend the operation of prohibition in Maine. He was glad to state that, in 1900, the new German law would come into operation defining inebriety, which made a person unable to manage his affairs or a cause of danger to others as qualifying for interdiction and involuntary seclusion, with a view to the cure of the inebriate and the protection of the inebriate's relatives and the community. France was building a special asylum for inebriates, Russia was doing so also, and in Belgium narcomania was practically regarded as a variety of mania warranting compulsory detention.

Mr. Wilkinson said ether, methylated spirit, and "varnish" drinking had been effectually put a stop to in Ireland, by the government scheduling ether as a poison to be sold only by chemists, and the rendering more nauseous of the other compounds.

COMPLETE BLINDNESS, DUE TO ACUTE POISONING FROM OVERUSE OF JAMAICA GINGER; RECOVERY FOLLOWED BY TOXIC AMBLYOPIA OF ORDINARY CHRONIC FORM, WITH EVENTUAL ATROPHY.\*

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ARCHIBALD G. THOMSON, M.D., PHILADELPHIA, PA.

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The case about to be reported presents several interesting points, which may throw light upon or help to confirm some of our ideas on the subject of toxic amblyopias.

J. R., a sailor, 32 years, related that his mother and father were both dead, from causes to him unknown. Had had the diseases of childhood, but had never suffered from any serious disease. He denied absolutely any venereal disease. He had never been a steady drinker, but from his occupation as a sailor would abstain from alcohol for several months at a time, on reaching shore going off on a spree for a couple of days two or three times in the course of a year. He had been moderate in the use of tobacco, smoking weekly about four ounces in a pipe. His eyesight had always been good until about December 22, 1896, when he came ashore from a cruise and with a party of friends, being unable to procure whisky, got intoxicated with Jamaica ginger of the ordinary commercial kind sold in small country stores. This was taken, as whisky is, with water. The man remained drunk for two days, estimating that during that time he took about a quart and a half of Jamaica ginger. On the following day the man's feelings were similar to those that ordinarily follow an alcoholic de-

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\* Read before the Philadelphia County Medical Society, June 23, 1897.

bauch, though greatly intensified. Among other things he suffered from headache, nausea, and vomiting.

On the evening of the next day, the fourth from the first taking of the ginger, while lighting the lamp in the cabin, the man noticed everything to be hazy and vision failing, together with some photophobia.

By the next morning he could not see a lighted match held directly before his eyes, but had peripheral vision sufficient for him to grope around. By the following morning, however, light-perception had absolutely disappeared, both central and peripheral, and blindness was complete. This condition lasted for seven days, when vision began gradually to return, first in the periphery of the field; the man finally being able to read large print with great difficulty.

The time that elapsed between the period of complete blindness and the recovery of vision, the patient estimated at about four weeks. Matters remained thus stationary for three weeks, when vision again began to fail, now very slowly, until the present condition has been reached, three months and a half after taking the Jamaica ginger.

The anterior aspect of the eye is apparently normal, cornea and conjunctiva. The pupils are slightly dilated, but react both to light and in accommodation.

V. = R. Fingers at 1 meter.

V. = L. 1-100, eccentric.

On ophthalmoscopic examination the media are found to be clear. The discs are exceedingly pale, the capillaries being almost entirely absent. The portion of the discs occupied by the papulo-macular bundle of fibers (forming the lower and outer quadrant) is completely atrophied and greenish-white in color.

The fundus of each eye is otherwise normal. There is a well-marked physiological cup, and the absence of lymph from the vessels, showing the atrophy to be primary and not secondary to a previous papillitis.

There is no evidence of cerebral or spinal trouble (no locomotor ataxia or disseminated sclerosis) or hysteria.

The patient states that one of his friends, who accompanied him on his debauch, has also marked disturbance of vision, though in less degree. Under treatment this entirely disappeared.

On questioning the man more closely some three months after I first saw him, he stated that since his visual loss he has heard of several other cases in which the sight was affected by drinking Jamaica ginger, and that the practice of using this as a beverage is quite common in districts where it is difficult to procure alcohol.

The case presents thus, several very interesting features:

1. The uncommon nature of the agent producing the poisoning.
2. The suddenness of the attack of complete blindness.
3. The peculiar changes in the fields which correspond most probably with the pathologic condition that takes place in the nerve.

There is a difference of opinion between authorities as to whether alcohol adulterated with certain substances is more or less liable to produce toxic amblyopia. However this may be, I think it is generally conceded by all that the cheapest and worst kinds of alcohol are more likely to bring about this condition.

I have been unable to procure a specimen of the kind of Jamaica ginger taken by the patient, which he describes, however, as being the ordinary commercial kind; so I wrote Professor Remington of the Philadelphia College of Pharmacy, asking if he could inform me as to the ingredients contained. To my inquiries I received the following courteous reply:

“What is known as Jamaica ginger, or, more properly, essence of Jamaica ginger, is made in a very simple manner, by percolating the ground ginger-root with alcohol or alcohol containing water. The cheap trash found in country stores is often made with a portion of capsicum, in this way saving ex-

pense. You can see that a very little capsicum would take the place, in pungency, of a large quantity of ginger. Of course, sufficient ginger would have to be used to give a flavor to the decoction. Then, again, if it is made hot with cayenne pepper, a weaker alcohol can be used, and this would cheapen the product very much."

From the suddenness of the blindness, the profound condition following and the history of several other men being affected, it would seem as if the presence of foreign materials in the spirit would be the more likely to cause amblyopia.

The fields are most interesting, as I think they clearly indicate the pathologic process that has taken place in the nerve.

#### FIELDS.

Description of fields:

- A. Form field.
- B. Blue field.
- C. Red field.
- D. Relative scotoma for red.
- E. The heavily shaded portion, positive scotoma, both for form and color.
- F. Lightly shaded portion, relative scotoma (form is perceived badly, *i. e.*, white appears dirty, not clear, as in other portions of the field).

As no post-mortem examination has been reported in an acute case of this character, and as there is primary atrophy of the optic nerve, I take it that the following series of changes have taken place in the nerve: First, from the profound poisoning there resulted an acute interstitial retro-bulbar neuritis or effusion into the sheath of the nerve, affecting, as alcohol always does, the papulo-macular bundle of fibers and producing, most probably, at first a central scotoma, negative in character (that is, for colors and not for form), with the resulting blurring on the first day. As the neuritis or effusion increased and the pressure on the axis-cylinders became greater the scotoma gradually changed from negative to positive, and,

finally, became larger and larger, until it spread over the entire field, causing complete blindness. After the seven days of blindness, as the neuritis or effusion subsided, the pressure was relieved and vision gradually returned, with the exception of that effected through the papulo-macular bundle, which, owing to its depth in the nerve, was more seriously affected by the pressure. The renewed failure of vision, after three weeks, is to be attributed to a consecutive atrophy following upon the pressure exerted upon the axis-cylinders as a result of the neuritis. This sequence is clearly demonstrated by the interesting fields, showing the "breaking through of the scotoma," to finally meet the periphery of the field, indicating not only an atrophy of the macular bundle, but its extension to adjacent fibres. The portion of the field represented by the letter F shows that the fibres of this region have not undergone complete atrophy, but are damaged so that they will not respond with the same promptness to the vibrations of light as the other portions of the field.

#### *Discussion.*

Dr. G. E. de Schweinitz said that, so far as he knows, from an extensive acquaintance with the literature of the subject, the case reported is the first of toxic amblyopia following the abuse of Jamaica ginger, and the paper for the first time calls attention to the ocular lesions that may follow the excessive use of this drug. It is not surprising, however, to hear that optic-nerve atrophy may follow excessive indulgence in Jamaica ginger, although that it should come on acutely, as has been described, is worthy of special remark. Dr. de Schweinitz has been told by a college mate who lives on the northern border of Pennsylvania, that persons in the vicinity who cannot obtain whisky are in the habit of indulging excessively in the use of Jamaica ginger, and, as a result, there arises a species of drunkenness far more uncontrollable and disastrous in its effects than that which follows the free imbibing of alco-

holic spirit. Therefore, it is not surprising that the optic nerve should suffer in the way that has been described.

Dr. de Schweinitz referred to a case already reported, in which the visual fields closely resembled those described by Dr. Thomson, in which the disorder was due to the toxic effects of alcohol and tobacco combined, or else was a type of progressive scotomatous optic-nerve atrophy that may have resulted from inherited tendencies. Therefore, it is not surprising that the patient ultimately became entirely blind. An examination of the charts shows how closely they resemble those of Dr. Thomson's case, save only that the process has progressed much further and the atrophy has become more extensive. In fact, this patient ultimately became entirely blind. The scotoma, beginning in the center and representing disease of the papillo-macular bundle, gradually increased until it broke through and met a peripheral contraction of the visual field. Finally, the peripheral and intermediate bundles of the optic nerve became affected, and vision was gradually destroyed.

Although it is not known exactly what principle it is in alcohol, or, indeed, in any of the toxic agents, that causes these forms of amblyopia, it seems likely, in spite of some assertions to the contrary, that the poorer the quality of the alcohol, the more likely the development of toxic effects. Recently, Dr. de Schweinitz made an autopsy in the case of a man — the nineteenth — dead of pneumonia, who for some years before his death was a typical example of so-called toxic amblyopia, presenting the usual central negative scotoma. The specimens have already been demonstrated before the American Ophthalmological Society, but the charts show beautifully the circumscribed atrophy of the papillo-macular bundle throughout its entire course, the atrophy being ophthalmoscopically manifest as a quadrant-shaped patch of discoloration in the lower and outer portion of the optic disc, and, microscopically, as a degenerated bundle occupying first the lower and outer portion of the nerve, gradually reaching its axis, then sinking to the lower portion of the nerve, passing through the chiasm,

and finally losing itself in the optic tract. There is some doubt as to the exact pathology of cases like this, that is to say, whether the atrophy is primary or is preceded by neuritis. Dr. de Schweinitz holds that there is an interstitial neuritis, with thickening and changes in the inter-fascicular septa, which then press upon the nerve fibres and destroy them. The process has been compared with the sclerosing inflammation found in chronic hepatitis of alcoholic origin. Recently a theory has been revived by Nuel that the primary effect of these poisons falls upon the ganglion-cells of the macular region, atrophy of which is followed by an ascending degeneration of the optic nerve. While both clinical and experimental evidence goes to prove that atrophy of the ganglion cells of the macula does cause degeneration in the papillo-macular tract, a case like Dr. de Schweinitz', in which the ganglion-cells were normal, indicates that they are not always the starting point of the disease, but that alcohol, tobacco, or whatever other drug may be regarded as the toxic agent, or else the toxin that it liberates in the system, may sometimes, and, probably, usually, affect primarily the fibres of the optic nerve. Recent investigations, particularly in Chicago, by Casey Wood, Klebs, and Turek, indicate that certain toxins may be liberated in the stomach, that, in turn, have the power of causing blindness. It is a curious fact that tobacco amblyopia almost never occurs unless there exists marked gastric disturbance, or, at all events other disturbances than those merely connected with sight. Its victims frequently suffer from insomnia and chronic indigestion. This is noteworthy because Dr. Thomson's case, which really was a form of poisoning with a mixture of bad alcohol, poor ginger, and cayenne pepper, may perfectly well be explained, if this theory is accepted, by the hypothesis that some active toxin was liberated which was the mischievous agent. Dr. Thomson's communication is a most important and interesting one, and adds not a little to existing clinical knowledge of the interesting subject of the toxic amblyopias.

Dr. Edward Jackson said that he had had an opportunity



of seeing Dr. Thomson's very interesting and instructive case, which is, perhaps, not so far removed, however, from the more common cases of toxic amblyopia as it might at first seem. Certainly, some of such cases are quite sudden in the onset. Dr. Jackson has never had one that he could watch within the first week of the appearance of symptoms, but he has seen several in which there was a very definite history of quite a sudden impairment of vision, sufficient to interfere very much with ordinary occupations, and which coming under observation within two or three weeks showed the typical symptom-group of toxic amblyopia; so that while the history of this case is one of very much greater suddenness and severity than that of the ordinary case, it is a difference not radical, but rather in degree.

Dr. Jackson further called attention to the fact that in some cases, particularly in a series published in the last number of the *Royal London Ophthalmic Hospital Reports*, by Dr. A. H. Thomson, recovery is sometimes much delayed, although from the appearance of the optic discs there is not likely to be much improvement in this case.

In the series of cases referred to, one was under treatment for a whole year without material improvement; yet at the end of the second year full vision had been recovered.

Dr. de Schweinitz has stated the current diverse views of the pathology of this condition. Dr. Jackson's own feeling is that *if* these narcotics act directly, although that is an important *if*, with the supposition of autoinfection that has recently been introduced, the most plausible theory is that which regards the nerve elements as suffering first, and in some cases it would seem that the nerve elements at the macula suffer before the macular bundle, that is, that the involvement of the nerve is secondary.

Dr. William Thomson said that he had seen this case and had only to corroborate all that was said about it. It is of particular interest because it has been kept under observation for a longer time than is usually permitted.

Dr. A. A. Eshner asked if the patient had presented symptoms of multiple neuritis or of involvement of any other than the optic nerves. Increasing evidence tends to show that optic neuritis in its various forms, as well as inflammation of other nerves, may result in the course of any of the infectious diseases. This relation has been established in the case of malaria, of typhoid fever, of influenza, and some other diseases, and it probably exists in the case of still others in which the proof is not yet at hand. It is probable that in these cases the inflammatory process, whether interstitial or parenchymatous, is actually toxic in nature. There is no reason to assume that there occurs lodgment of the causative micro-organisms in the diverse situations of the various complications, neural and otherwise. The neuritides that follow are due to the toxic influence of the products of bacterial activity, and are comparable to those dependent upon intoxication with alcohol, tobacco, lead, iodoform, and other agents acting similarly.

In following the morbid process it seems scarcely necessary to interpose the action of toxins generated in the gastro-intestinal tract, with resultant auto-intoxication. It seems much easier simply to assume that under the conditions named the function of the liver is at fault, so that poisons taken in by the stomach are not restrained in their onward course or physiologically modified through the normal functional activity of the liver. As a result, such poisons pass almost directly into the circulation and give rise to more or less characteristic disturbances. Just why, however, in some instances the optic nerves alone should suffer, and in other instances other nerves, is not yet known; and the explanation may not be looked for until more is known of physiologic chemistry, until it is known also why certain substances used medicinally act upon one portion of the nervous system and other substances act upon other portions. The matter is one of selective affinity, and the solution of the problems attending it must await increased knowledge concerning functional, nutritive, and metabolic activities of the cellular elements of the body.

Dr. A. G. Thomson said that he had not made any very careful examination of the patient as to sensation, but the man related that, on recovering from his debauch, his general condition was very much worse than from the ordinary effect of alcohol. Examination of the visual field showed an increase of the scotoma outwards. Below, in that portion of the field where the scotoma was breaking through towards the periphery, vision was not as clear as elsewhere, so that, if the color fields were large enough, a scotoma for color would have been found, showing that these fibres, though not completely atrophied, were undergoing certain changes, and would not receive certain vibrations as the upper portion of the field.

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#### DELIRIUM TREMENS DUE TO PARALDEHYDE.

Reinhold (*Therapeutische Monatshefte*, June, 1897; *Wiener medizinische Blätter*, July 29, 1897) relates the case of a patient, forty-one years old, who was addicted to taking paraldehyde, and had taken as much as two ounces in the twenty-four hours preceding his admission. He was very much depressed, his speech was labored, and there was decided tremor of the tongue and hands. On his being deprived of paraldehyde, epileptoid attacks occurred. Wine, diuretics, bromides, and lukewarm baths were prescribed. There were transitory periods of agitation with delusions of persecution and visual illusions. Reinhold advises against the free use of alcohol and bromides in such cases and says that, if they are not employed, the epileptoid seizures may perhaps be avoided altogether. Sleep is to be procured by means of sodium bromide and trional. The diet should be generous, the bowels carefully regulated, and metabolism promoted by hydiatic measures. The patient should not be dismissed until his sleep is normal.— *New York Medical Journal*.

## OPIUM IN INDIA.

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BY ROBERT D. RUDOLF, M.D., EDIN., TORONTO.

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I have no intention in this communication of discussing the pharmacology and therapeutics of opium, nor yet of mentioning the diseases in which it is indicated or otherwise, but would ask you to bear with me for a short time, while I give you the knowledge of the drug which I picked up while living in India. During the five years that I was there I resided in Behar, where the best Indian opium is grown, and where many thousands of natives and a few Europeans are employed in the cultivation of the white poppy (*Papaver somniferum*) from which opium is obtained.

Just at this season of the year, when, after the cold weather, the climate is becoming tropical again, the little fields round thousands of native villages will be white with poppy blossoms, and the heavy, sweetish odor from these is as characteristic of the season as the smell of a hay-field is of June. The fields are prepared in December with the greatest care by the native and his family, and when the ground is so fine that not a lump the size of a walnut remains, they mark the surface off into oblong beds about six feet by four feet, and the ridges between these beds are trenched to allow of the free passage of water, for all opium is grown by irrigation. This irrigation is usually from surface wells.

The seed is sown broadcast early in January, and in three or four days comes up. When the plants are about two inches high, most of them are weeded out by hand, and only one plant to every square foot or so is left. The irrigation is continued every two or three days, until the blossoms fade and the heads appear. When fully grown, the plant is about four feet

high. The blossoms all come out nearly at the same time, so that a whole field, which was pale green one day, is white the next. The petals of the blossoms are collected by gently removing them by hand from the capsules, never plucking them off forcibly, as this would injure the latter. These petals are then handed over to the women of the family, who, seated in front of circular iron plates placed over a slow fire, dab the petals on one by one, pressing them with a damp roll of cloth. When fresh, the petals are gummy, the heat makes them stick together, and the moisture being driven out they form circular cakes, technically called "leaves," eight inches to fourteen inches in diameter and .5 to .3 inches thick, which are used in making the shells of the opium cakes at Patna.

Next the poppy juice must be collected, and this is a very critical operation, and all the native household is pressed into the service. Each person is armed with an instrument having two or three sharp points, so that one stroke of it makes two or three parallel scratches. Thus armed, they go into the fields in the afternoons, when the sap is rising best, and lightly scratch each poppy capsule on two or three sides in a vertical direction. This is a very tedious job when a man has several acres of poppy under cultivation, and all the village, from old men and women who can scarcely stand to children who have barely learned to do so, are pressed into the work. The work is urgent, for a whole field becomes ready for the extraction about the same time, and it must be all accomplished in a very few days, or the capsules will dry up and much of the juice will be lost. When the capsule is lanced, a white juice about the consistency of glycerine slowly exudes, and this partially dries and turns brown. Next morning the harvesters return and scrape off the crude opium; this they smear on to the palms of their hands, and when they have got together a good collection, they put it into earthenware dishes. This collecting is done with blunt knives like bits of hoop-iron. Each set of incisions in a capsule yields about  $1\frac{1}{2}$  grains of crude opium, and the scarifications are repeated several times

— until the juice ceases to flow. As thus collected, opium is a granular, rose-red liquid, containing 49–51 per cent. of moisture. The poppy plant now rapidly fades and is soon cut down and broken up, and is sent in to be used for packing opium cakes. The seeds are pressed for poppy oil, or are kept for the next year's sowing. After pressing, the residue is used as food for cattle. The land is at once cultivated again and, probably, indigo is sown—what strikes one especially in Indian agriculture being that the soil is given no rest, one crop following another in constant succession.

The opium trade of India is a government monopoly, and is worked by a department of Europeans, assisted by a great number of minor native officials. These grant licenses to the cultivators, without which they are not allowed to grow the poppy. They also advance money to enable the cultivators to meet the expenses of preparing the land, etc. They measure all the land after it has been sown with poppy, and thus check any cheating, in that a native cannot get an advance on a greater piece of land than he actually cultivates. All the opium that is collected must be taken by the natives to the government go-downs (or warehouses), where it is weighed and carefully examined to see that it has not been adulterated. In spite of this barrier, adulteration is a common thing, and the substances used for this purpose are very numerous, of which gum acacia, bael, betel, the juice of several milk-yielding trees, raw sugar, ghee (boiled butter), flour, linseed, brick-dust, and even cow-dung may be mentioned.

The examiners at the warehouses become very skillful in detecting adulteration by the senses of sight, touch, and smell, and use no chemical tests there.

All the opium is, at the warehouse, roughly divided into three qualities, according to its consistence — the most solid being the best — and the value is placed to the credit of the grower, and he is paid that amount in cash, less the advance, which he received earlier in the season. The officials then put the opium into great earthenware jars, each containing

eighty pounds, and these are carefully sealed, and then sent by boat or train to headquarters at Patna, under a guard of police.

Arriving here, the opium, after being carefully check-weighed, is searched and again classified, first by hand — and the men to do this work can, from long experience, tell to one degree the consistence of any specimen — and then is classified again on a steam table.

Dr. Manyard, the officiating factory superintendent, thus describes this second examination:

“ These tables are shallow iron chambers, inside of which steam circulates, and on top of which rest white china plates. A specimen of a hundred grains of opium dried to a powder on these shows by its loss in weight the amount of moisture it contained. Thus, if 100 grains result in 80 grains, we say the consistence of that opium is 80°, *i. e.*, it contains 20 per cent. of moisture, and it is on this consistence that the assami is paid, the same weight of opium at 80°, of course, being more valuable than at 50°. Every specimen, in addition to the assay, is also carefully tested for impurities, and not until a certificate of purity is received back from the laboratory can any single jar of opium be passed into the *malkhana* storing vats, where opium of different classes (each class including 3° of consistence) is stored in different vats. Each class bears a distinctive name, thus, *awal* includes opium of consistence, 70°, 71°, and 72°, *darawal*, 73°, 74°, and 75°, and so on. This classification and examination of the opium takes place in April, May, and June — as many as 1,200 and even 1,800 jars (maunds) being disposed of daily. Good opium, as this received at the factory, is a moist, granular, rich mahogany-brown colored substance, varying in consistence according to the inspissation it has undergone, from that of thick pea-soup to that of putty; the consistence also rising with the amount of *pasevha* present. The color varies with the age of the opium (darkening with age), amount of *pasevha* (darker the more there is), soil on which grown (lighter from high land only recently cultivated), but is never black unless adulteration has occurred. The

texture varies from the distinctly granular to the homogeneous, but when the opium is pure is always uniform. Its variations depend upon the amount of *pascuha* present, but more especially upon the manipulation the opium has undergone, the grain being destroyed by long manipulation. The texture is usually determined by taking a specimen in the palm of one hand and spreading it out with the other, or with a spatula. Pressed between the finger and the thumb, opium is sticky and viscid and draws out in fine threads, which break with a ragged fracture, and by the appearance of these the Chinese, in part, judge of the nature of the drug. The smell of fresh opium is strong and peculiar, rather agreeable, fruity, it has been called, and with less justice narcotic, as it rather stimulates than narcotizes, at any rate when first smelt. Its taste is also peculiar and bitter. Pressed between two glass slides, it is translucent and of a reddish-brown color. The same result may be obtained by smearing a piece on a white china plate with the finger, when any blackness or grittiness indicating adulteration is at once revealed.

“Starch is also said to be detectable by the naked eye in these ways, and, no doubt, can, when present in a very large amount, but it is unreliable.

“Microscopically, opium macerated in glycerine shows as a brown amorphous or granular substance, in which are to be seen large crystals — either single tablets with pointed ends resembling ammoniaco-magnesian phosphates (as figured in Sir Roberts’ book on Urinary Diseases) or in tufts resembling stars of uric acid. There are also flat, square tabloids. A few starch grains, resembling arrowroot or tapioca, may generally be found, also refractive globular bodies said to be resinous, and now and again particles of vegetable fibre.”

In addition to this opium, there are a number of varieties sent in, *e. g.*:

(1) *Khurchan*, which is the scrapings from the earthenware dishes of the natives.

(2) *Pascuha*, that is, an acrid kind of opium, which rises



in the capsules during an east wind, and which, although very pure opium, is disliked because it is hygroscopic, and hence unfit for the interior of opium cakes.

(3) *Kuffa*, that is, pieces of cloth which have opium adherent to them. If clean, the opium is washed out and used for alkaloidal manufacture, otherwise it is confiscated and burnt.

(4) *Burned Opium*, usually from accident.

(5) *Contraband Opium*, seized in Bengal or Assam.

(6) And lastly, *Adulterated Opium*.

All opium at Patna is specially prepared to meet the three uses: (1) provision for the China market; (2) excise opium for use in India; (3) medical opium. This last is of two kinds — cakes and powder — and is made from opium of highest consistency and lightest color. It is spread out on shallow wooden trays in the shade, carefully protected from the dust, and kneaded by hand every few days until it rises to 90° consistence. This takes months to effect, and is then pressed in a hand-press into cakes of two pounds weight each, wrapped in Nepal paper, and issued to medical storekeepers. The powder is simply opium dried to a powder on plates on the steam table, and is pure opium at 100° consistence.

The opium for use in China and India is sent out at the standard strength of 75° (25 per cent. of moisture). It is made into balls weighing two pounds each, and these are packed in boxes among opium plant straw. This opium is despatched to Calcutta and there sold to Chinese and Indian buyers at the monthly Board of Revenue sales.

Opium, not suitable for any of these three purposes, confiscated opium, and *pasevha* is all sent to Ghazipur, where it is used for the extraction of alkaloids.

As regards the *composition* of Indian opium, it is peculiar in containing less morphine and more narcotine than the Smyrna variety. It contains more morphine than Chinese or Persian opiums, and much more narcotine. This excess of

narcotine in Indian opium is well worth noting. Narcotine has a more convulsive and less narcotic action than morphia. Squire, in his *Companion to the British Pharmacopeia*, states that it has no narcotisine action at all, and hence has been sometimes called *Anarcotine*.

Bihar, that is, Patna, opium, when thoroughly dried, contains 5.16 per cent. by weight of morphine against 9.64 in Smyrna opium. On the other hand, Patna opium contains 8.24 per cent. by weight of narcotine, and Smyrna opium only 2.26 per cent.

The opium belongs to the government from the first, and a large staff of officers are employed to prevent the local sale and use of it by the cultivators. But with all these precautions, a certain amount is used thus, and the presence of the dish of opium in the hut not infrequently tempts natives — usually women — to steal enough to do away with themselves. It is also a fairly commonly used poison in cases of murder, although arsenic is the commonest here.

A good crop of opium is the most profitable one that can be grown by the villagers, but the risks are many, and it is seldom that a man secures a perfect 16 anna harvest. A 16 anna means a perfect one, from the idea that there are 16 annas in the rupee. A 12 anna crop would, thus, be a 75 per cent. one.

But the poppy plant is a very delicate one, and its life and development are endangered by many things. Thus, the ground must be very rich and contain a good deal of natural moisture or the seed will not germinate. When the plants are above ground, a cold spell of weather may kill them. Later on the blossoms may be destroyed by hail, heavy rain, or high wind; but the most risky time of all is when the capsules have been lanced and the opium is lying on the surface. Then a heavy rainfall will wash most of it away, or a high wind blowing the plants about may rub them against each other and knock quantities of the opium off. Thus, a native who trudges home with the price of a good crop tied up in his loin-cloth

may truly breathe his thanks to his gods, and probably will offer up some simple sacrifices to their images. If, on the other hand, he has received little or nothing, or even is in debt to government for part of the advance he has already got, he will quietly make his way back to his village, muttering "*kismet, kismet*" (fate, fate), for the native of India is a great fatalist.

The two great races in India, Hindoos and Mohammedans, use opium largely as an habitual stimulant, as a necessary part of many social ceremonies, as a prophylactic against disease, and as a therapeutic agent.

The exact date on which opium was introduced into India from Asia Minor is doubtful. Some believe that the Rajputs (who are high-caste Hindoos) used it over 2,000 years ago. There is no evidence, however, of the plant being cultivated in India before the sixteenth century, and it was probably then introduced by the Arabs, who also took it first to China.

(1) The *use of opium* has been for long intimately connected with the *social functions* of many classes of Indians. Dr. Norman Chevers, in his "Medical Jurisprudence of India," tells us that *Amal-lar-khana*, "to eat opium together," is the most inviolable pledge among the Rajputs, and an agreement ratified by this ceremony is stronger than any adjuration. If a Rajput pays a visit, the first question asked or words uttered are *Amal kya*, "Have you had your opiate?" On a birthday, when all the chiefs convene to congratulate their brethren on another link being added to the chain of years of their age, a large cup is brought forth, a lump of opium is put therein, upon which water is poured, and by the aid of a stick a solution is made, to which each helps his neighbor, not with a glass, but with both of his hands held to the mouth. The practice of *Amal-lar-khana* was also a social indication that all enmities were at an end; it was the seal of renewed friendship between individuals or tribes among whom hostilities had previously prevailed.

In July, 1892, the Calcutta Medical Society held a dis-

cussion on the use of opium, in which several native medical men spoke of its social use. Dr. Chunder Bose, the president of the society, spoke as follows:

“ I cannot find from records when the drug was introduced as a social necessity in this country, but I am in position to state that opium is indispensable in the reception of chiefs, nobles, and men of rank among the Rajputs, the Marwarees, and the Mohammedans of the central provinces, and of Surat and Ahmedabad. The process of welcoming guests with opium either in the form of devotion or highly-scented extracts, is called *Kussoba*. The host himself takes the gold or silver cup filled with the preparation of opium, and goes round the party, distributing spoonfuls to each one of his guests, who drinks it to the health of his host. Infants' and little children's right to the *Kussoba* is not denied by the host. The process is meant to remove anxieties from the mind and to bring about a state of hilarity.

“ Different sects of people observe different modes of eating the drug; some take it in its crude state, while others soak it in water or milk, and then drink the fluid and throw away the residue. The well-to-do class keep a separate formula for preparing their own opium; they take a quantity of good opium, mix it up with the powdered seeds of cardamom, bamboo camphor, *Bangsolochun* musk, camphor and saffron to the consistency of a pill mass, and then make pills or boluses according to the dose which they take. These ingredients are added to the drug with the view of augmenting its virtues. The zemindars and the rajas and nawabs of Bengal boil opium in milk, and then they eat the cream only. The process of smoking *madat*, otherwise called *goolie*, is simple, while that of smoking *chandu* is involved and difficult. *Madat* smokers in this part of the country are of a low class, and generally shunned, while the *chandu* smokers are generally better off, though of depraved morals.”

Thus it will be seen that opium takes much the same posi-

tion in social ceremonies in India as alcohol does among western nations.

(2) As an *habitual stimulant* the drug is very largely used. Among some classes, *e. g.*, the Marwarees (bankers) and Sikhs (fighting men) the practice is almost universal. In Behar itself, where opium is chiefly grown, about five per cent. of the Hindoos and thirty per cent. of the Mohammedans habitually use the drug in daily doses of from two to ten grains, and once the dose which suits the individual is reached it is not common for him to exceed it. Occasionally, however, one hears of enormous doses being regularly taken. There are people in India who take their two, four, six, and even eight ounces of solid opium daily, and one case was recorded by Dr. Crombie of a man who ate nine ounces and 225 grains daily, without developing any poisonous symptoms whatever.

It is taken usually in the form of the crude drug made into pills, and half is taken in the morning and the rest at night, half an hour before food. The result is that the drug mixes with the food and thus is very gradually absorbed. When a native commences to take opium the effect at first is to cause constipation and a drying up of the secretions, but after a week or two of habitual use these untoward results wear off and the drug seems to actually stimulate peristalsis. The habitual taking of opium is usually commenced after the age of thirty, very often, to commence with, as a treatment for disease, and is then probably continued for the rest of the man's life. The effect of moderate use on the *native* seems, on the whole, a harmless one. The man, as long as he takes his dose regularly, is capable of the highest mental and physical exertion. If, however, his dose be withheld he suffers extremely.

Prolonged indulgence in the habit does not seem to produce any definite tissue changes which can be detected post mortem. As regards the effect on the brain, some interesting statistics were produced by Dr. Crombie of Calcutta, for the use of the Royal Commission on Opium that sat some three years ago in India. I may summarize them as follows:

Of the total admissions of 2,202 into the lower Bengal asylums during the ten years, 1881-1890, 641 were ganja (Indian hemp) smokers, 117 were spirit drinkers, and eight were opium eaters. In other words, 29.1 per cent. used ganja, 5.3 alcohol, and only .35 were opium eaters. Of the 800 admissions during the three years, 1888-90, into the Bombay presidency asylums, 132 were ganja smokers (16.5 per cent.), 56 (or 7 per cent.) were spirit drinkers, and 6 (or .75 per cent.) were opium takers — of these six cases attributed to opium, five were from the city of Bombay itself, leaving only one for the rest of the province, and he belonged to Hyderabad, in Sindh, where the opium habit is almost universal. In the Madras presidency during the year 1888, the total admissions were 168, and of these 7.1 per cent. were from ganja, 6 per cent. were alcoholics, and *none* took opium. In the Rangoon asylum, the only one in Burma, the total admissions for the six years ending 1890 were 541, of which 2.9 per cent. were attributed to ganja, 5.91 to alcohol, and .92 to opium. The city of Rangoon contains about 15,000 Chinamen, and yet not a single Chinaman was admitted to the asylum during these six years, although a large number of them smoke opium.

To summarize these figures: Out of 3,711 admissions to the various asylums, 801 cases were attributed to ganja, 215 to alcohol, and only nineteen to opium, and these figures are the more remarkable when we consider how little alcohol and ganja are used compared to opium. Dr. Crombie remarked before the commission that, in his experience, it would be "almost justifiable to advance the theory that one of the advantages derived from the native habit of eating opium is a diminished liability to insanity."

As regards the influence of opium eating on longevity, Dr. Roy Mox Roy, himself an opium eater, has compiled a table of 215 habitual indulgers who had come under his own observation, and it is remarkable, on looking through these tables, to notice how many of the individuals have reached and exceeded the expectant period of life, as taken from English tables, and,

of course, it must be remembered that the expectancy of life in England is considerably greater than in India.

The table includes one man who, at the extreme age of 106 years, died a violent death. He was in full possession of his senses and in good health, considering his age, and used to manage a large estate of his own. His custom was to take 180 grains of opium daily, and this he had done for sixty-six years.

The Zantras — the religious books of one of the large sects of Hindoos — have authoritatively laid down that the practice lengthens life.

One great reason, it seems to me, why opium has been credited with tending to longevity is that it so often acts as a prophylactic to disease. When natives have to undergo any great physical hardship or exposure to cold and damp, they take opium, under the firm belief that it helps them to bear up under these difficulties.

The boatmen on the great rivers take it regularly, and they are a happy, healthy, and contented lot of men. "They begin work at six A. M., and will often work a large, heavy house-boat, dragging it the greater part of the day against the current till eight P. M., on a hasty meal, snatched at midday, and an occasional chew of opium, all the time happy, jolly, and contented."

Dr. Moir of Calcutta says:

"Opium is taken very commonly with a view to lessen fatigue and hunger in prolonged hard work or long marches. The Blutia and Gurkha coolies in Lushai land stipulated for opium in their rations, because they were accustomed to it; because they believed it lessened fatigue in carrying heavy loads long distances in that hilly country, and because they thought it lessened their susceptibility to fever and did good in fever. The authorities wisely allowed them to have a fixed daily opium ration. I never saw any of these coolies suffering from any symptoms that could be attributed to eating opium, though I have seen some of them beastly drunk."

*Smoking of opium* is not very prevalent in India, but in  
VOL. XIX.—47

some of the large towns it is practiced. Either they smoke *chandu*, which is a watery extract of opium, from which the oily matters have been removed by heat, or *madat*, which is also a watery extract pounded up with charred guava or vine leaves. The former method is practiced by the better class, the latter by the lowest classes.

*Pure morphia* is little used by natives, but the Bengalee baboos of Calcutta have found it out, and many of them take this most insidious drug in doses of five to fifteen grains daily. As regards large doses of morphia, a Maharajah who died lately at a good old age, used to take twenty-six grains daily, and was a good sportsman and a first-class shot.

(3) As a *prophylactic*, opium is very largely used in India, as well as in other countries, and there seems no doubt that it does act in this way against malaria, rheumatism, dysentery, and cholera. As to the exact way in which it acts on the system in exerting its protective power one can only theorize, but the belief is well nigh universal in the East that an opium eater is less apt to suffer from these diseases than one who does not so indulge. This belief is not confined to the East, for opium is largely used in the fen districts of England for this very purpose, as stated by Dr. Lauder Brunton. In the *British Medical Journal* for July, 1881, Dr. Murrell draws attention to this fact, and points out that phthisis is very uncommon among these opium eaters.

Dr. Crombie wrote as follows:

"During sporadic outbreaks of cholera among the people of Burrobazar, the victims are those who are either abstemious in their habits or are blang eaters and ganja smokers. The opium eaters, who often closely attend upon patients, are not affected by the disease. A few months ago a party of twenty men, of all ages, one morning started from No. 9 Hanspooker Lane to Kalighat, to visit the goddess, and returned during the night. They prepared one kind of food, and all of them ate it. Early next morning nine of the party got cholera, and succumbed to it, while the rest escaped. On inquiry it was



found that those who escaped were habitual opium eaters. But opium eaters, during the last epidemic of influenza, suffered most severely, and some succumbed to the disease."

During the Poojah season people come to Calcutta from the Terai of Jalpaiguri and Sotatia for treatment of Terai fever and enlarged spleen. The history they give of their illness is interesting. They say that because they have not listened to the advice of opium eaters they are destined to suffer and to die prematurely, for in the Terai the opium eaters are the healthiest of men.

In the Central Provinces and Bombay pills of opium, the size of poppy seed, are given to the children from the first, and the dose is gradually increased to one grain. The practice is continued until the age of four years. From that age until after thirty opium is seldom used, except in the treatment of disease. It is thus given to children in the belief that it renders them less liable to tetanus and diarrhoea.

The prophylactic action of opium against malaria is probably largely due to the narcotine it contains. Narcotine, in doses of five grains or so, has often been used in the treatment of this disease.

Dr. Hehir of Hyderabad writes thus: "In malarial-poisoning there appears to be a hypersensibility of the general vaso-motor center, so that a draught of cold air blowing on the surface, slight gastric irritation, or even slight distension of the bladder, will cause contraction of the cutaneous vessels and shivering, in one suffering from such poisoning. Opium appears to be useful in such conditions, probably by lessening the excitability of the general vaso-motor center. This exalted condition of irritability of the general vaso-motor center is one very commonly met with in Hyderabad and its suburbs, and being the determining cause of many of the cases of ague met with, we may often ward off attacks of ague by giving *sedative* doses of opium to lessen those chemical, vital, functional, or metabolic changes (in the protoplasmic constituents)

of ganglionic cells of this special center, and thereby keep the blood at the surface, a condition incompatible with the manifestations of an attack of ague.”

So much for the habitual use of opium by the people of India. The question naturally arises, How is it that the drug can be used with so much benefit and so little harm by these people, when the opium habit, or, at least, the morphia habit, is so easily acquired by Western nations, and is so dreadful in its results. One reason for this is, undoubtedly, that the opium of India (and also of China) contains much less morphine, but more narcotine, than do other kinds. But I believe that the great reason for the comparative innocuousness of opium on Eastern nations is that it is, so to speak, their *natural* stimulant. It seems as if every people must have some stimulant, speaking generally — take, for example, coca in South America, kola in Africa, and alcohol with Western nations. And as long as they keep to their own stimulant, the minimum of harm (though often great harm) is done; but if one nation adopt the stimulant of another, great havoc ensues, and the people seem unable to resist the desire to take an excessive amount of that stimulant. Alcohol fortunately is forbidden to most races in India, but where this is not the case and they substitute it for opium, the results are lamentable. Three years ago an attempt was made by a party in England to make it illegal for opium to be sold in India, except for medicinal purposes. The Government Commission, which sat in the country on the subject, almost unanimously concluded that it was wiser to let things be. With this decision I agree, and hold that the harm and hardship caused by such legislation would far exceed any benefit which might accrue. If the natives of India must have a stimulant to assist them in their social functions, to help them through their daily work (in their opinion), and to protect them against disease, then, by all means, let it be the comparatively harmless opium, rather than the deadly ganja, or the still deadlier alcohol.

JUDICIAL EVOLUTION AS TO CRIMINAL RESPONSIBILITY OF INEBRIATES.

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BY CLARK BELL, ESQ., LL.D.

*Editor Medico-Legal Journal.*

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By the common law of England it was conceded that the words *non compos* meant a total deprivation of reason. Lord Coke divided it into four parts, or, as he called them, "Manners." 1. The idiot or fool. 2. He who, of good and sound memory at birth, lost it by visitation of God. 3. Lunatics who have lucid intervals, and sometimes of good sound memory, and sometimes *non compos mentis*. 4. By his own act as a drunkard. So that drunkenness at and by common law under certain circumstances was a form or species of insanity. By the same common law it was held: 1. That the drunkard was responsible for all his acts criminally, even if the state of drunkenness was such as to make him insensible to his surroundings and unconscious of his acts. 2. That drunkenness, instead of being any defense to a charge of crime committed while in a state of intoxication, was not only no defense, but that it aggravated the act. These doctrines were upheld by the English courts in *Dammaree's case*, 15 St. Tr., 592; *Frost case*, 22 St. Tr., 472; *Rex vs. Carroll*, 7 C. & P., 115; and these doctrines have been held likewise in nearly all the American states. In Alabama, *State vs. Bullock*, 13 Ala., 413; in California, *People vs. King*, 27 Cal., 507; in Connecticut, *State vs. Johnson*, 40 Conn., 106; in Delaware, *State vs. M'Gonigal*, 5 Har., 510; in Georgia, *State vs. Jones*, 20 Ga., 534; and in nearly every American state, similar decisions have been made.

The common law, which would not uphold a deed, will, or

contract made by a drunken man in an unconscious state of intoxication, would hold the same man criminally liable for every act constituting a violation of the criminal law. To-day we are regarding these views as legal curios and relics of the past. The law should have its museums for the preservation of its antique anomalies. A silent, unconscious change has been wrought in the law, not by legislation, but by the growth of ideas, the diffusion of knowledge. Insanity is now demonstrated to be a disease of the brain, of which it is itself an outward manifestation. Inebriety is also shown to be a disease of the man, manifesting itself through brain indications, which demonstrate it to be a form of insanity, sometimes wholly dominating the volition and beyond the powers of the victim to control, and is now treated as such. The essential element of crime, *intention*, hardly fits into the acts of the unconscious inebriate, who, while blind or dead drunk, kills an innocent victim, and the absence of motive, like the absence of intention, are missing links in that chain, which the law exacts in regard to all criminal action. It would be next to impossible now to find a judge willing to charge a jury that a crime committed by a man in a state of intoxication, in which the accused was unconscious of his act, or incapable of either reflection or memory, should be placed on a par with one fully comprehended and understood by the perpetrator. Buswell says, in speaking of the old doctrine of drunkenness being an aggravation of the offense: "It is apprehended that this is the expression of an ethical, rather than a legal, truth." (Buswell on Insanity.)

Such considerations compel us to inquire, What is law? There are two schools of thought regarding it. Webster, the great expounder of the American Constitution, is credited with saying: "Law is any principle successfully maintained in a court of justice." This represents one school.

Richard Hooker, in his *Ecclesiastical Polity*, represents the other. He says of law: "There can be no less acknowledged than that her seat is the bosom of God, her voice the harmony of the world; all things in heaven and earth do her homage;

the very least as feeling her care, the greatest as not exempted from her power." The gulf intervening between these two extremes is as wide and deep as that which divided Abraham and Lazarus in the parable of our Lord.

The framers of the New York penal code, without the courage to hew down the error of the old doctrine, engrafted thereon a provision that enables a jury now, in that state, to pass on the motive and the intention of the unconscious and wholly insensible inebriate, so that now, in New York, since the penal code of that state, a conviction would, in such a case, be wellnigh impossible.

How have the English judges met the question? In 1886 Mr. Justice Day, in *Regina vs. Baines*, at the Lancaster Assizes, charged a Lancaster jury that if a man was in such a state of intoxication that he did not know the nature of his act, or that it was wrongful, he was insane in the eye of the law; and that it was perfectly immaterial whether the mental derangement resulting from such intoxication was permanent or temporary. In 1887 Chief Baron Palles held that if a person, from any cause, say long watching, want of sleep, or deprivation of blood, was reduced to such a condition that a smaller quantity of stimulants would make him drunk, than that would produce such a state if he were in health; then neither law nor common sense could hold him responsible for his acts, inasmuch as they were not voluntary, but produced by disease. As long ago as 1865, in the case of *Watson*, tried at Liverpool for the murder of his wife, before Baron Bramwell, the evidence showed that he was laboring under delirium tremens. After the act, he grew calm and said he knew perfectly well what he had done, and that his wife was in league with men who were hidden in the walls. Baron Bramwell, who favored hanging insane men who committed homicides, when acting under an insane delusion, if of sufficient intelligence to understand the nature and quality of the act and its consequences, tried the case, and charged the jury, "that there were two kinds of insanity, by reason of which a prisoner was entitled to be acquitted. Prob-

ably the jury would not be of opinion that the prisoner did not know the quality of his act, that it would kill and was wrong, but it was still open to them to acquit him, if they were of opinion that he was suffering from a delusion leading him to suppose that which, if true, would have justified him in the act." One more remark he would make, viz.: "That drunkenness was no excuse, and that a prisoner cannot, by drinking, qualify himself for the perpetration of crime; but if, through drink, his mind has become substantially impaired, a ground of acquittal would then fairly arise." The prisoner was acquitted. Under the English law there is no right of appeal to the convicted homicide, as in the American states, and so it is difficult to find the decision of English higher courts on the questions involved in the discussion. In the American states no person is executed except on the decision of the highest court of the state, if the accused desires it and appeals. In England the appeal does not lie as a matter of right, and so the opinion and dicta of the English trial judges form the real body of the law of England upon these questions. Baron Bramwell, undoubtedly, regarded Watson as entitled to an acquittal, and the case shows a remarkable result in this respect. Had he been insane and committed the homicide under delusions which dominated his will and controlled his action, he would have been convicted if he had sufficient intelligence to understand the nature and the quality of the act, but the drunkenness which had caused the act which resulted in delirium tremens, with a diseased condition of the brain, also resulted in a delusion which controlled his mental powers so as to render him irresponsible at law. In 1888 Baron Pollock held that the law was the same where insane predisposition and not physical weakness was the proximate cause of the intoxication.

The late English Home secretary, Mr. Mathews, was one of the ablest men connected with the English government. Under the English system this officer has the power to commute or modify the sentence of the courts in criminal cases,

and he exercises it with as much effect, and more in many cases, than would the reversal of the Appellate Court, if the right of appeal existed. No eye in Great Britain sees more intelligently the action of the criminal courts than his. It is his province to correct errors and redress grievances and abuses, if such exist or occur, in the criminal jurisprudence of Great Britain. Mr. Mathews named a commission, composed of Mr. J. S. Wharton, chairman; Sir Guyer Hunter, M. P.; Mr. E. Leigh Penburton, assistant under-secretary of the Home Department; Mr. Daniel Nicholson, superintendent of the Broadmoor Criminal Lunatic Asylum; and Mr. C. S. Murdock, head of the Criminal Department, to inquire into the best mode of treatment and punishment for habitual drunkards. Mr. Mathews says, regarding the appointment of this committee, "Great differences of opinion have arisen as to what kind and degree of punishment for offenses committed by habitual drunkards would be the most effectual, both as a deterrent and with a view to the reformation of such offenders. It appears to me that advantage would result from an inquiry being made into the subject." It may be fairly claimed, so far as the British Islands are concerned, that the old common law rule no longer is enforced there, and that inebriety, as a disease, is now not only recognized as an existing fact, but that the jurisprudence of that country is receiving such modifications as are necessary to fit it for the advance made by scientific research. We are, doubtless, near similar results in the American states. (*Med.-Leg. Jour.*, Vol. X, No. 3, p. 259.)

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The annual consumption of tobacco in Holland is a little over seven pounds a head; in the United States, 4.5 pounds; in Austria, 3.8 pounds; Denmark, 3.7 pounds; Switzerland, 3.3 pounds; Belgium, 3.2 pounds; Germany, three pounds; Sweden and Norway, each 2.3 pounds; France, 2.1 pounds; England, a little under two pounds; Italy, Russia, Spain 1.25 pounds. It is estimated that 2,000,000,000 pounds' weight are used annually, of a money value of more than \$2,500,000,000.

## A CASE OF DEMENTIA AND ALCOHOLIC MANIA.

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

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The interest of this case centers on the fact that it is a prominent illustration of the legal blunders in dealing with capital crime, so common at present. The failure to recognize the insanity of inebriety in the court-room is culpable in the highest degree. The facts concerning inebriety are now so well attested that to ignore them is manifest ignorance without excuse. In addition, this case points to the urgent necessity of a change in the theories and methods of treating capital crime, and determining the mental condition of the criminal.\*

Thomas F. Kippie of New Haven, Conn., a moulder, forty years of age, killed his wife January 31, 1896. In January, 1897, he was tried and convicted of murder in the first degree, and hung July 16, 1897.

In a study of the history of the case, the following facts were brought out on the trial and were undisputed:

Kippie's parents were inebriates. The father drank excessively at intervals, and was of a violent quarrelsome disposition. The mother drank at all times when she could get it, and was violent and stupid, alternately, often beating her children severely, driving them out of the house. Usually she would become stupid, and fall down, and have to be carried home. She was finally found dead in a well, having fallen or jumped in. The drink periods were governed by the ability to procure spirits, and were always associated with fighting and other boisterous excitements. The children, five in number, were early forced out on the street and into facto-

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\* It is a pleasure to note the very intelligent, persistent efforts of Mr. Tuttle, the senior counsel for the defense, to bring out the real facts of this case.



ries to earn money, and their home life was marked by bad, irregular food, worse surroundings, and scenes of continued drink excesses. Of this family one girl was imbecile and epileptic. The other suffered from hysteria and was feeble minded, and two boys were petty criminals, inebriates, and disreputables. Thomas, the oldest, on trial, was intoxicated when six years old, and from that on to the time of homicide has used spirits to excess, continuously and at intervals. At six or seven years of age he was hit by his mother on the head and made unconscious, suffering for two weeks in bed. Since that time he has been frequently injured by blows on the head and falls, which have left many scars, together with a broken nose. As a boy, Kippie was constantly fighting, and when drinking was very irritable and vindictive in his assaults. His brain seemed to be very unstable and uncertain, suddenly changing from one thing to another, and he was frequently arrested for assaults and drunkenness, serving short terms in jail. He learned a trade, and worked energetically for a time, until he procured some money, which was usually spent in dissipation. He married a disreputable drinking woman, and for years, up to the homicide, drank and quarreled continuously.

He was intensely jealous, with and without cause, and frequently separated from her, and then returned, living together again. As he grew older he became more reckless and violent in his conduct when drinking. He would assault any one when using spirits, breaking bottles, windows, and chairs, unprovoked, and was regarded by saloon-keepers and associates as crazy and dangerous. Deliriums of destruction and boastful excitement of his ability to whip any one, together with recklessness of conduct and language, and a disposition (which was termed to start a row and be the chief actor) became more prominent. Several persons swore that he looked and acted like a crazy man, and at times had a dazed expression, bursting into tears or in a wild passionate rage.

For two days before and up to the time of the homicide, he drank continuously to stupor, with his wife, both of whom were deliriously intoxicated. They had been quarrelling, and officers had been called in to quiet them. His wife was in the yard, when he suddenly rushed down stairs, stabbing a stranger who stood in his way, then ran to his wife, stabbing her repeatedly, calling out, "Have it, have it." He then tried to escape; was caught, and taken to the station-house. After two or more days of bewilderment and general confusion, he recovered, and displayed suspicious cunning in denying, affirming, and explaining various acts and events of the past. On the witness-stand, at the trial, the same cunning of exaggeration and concealment and moral palsy was apparent. The sight of his sister having an epileptic paroxysm in the courtroom, roused him to make a furious effort to follow her out of the room, requiring much force to stop him. On several occasions during the trial he sprang up and displayed wild paroxysms of rage and excitement. The sudden onset and violent agitation, shouts and ejaculations, then extreme prostration and quiet, resembled epilepsy. His head and facial muscles were in a constant state of agitation, and his eyes had a peculiar staring expression. Both head and face were astigmated and irregular, his nose was broken, and his manner was suspicious and uneasy. In addition he had a high palate arch.

He declared that he was not insane, and wanted to be hung, rather than be kept in prison. In prison, awaiting execution, he was irritable, assumptuous, threatening, complaining of his surroundings and neglect, coarsely indifferent to his situation, joking of hell and the hereafter, treating his punishment as a farce, and sneering at everything about him. At the execution the same indifference and moral palsy was apparent up to the last moment.

These and other facts clearly supported the defense of unsoundness and insanity and general unconsciousness of the nature and character of the crime. It was alcoholic mania

and dementia, the latter coming from inheritance, marked by moral palsy and idiocy. The higher part of the brain and consciousness of right and wrong was absent; he was literally a moral idiot from birth. The effect of bad food, worse surroundings, with free use of alcohol from early childhood, was followed by a low progressive dementia, with attacks of mania.

Delusions of suspicion, and morbid explosive impulses followed the use of alcohol at all times. These delusional impulses of unrestrained excitement and violence were likely any time to develop into serious injury and homicide, and it was a mere accident that prevented an earlier crime. The defense assumed from these facts that Kippie was mentally unsound from birth, and incapable of reasoning rationally concerning his acts and their consequences.

I testified that no man with this heredity could be literally sane, and no man using spirits from early childhood, with a record of head injuries and maniacal fighting paroxysms, could be sane. The exceptions, when found, would only prove the rule. Also that Kippie was practically insane from birth, devoid of all consciousness of right and wrong, duty and responsibility, and unable, by his degenerate brain, to reason sanely, or exercise control over his conduct.

The State assumed that Kippie was simply a low, vicious inebriate, who deliberately committed this crime, and now sought to escape the consequences by feigning insanity.

The experts for the State were kept in court during all the trial, then called to give an opinion on a hypothetical case, in which the main facts of Kippie's life were omitted, such as the heredity, the drink history, the use of spirits at the time of the homicide, the drink paroxysm before the crime, and the head injuries.

On the cross-examination they each testified that these facts of the history were not considered in giving an opinion on the hypothetical question. They swore that Kippie was sane and responsible at the time of the murder. One expert testified that all alcoholic mania was simply degrees and varieties of

simple drunkenness; also drunkenness is only brutality, not insanity, and that brain action is altered, not brain condition, and that Kippie was sane and did not exhibit any appreciable brain disease. Another expert was sure that excessive drinking from 15 to 40 years of age would not have any effect on the question of the man's sanity. A man might use alcohol twenty-five years to excess and be perfectly sane in all respects; such excesses would not necessarily destroy any part of the brain tissue. These experts heard the testimony of Kippie's history and inebriety, saw the violent emotional paroxysms, and heard the facts of the homicide described minutely, then consented to give an opinion on what was clearly a misleading hypothetical case, leaving out facts which they knew to be essential. The legal trick of drawing out positive opinions on a hypothetical case, dissimilar to the one in question, and creating the impression that the facts not mentioned were of little value, was a sad reflection on the conduct of the case.

The judge charged the jury to discriminate in the opinions of the experts, to determine whether they were based on all or a part of the facts, or on facts unproven. The jury, as usual, were hopelessly confused, and the verdict was another illustration of the force of submitting questions of this class to untrained men. Trials of this character are simply reversions to an earlier age, ignoring all progress and teachings of science, and following the same lines that were prominent a century ago. The effort to discriminate between what is called willful vicious conduct, marked by alcoholic excess, and strange acts, and mental degeneracy, which, in a general way, is practically insanity, and show to a jury of untrained men the lines of division is simply to attempt the impossible. The attempt to determine the effects of alcohol on the brain from theory and opinion, and find how far it has, or has not, altered brain activity and tissue, is equally impossible. Nothing can be more absurd than the practice of demanding exact technical answers to medical questions, and accepting the vague uncer-

tain terms of vice, wickedness, willful drunkenness and brutality, as expressing clear fixed facts; in other words, urge exact definitions of terms of science, and accept terms like these to describe operations of the mind.

This trial is a marked illustration of the injustice of a legal combat to determine a psychological question of the mind and its condition; also of expert testimony narrowed to legal lines, and from a legal standpoint.

The facts of this case may be grouped in the following:

1. Kippie was a degenerate from birth, and moral paralytic.

2. His drink history, with violent paroxysms of anger, and sudden ungovernable impulses, were natural symptoms of the growth of disease.

3. The brain injuries and continuous brain poisoning by alcohol still farther increased the disease.

4. His conduct up to the homicide, and the circumstances of the crime, with his history up to the execution, were natural common symptoms of all such cases, without exception.

5. In Kippie's case, from birth to death, the chain of symptoms were complete, showing defective organization, imperfect growth, palsies, degenerations, progressive disease, and failure to understand or adjust himself to normal life and living.

The trial was a travesty on justice, and the expert testimony which pronounced Kippie sane, a reflection on both experts and methods. The refusal of the Board of Pardons to commute the death sentence was a dogmatic adherence to a delusion, that such penalties prevented crime, and intimidated degenerate criminals, and served the ends of justice.

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One of the recent cures for inebriety urged with great confidence is to drown an eel in French brandy, and, after a month's ageing, begin to use it in table-spoonful doses every two hours. This is, in the opinion of Dr. Harlin, a certain remedy, and he is prepared to defend this statement with most excellent proof.

## INEBRIETY AMONG YOUNG MEN.

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BY GEORGE H. McMICHAEL, M.D., BUFFALO, N. Y.

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There is at the present time some evidence that inebriety among young men is increasing. This may be to some extent due to the so-called "club" life which is now fashionable among the wealthy classes. But while the young man's surroundings are partially responsible for his habits, other factors in the etiology of the disease must not be overlooked.

During the years of adolescence, while the brain is only partially developed, the nervous organization is not in the stable condition which marks the full vigor of normal adult manhood. This being so, the desire for alcoholic drinks is much more easily acquired between the ages of seventeen and twenty-five than in later life. If inebriety has, up to now, been comparatively uncommon in youths, it has been because the customs of society have made indulgence comparatively difficult. These customs are rapidly disappearing, if they have not already disappeared, and drunkenness among young men, as I have already mentioned, seems to be increasing.

I think that the word "thirst" must be understood to include all desires for drink, whether physiological — and, therefore, normal — or pathological. In the former case the organism requires water, and the desire ceases when it has been consumed. I am not saying, of course, that unless a person is thirsty he should not drink water; but what I wish to insist upon is that if, in addition to the four or five tumblers of pure water which all of us ought to drink every day, our drinking were confined to those times when we feel thirsty, alcoholism would not be a common disorder.

The limitation of drinking to physiological requirements

necessitates in many cases the exercise of a greater degree of self-control than is possessed by the ordinary young man who has been brought up in such a way that most or all of his wants have been gratified. He visits the club and somebody invites him to take a drink. As a matter of politeness he does so. This sort of thing continues until a condition arises in which abstinence means discomfort. Now it is quite well recognized that the continued repetition of any process which gives pleasure, although originally purely voluntary, becomes less and less so, until eventually the operation is performed independently of the will. What actually happens is that the nervous mechanism has been educated by degrees to one line of conduct, and that line of conduct — in this instance drinking — becomes normal. Abstinence would demand a readjustment of the mechanism of inhibition and would be attended certainly with discomfort, perhaps with distress. The normal will-power has left the man; he has ceased to be a free agent; and the craving for alcohol is not voluntary, but automatic.

The typical case of any disease cannot be found outside the text-books. The cause of alcoholism must, therefore, be scientifically investigated, as far as possible, in each individual case.

The instances of inebriety, unconnected with club habits, are, of course, very numerous. The following facts, however, are worthy of notice. Prior to the age of seventeen serious intellectual strain is liable to be injurious to boys. The development of the reproductive functions quite frequently unbalances the nervous system, and, strange as it may seem, excessive mental capacity in some one direction often makes its appearance. Self-control is wanting and irregular habits are formed. The stomach becomes irritable and indigestion becomes almost chronic. This condition is quite well known, not only to physicians, but to every man who looks around him. What happens next? As alcohol seems to give relief, alcohol

is taken, and the young gentleman argues that it cures his dyspepsia and "keeps him strong."

I have now traced the history of a common form of inebriety among young men just commencing life. Mark the position at the twenty-third, twenty-fourth, or twenty-fifth birthday. Some alcoholic stimulant is consumed every day; "How do you do?" is to this man very closely allied to "Come and take a drink." If one talks with him upon the subject of inebriety he generally argues that although drinking is a bad habit total abstinence makes him "nervous." The inebriate himself believes that he is capable of refraining from the use of alcohol whenever he chooses, and the public shares his belief, which is to some extent due to the fact that alcoholic disease exists in the stomach a long time before any very acute symptoms arise. Nevertheless, the young inebriate, who usually called himself "a moderate drinker," seldom denies that there are occasions upon which he gets what he calls "full," a term which is destitute of scientific accuracy.

The pathology of alcoholism is not altogether understood, although the effect of ethyl-alcohol upon the liver, kidneys, brain, and heart has been determined, and may be found in the books upon the subject. A general study of the laws of poisoning naturally throws some light upon the matter. There can be no doubt that any poison taken habitually in quantities insufficient to cause death produces a tolerance of the poison, and also a demand for its continual presence. But while this much is certain, I do not think that anybody has determined what special cells are responsible for this pathological craving. Assuming, however, that the cerebro-spinal system is the guilty portion of the body, we can get some idea of the reason why the toleration of alcohol increases — as it unquestionably does — during a debauch. When a nerve-cell encounters a poison, if it is not destroyed it is stimulated to resistance; its activity is increased, necessarily, in the direction of its natural physiology. Moreover, an increase of energy in the direction of development takes place, and this development — a varia-



tion of cell-structure — provides for an abnormal toleration of the toxic material.

The character of the treatment demanded by the alcoholic condition of necessity depends upon the general health of the patient, but there are, of course, some principles which are applicable to almost every case. As the drinker usually has a poor appetite, especially in the morning, he must be induced to take food, otherwise the lowering of his vitality by fasting will retard his recovery. Moreover, there is no doubt that the consumption of simple food at short intervals will diminish the craving for alcoholic stimulants. Sufferers from alcoholism require a great amount of sleep, and if this cannot be obtained by natural processes, hypnotics must be resorted to.

Narcomania in any form being due to a disordered nervous system, its cure must be looked for in the restoration of the nervous system to a normal condition. This can only be accomplished by the combination of hygienic surroundings, moral suasion, attention to diet, and the judicious use of such drugs as are indicated in each individual case.

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Acertain small number of persons can drink spirits daily in varying quantities for years, and seem not to be much injured by it. Then all at once they become diseased, some chronic or acute affection begins and goes on rapidly to a fatal issue.

Such persons have the appearance of health, but die suddenly, usually from heart disease, or cerebral hemorrhage, or pneumonia. The latter and Bright's disease are most common, and in all cases the disease is sudden and fatal. The degeneration from use of alcohol finally culminates in sudden fatal inflammation. The connection between the use of spirits and the disease is clear and positive, and yet unrecognized. The vital forces and powers of resistance are destroyed, and death follows, literally from alcohol.

THE INFLUENCE OF ACUTE ALCOHOLISM ON THE  
NORMAL VITAL RESISTANCE OF RABBITS TO  
INFECTION.\*

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BY DR. A. C. ABBOTT,

*First Assistant Laboratory of Hygiene, University of Philadelphia.*

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These studies were made in the Laboratory of Hygiene of the University of Pennsylvania under the auspices of the Committee of Fifty to investigate the Alcohol Question for the experimental solution of one of the most interesting and important phases of the subject, viz.: that concerning the influence of alcoholism, acute and chronic, upon the normal vital resistance of animals to various forms of infection.

The lines along which it was proposed to conduct these investigations are as follows:

1. Determine if the normal vital resistance of animals to infection by the common pathogenic bacteria is demonstrably influenced by either acute or chronic alcoholism, induced through the use of known amounts of pure ethyl alcohol.

2. If any or no effect is observed, determine if the same holds good for animals under the influence of the commoner alcoholic beverages, as beer, wine, whisky, cordials, etc.

3. Determine if through either acute or chronic alcoholism the germicidal properties of the serum of the blood of animals is materially altered. If so, determine, if possible, the nature of this alteration.

Thus far the work has borne upon the question concerning the influence of acute alcoholism upon the resistance of rabbits to infection by the pyogenic cocci; *i. e.*, the streptococcus pyogenes (*erysipelatos*) and the staphylococcus pyogenes

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\* Abstract from the Journal of Experimental Medicine.

aureus — and by the bacillus coli communis, and the results are in many ways sufficiently instructive to warrant their report at this time.

The experiments were made with cultures of streptococcus pyogenes of a low degree of virulence, with normal bacillus coli communis, and with virulent staphylococcus pyogenes aureus, and, as the results to be reported show, with very diverse consequences.

Another difficulty was encountered in regulating the dose of alcohol. The intention was to have the animals daily in a state of intoxication; but it is not easy to decide just when this stage is reached, and the only certain indication of it is incoordination of muscular movement. It frequently occurred that when alcohol was given to this stage the direct effect of the drug was such as to gravely imperil the life of the animal, and in a certain number of instances the animal did not rally from even so few as one or two such administrations. If the dose were diminished, then one could often not be sure that the rabbit was intoxicated.

On the other hand, one encounters occasionally an individual on which alcoholism to intoxication has apparently no effect upon the general health, and may be prolonged over relatively long periods.

The individual susceptibility of different animals to the physiological action of alcohol differed in such a way as to require at the beginning a special dose for each individual.

As it was impossible to induce the rabbits to take alcohol voluntarily, either with the food or otherwise, it became necessary to administer it through a soft-rubber catheter passed down the œsophagus into the stomach; and though this was done as gently as possible, the irritation resulting from the repeated passage of the catheter, together with the depressing influence of the drug, was accompanied in a number of instances by intercurrent infections which, from their character and location, I think, can be reasonably traced to insignificant

wounds of the mucous surface of the œsophagus made when the alcohol was administered.

In only two instances was death positively the result of inspiration of alcohol into the air passages at the time of operation. When such an accident occurs death is practically instantaneous.

The most common macroscopic effect of the direct action of the alcohol was erosion and inflammation of the mucous membrane of the stomach, a condition that was unfortunately present in quite a number of my animals, and which complicated matters in such a way as to vitiate considerably the results of the experiments.

When the necessary dose of alcohol was determined, it was always given mixed with an equal quantity of distilled water.

The dose necessary to positively produce intoxication ranged from 5 cubic centimetres to 15 cubic centimetres of pure ethyl alcohol, though the usual dose in rabbits of from 1,500 to 1,800 grammes weight was from 7.5 cubic centimetres to 10 cubic centimetres, doses which, if taken by a man of one hundred and fifty pounds weight, would be roughly equivalent to from two-thirds to five-sixths of a pint of absolute alcohol. Notwithstanding this apparently very large amount, animals have repeatedly been encountered on which from 10 to 12, and even 15 cubic centimetres had no visible influence, though the continuance of those doses in many instances was followed by death, associated with grave lesions of the gastric mucous membrane.

While rabbits offer conditions in a way favorable to experiments of this character, they are so liable to intercurrent bacterial and protozoal infections as to lead to many irregularities when large numbers of them are used. In the course of this work a number of experiments have been seriously vitiated by reason of such complications. The general plan followed in these experiments was to employ groups of equal numbers of animals. All were inoculated in the same way,

then to one group alcohol was given, while to the other no alcohol was administered. They were all then kept under the same conditions of food, etc. Each animal was weighed in the morning before it was fed. In one or two cases the number of "controls" was fewer than that of the alcohol group. Control animals receiving only alcohol were not introduced into each experiment, as the necessary data on this point could always be had by reference to the records of preceding experiments in which the different effects of the drug on different animals was recorded.

#### *Conclusions.*

The deductions that may be drawn from the results of these experiments are as follows:

That the normal vital resistance of rabbits to infection by streptococcus pyogenes (erysipelatos) is markedly diminished through the influence of alcohol when given daily to the stage of acute intoxication. That a similar, though by no means so conspicuous, diminution of resistance to infection and intoxication by the bacillus coli communis also occurs in rabbits subjected to the same influences.

And that, while in alcoholized rabbits inoculated in various ways with staphylococcus pyogenes aureus, individual instances of lowered resistance are observed, still it is impossible to say from these experiments that in general a marked difference is noticed between alcoholized and non-alcoholized animals as regards infection by this particular organism.

It is interesting to note that the results of inoculation of alcoholized rabbits with the erysipelas coccus correspond in a way with clinical observations on human beings addicted to the excessive use of alcohol when infected by this organism.

In the course of the work an effort was made to determine if, through the oxidation of alcohol in the tissues to acids of the corresponding chemical group, the increase of susceptibility could be referred to a diminution in the alkalinity of the blood as a result of the presence of such acids. The number of

experiments thus far made on this point is too small to justify dogmatic statements, but from what we have gathered there is but little evidence in support of this view.

Throughout these experiments, with few exceptions, it will be seen that the alcoholized animals not only showed the effects of the inoculations earlier than did the non-alcoholized rabbits, but in the case of the streptococcus inoculations the lesions produced (formation of miliary abscesses) were much more pronounced than are those that usually follow inoculation with this organism.

With regard to this predisposing influence of the alcohol, one is constrained to believe that it is in most cases the result of structural alterations consequent upon its direct action on the tissues, though in a number of the animals no such alteration could be made out by macroscopic examination. I am inclined, however, to the belief, in the light of the work of Berkley and of Friedenwald, done under the direction of Prof. Welch, in the Pathological Laboratory of the Johns Hopkins University, that a closer study of the tissues of these animals would have revealed in all of them structural changes of such a nature as to indicate disturbances of important vital functions of sufficient gravity to fully account for the loss of normal resistance.

The conspicuous influence of the alcohol on the gastric mucous membrane in many of these animals, with the consequent disturbance of nutrition, is undoubtedly the explanation of the marked loss in body weight that was observed in many of the animals employed in these experiments. In this light the susceptibility induced by alcohol to excess is somewhat analogous to that induced by starvation, where we see the resistance of animals to particular forms of infection very markedly diminished.

CONCLUSIONS OF PAPERS PRESENTED AT MOSCOW, AT THE INTERNATIONAL CONGRESS.

We have received the following abstracts of papers read in the section on Hygiene at Moscow, August, 1897. As indicating the interest in inebriety which is growing rapidly in all parts of the world, they are very significant.

Dr. Garochevsky of Samara read a paper on "The Principles of the Struggle against Alcoholism, and the Duty of Special Hospitals for Inebriates."

The following were the conclusions:

1st. Alcohol is a product which, sooner or later, destroys the health of those who use it.

2d. Alcoholism is not a vice, it is a disease, having its clinical physiognomy and anatomical pathology clearly defined.

3d. Alcoholism should be treated in establishments specially designed for the purpose, never in general hospitals or insane asylums.

4th. Special hospitals for the treatment of inebriates should be the strongest plea in the struggle against alcoholism.

5th. Each province should have at least one hospital specially devoted to the treatment of inebriates.

6th. The organization and management of these hospitals should be altogether under the control of those who have the monopoly of the sale of spirituous liquors, etc. This is exacted by the principles of justice and political economy.

7th. The decrease of drunkenness depends, in any given country, entirely on the government views as to the sale of spirits.

8th. The total abstinence theory is not an illusion, but in the general crusade against alcoholism, it certainly can be useful.

“Hygiene and the Struggle against Alcoholism” was read by Dr. A. M. Korowine (Moscow), with the following conclusions:

1st. The weak side of the fight that is being waged against alcoholism in continental Europe is, that it is carried on by the local governments, the clergy, and the philanthropists. The medical body take but a small part in the struggle.

2d. Medical men, more than any others, could contribute effectually to the wiping out of alcoholism. In fact, from the varied forms which alcoholism assumes, it is absolutely necessary that there should be unanimity of opinion as to what constitutes an inebriate. This question can be settled competently only by medical men.

3d. The present state of the struggle against alcoholism gives rise to consequences hurtful to the entire work. The profound differences of opinion among the medical profession has created a distrust on this subject and a disinclination to test it fairly.

4th. The battle against alcoholism would not, perhaps, succeed were it based on prophylactics; it is by hygiene alone that we can successfully compass this great undertaking.

5th. The purpose of hygiene in this question is to decide to exclude all forms of alcohol from daily drinks, to relegate alcohol to the druggists' shelves, side by side with morphine, ether, etc.

6th. The medical measures necessary to be taken to successfully fight alcoholism are the following:

(a) To determine the point when a moderate drinker should be considered an inebriate. To study the effects of small and average doses of alcoholic preparations.

(b) To test the nutrient, fortifying, and stimulating properties of alcohol on a healthy and on an unhealthy subject, on one who drinks and on a total abstainer. To test the results of alcohol on the vital economy of the human organism. It is here indispensable that there should be a concurrence of opinion among the majority of observers.



(c) To test the powers of alcohol to cause or predispose to illness.

(d) To draw more fully the attention of the medical profession to this disease of contemporary humanity.

(e) To teach anti-alcoholic hygiene in the home and in the schools; also the questions of individual abstinence.

(f) Active aid given by medical men to the authorities and to public institutions in their struggle against alcoholism.

(g) To impress the necessity of treating inebriates in a special hospital.

7th. The present state of the question exacts that the XII Medical Congress sanctions the participation of the medical profession in the struggle against alcoholism by the adoption of the following thesis:

(a) The struggle in question merits as much attention on the part of the medical profession as that against the various epidemics.

(b) The success of the struggle is impossible without the active sympathies of the medical profession.

Dr. Grigoriere of St. Petersburg read a paper "On some Results from the License of Spirits in Russia," with the following points:

1st. The average consumption of spirits per head has gradually lowered to forty degrees in European Russia during the last eleven years; it was 70 per cent. in 1885, and 53 per cent. in 1895.

2d. From the average consumption of spirits per head, such as brandy, wine, beer, reckoned in per cent. of alcohol, Russia occupies the lowest place among European countries; the average individual consumption of pure alcohol in the form of the above-named drinks, show for Russia 0.27 per cent., for Norway, 0.29, for Sweden, 0.38, and last for France, 1.1 per cent.

3d. This decrease in the use of spirituous liquors in Russia shows, in a measure, the efforts of the people themselves

to put a stop to the prevalence of drunkenness among them. These efforts are shown in the arrests made, by the closing of public houses, and non-sale of wines, etc., on holidays.

4th. In the assumption by the government of the license of the sale of wines, etc.; and, above all, by their organizing temperance societies, thus showing the sympathy of the government with the people's efforts towards sobriety.

5th. The reform, which transfers to the government the right of sales of wines, etc., does away with the interference of the publicans, naturally an interested party, besides the establishment of new public houses where wines, liquors, etc., will not be drunk on the premises, with a view to lessening the number of public houses, decreasing drunkenness, preventing the sale of bad liquor, the giving of credit, sales to drunkards or minors, etc.; in a word, putting a limit to drunkenness without interfering with government interests, and without any hindrance to the consumption of good wines, etc., in such quantity as may be necessary to health.

6th. The license by the government of the sale of wines, spirits, etc., like all reforms, has its weak points, but time will remedy these. In every instance in the provinces, where these changes have been made, there is a marked decrease of drunkenness and crime.

7th. The temperance societies have already, by the means they have employed, drawn many people from the public houses. These means are: Public library, reading-rooms, tea-rooms, popular theaters, entertainments, with music and dancing, promenades, etc., these all becoming factors in the instruction and education of the masses; their utility is being constantly proved; their salutary influence is felt already, and we look forward with the fullest hope to having, in the future, our efforts crowned with success.

Several other papers were read on the dangers of alcohol to public health and individuals, and, although presented by physicians, were semi-moral discussions of little scientific interest.

## Abstracts and Reviews.

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### THE PATHOLOGY AND TREATMENT OF CHRONIC ALCOHOLISM.

BY H. WERNICKE GENTLES, M.D., C.M., CHICAGO, ILL.

#### *The Pathology of Chronic Alcoholism.*

In beginning the subject of the Pathology of Chronic Alcoholism, I cannot do better than review the post-mortem appearances found in such subjects.

*Stomach.* — The mucous membrane is of a dark bluish red hue with patches of erosion and ulceration scattered over it, specially marked over the pyloric end and upper intestine. The muscular coat is thinned and becomes semi-transparent, the dilated vessels showing in marked contrast. Dilatation of the stomach is specially the case in malt liquor drinkers. Sub-mucous connective tissue is increased with marked atrophy of the secreting glands.

The liver is cirrhotic, nutmeg or fatty. The spleen is frequently enlarged. The kidneys show similar loss of secreting tissue as the stomach and liver. Old pleuritic adhesions are frequent. In the lungs, lobar emphysema, bronchitis, or hypostatic consolidation is generally found.

*Heart.* — The heart is imbedded in fat. The muscles are flabby, pale, infiltrated, or degenerated. Frequently dilated, or dilated and hypertrophied to overcome the increased vis a fronte caused by renal cirrhosis, rigid arteries, and pulmonary complications. There is always dilatation of the arteries, thickening of the muscular coat, frequent atheromatous patches and cysts with calcareous deposits.

In the brain, hyperaemia is not so marked as in acute cases.

The atrophic changes, occurring in the other organs, are very distinct in the brain. The convolutions are narrowed, shrunken, and flattened.

The dura mater is abnormally thickened and adherent to the cranium. The Pacchionian bodies are enlarged. The arachnoid is opaque. The pia mater is thickened and adherent to the surface of the brain, with opaque white spots. There is increase of the ventricular and subarachnoid fluid; sometimes there may be oozing of blood into the substance of the brain.

The vessels from the pia mater to the cortex are enlarged, tortuous, and with marked fatty and atheromatous changes in them; as a result, death frequently occurs from rupture of a vessel.

The surface of the cortex is covered with a fine meshwork of branching cells, most marked around the vessels which penetrate the cortex. The motor areas are specially involved. In the spinal column, there is increased vascularity of the meninges. This is most marked in the postmedian raphe and columns. In the arterial vessels, the thickening may be so great as to fold up the intima in pleats or obliterate the canal of the vessel.

In neuritis, degenerative changes have been found in the posterior root zone in the lumbar and cervical regions. The changes appear to be mostly peripheral. The myelon of the nerve undergoes fatty degeneration, becoming first cloudy; then it breaks up into segments, followed by the formation of fatty drops, and as the result, the axis cylinder is altered or replaced.

When alcohol is taken internally it causes a vasomotor dilatation. The blood is quickly driven to the brain, face, etc., with a resulting pleasurable excitement, and is later followed by dullness and heaviness, if the dose be large enough.

The excitement corresponds with an acute hyperæmia of the brain, the dullness with a passive hyperæmia due to an inhibition of the vaso-constrictor centers. This inhibition is

not confined to the centers which regulate the circulation, but also affect the centers of motion, as shown by the tremulous hand after a night's debauch. In a similar way there is a loss of control over our desires, emotions, and passions, and in the case of the dipsomaniac these changes tend to become permanent, but soon disappear after one bout.

Alcoholic blood parts less easily with its carbonic acid than non-alcoholic blood. During the stage of passive hyperæmia, the brain is laden with venous blood; in addition, the alcohol itself is a direct nerve poison, so that the relation between the new tissue formation and the alcoholic poison, as effect and cause, is evident. The dulled perception of the dipsomaniac can be accounted for in much the same way. The brain, already poorly nourished by a blood containing too much carbonic acid, passing too slowly through the vessel, has a considerable portion of its nourishment diverted for the use of the new tissue. As time goes on, the incoördination of movement, desire, and will, become more marked, and the drunkard's moral and physical being becomes a wreck.

#### *Treatment of Alcoholism.*

It may be stated as a broad axiom that no alcohol is to be given in the treatment. Clum is willing to give wine, when necessary, while Kerr says that he has never required to do so in any case.

In the place of alcohol, hot water, lemonade, lime juice, aromatic spirits of ammonia, ginger, cinnamon, coffee, tea, or milk may be used. Demulcent drinks, *e. g.*, slippery elm and flaxseed tea, may be given where there is marked gastritis.

Where nausea and vomiting are a marked feature, give the fluids in small quantities, and either hot or cold, as may best be borne. Marcet recommends oxide of zinc in two-grain doses and upward, thrice daily, and says it helps the patient to sleep.

Juicy fruits or chipped pieces of ice help to relieve the terrible thirst, also effervescing mixtures with bismuth and

quinine, predigested milk, and lime water, club soda, vichy, etc.

The association in the patient's mind of pleasure and alcoholism may be broken by adding antimonial wine to their drink. The cases must be carefully selected and its use in a routine way is to be deprecated.

Dr. C. H. Hughes has used apomorphia with bichloride of gold with the same idea. As the sickness diminishes, concentrated beef broths and soups are administered, liquid beef peptonoids, with or without creosote, light cereals, white fish, then white meats, and as the gastric troubles subside, return to ordinary diet, which, while not entirely vegetarian, should contain little meat and consist largely of fruits and vegetables. Nux vomica and strychnia are of great use, but in alcoholics great care must be taken to watch the effects.

J. B. McConnell of Montreal gives a history of twenty-five cases treated subcutaneously by nitrate of strychnia. The dose varied from one-thirtieth to one-sixth grain, twice daily for ten days, once daily for ten days. The border line of tolerance was reached when two-fifth grain was reached. The maximum dose was given on the third or fourth day and continued throughout treatment. He reported fourteen relapses in eleven months. Phelps of Rochester obtained as good results from strychnia alone as from strychnia and atropin. Some recommend that the curative treatment with strychnia should not be begun until insomnia has ceased.

For the depression, valerianate of zinc; *assafoetida*, I have found very useful, especially where there is atonic dyspepsia; also a tablet of rhubarb, ipecac, soda, and strychnia, *e. g.*, Fraser's, cinchona, quinine, and salicylate of quinine have all been used at this stage. It is also very important that the resulting *débris* of the last bout, and from the succeeding depression, mental and bodily, should be eliminated. The skin should be kept open by baths, by the wet pack, and the kidneys washed out by the use of saline waters, which also tend to act on the bowels.

Kerr emphasizes the effect of liquor ammonii acetatis in causing free perspiration and diuresis, and for its calming effect. For the drink craze, the more simple the remedies the better. Kerr believes in simple emetics, *e. g.*, ipecacuanha. He says that the patient, after its use, gets a quiet, refreshing sleep, very different from the broken, restless sleep obtained by the use of opium, morphia, etc. He also recommends tincture of avena sativa in fifteen to twenty drop doses, hot drinks, aromatics and tincture of capsicum, taking care not to establish a capsicum habit.

Apomorphia, I have used hypodermically in two cases, but had no chance to observe the results. They certainly had no desire for drink at the time of treatment, and one patient said that frequently he slept for some hours after the primary effects had worn off. Tincture of gelsemium, very closely watched, did good service in one case. Doses of potent drugs, such as strychnia, atropin, etc., should be given with care, and the result carefully watched. Massage, I have found of service in toning up the muscles and preparing them for exercise in the open air. It also diminishes the cutaneous sensitiveness and frequently brings sleep.

For the sleeplessness, phenacetin, grains 8-10, repeated at one hour's interval, is safe, but unreliable. Sulfonal depresses the heart, and if pushed leaves an unsteady gait in many cases. Trional and paraldehyde are good, but if given largely may be followed by reactionary excitement. Chloral is believed to be safer than morphia where there are rigid arteries.

The preliminary purge followed by large doses of liquor ammonii acetatis, with the resulting diuresis and sudorific effect, often does a great deal to quiet the patient.

Baths, Turkish, Russian, or the wet pack, have also a sedative effect, while they also remove the alcohol and the débris from the system. Anstie recommends very highly tincture of sumbul and ether, each one-half dram. When the treatment is begun the patient should be watched night and day so that he shall have no chance to lapse. If the physician

cannot obtain full control of the patient and his surroundings, then he should try to bring about his removal to a well-conducted home, where he will have the best of skilled attention at the hands of physicians and attendants who are total abstainers, themselves.

The physician, in the treatment of chronic alcoholism, must impress the patient with the feeling that no matter how much he tries evasion he will be forestalled; also that the physician is determined to cure him in spite of himself. I do not think that too much emphasis can be laid upon this attitude of the physician toward his patient.

The surroundings of the patient must be attended to, and he should be compelled to take the greatest possible care of his person and his clothes. Improvement in this respect on the part of the patient is of good prognostic import. We all know the effect upon ourselves of wearing a new suit of clothes. Rest and nerve reconstructives are required; hypophosphites, coca, cod-liver oil, etc., have all been lauded. The patient must be encouraged in every possible way, and allured from thoughts of himself by light exercise, music, or some occupation which does not overtax his muscles. His meals should be clean, appetizing, wholesome, and easily digested, and ought to come by the clock. Everything in the way of exciting causes should be sought out and the indications met. If gastric, then some stomachic treatment. Many appear to be relieved by ipecac, rhubarb, and soda, capsicum alone, or in combination, bitter tonics, digestives, etc.

Idleness, brain worry, overwork, mental strains; and, in women, ovarian and uterine troubles are frequent causes of lapsing, and have to be met with appropriate treatment. In all cases artificial aids to sleep ought to be discontinued while the patient is under the physician's hands. In the majority of cases the use of tobacco ought not to be allowed, as alcoholic drink and tobacco are inseparably connected in many cases. In melancholia and neuritis forced feeding may be required, and the numerous complications, such as albuminuria, uremic



convulsions, jaundice, pneumonia, and bronchitis, require treatment, and it may be added that they are more intractable than in non-alcoholic states.— *Medical Times*.

### HOW FAR IS INEBRIETY INFLUENCED BY STRINGENT TIMES?

The American *Grocer* answers this question in the following statistics and tables:

It is evident that hard times have contributed to a notable diminution in the use of all kinds of beverages, but particularly spirits. Possibly the bicycle has contributed to decrease the patronage of saloons, but whatever the cause the following official figures show that the consumption of alcoholic stimulants has not increased, while the use of the milder beverages has barely been steady:

PER CAPITA CONSUMPTION OF LIQUORS				
	Spirits	Wines	Beer	Total
	Gallons	Gallons	Gallons	Gallons
1896 . . . . .	1.00	.26	15.10	16.42
1895 . . . . .	1.12	.28	16.08	16.35
1894 . . . . .	1.33	.31	15.18	16.82
1893 . . . . .	1.51	.48	14.95	18.04
1892 . . . . .	1.50	.44	15.16	17.04

These figures are surprising, in view of a reduction in the use of spirits from one and one-half gallons to one gallon per capita in five years. Naturally, under such circumstances, one looks for an increase in the use of the milder stimulants, but, instead, we find the use of wines has decreased from about one-half to one-quarter of a gallon per capita, while the use of beer has been stationary, whereas, during the five years, 1887 to 1892, it rose from 11.23 gallons in 1887, to 15.28 gallons in 1891, a period of marked prosperity. In 1896, 71,263,000 people used less spirits than 58,680,000 people did in 1887. About 11,000,000 gallons of spirits are used annually in the arts, manufactures, and medicine, so that deducting that quantity leaves about 60,000,000 gallons for use as a

beverage. Barrooms show an average of sixty drinks per gallon, returning about \$4.50, thus making the nation's whisky bill, in 1896, as a beverage, \$270,000,000, while in 1892 and 1893 it averaged \$400,500,000. This decrease accounts for a big loss in revenue, officially reported in 1896 at nearly \$14,000,000 less than in 1893. Foreign spirits are in favor in fashionable circles, and yet the importations in 1896, while heavier than for the four preceding years, were lighter than in 1890 or 1891.

Beer disputes with coffee the claim to be the national beverage. Twenty years ago the per capita consumption was less than one-half of what it is to-day, or six and one-half gallons against fifteen gallons in 1896. During the prosperous years, 1891 and 1893, the consumption reached its maximum, rising in 1893 to 16.08 gallons, since which date it has fallen off about one gallon per capita, averaging for the past three years fifteen gallons per capita annually. Hard times and bicycles explain this decrease in the use of malt liquors. On the basis of 50 cents per gallon for domestic beer and \$1 for imported beer, as the cost to the consumer, we have a total expense for that item in 1896 of \$541,963,348. It is very evident that Americans are not given to a free use of wines. The consumption of domestic wines in 1896 was less than one-half the quantity used in 1888, leaving out of question an increase in population of 12,583,000 people. Less imported wines are used than formerly. In 1883 the importations were more than double those in 1896, and over 1,500,000 gallons less than in 1893. The figures ought to encourage the friends of temperance, although they may be discouraging to the wine industry of the United States. Assuming that domestic wines cost the consumer \$2 per gallon, the nation's bill in 1896 for that item was \$29,199,514. The importations of that year were valued at the custom house (plus duties) at \$10,265,465. Allowing 100 per cent. profit to distributors, the cost of foreign wines for the year 1896 was \$20,530,930, which, added to the cost

of domestic wines, makes the nation's wine bill last year \$49,730,444.

Bringing the above items of the cost of alcoholic beverages together, we have the following as the drink bill of the American people, so far as alcoholic stimulants are concerned: Beer (domestic), \$538,662,857; beer (imported), \$3,300,531; whisky (exclusive of quantity used in arts), \$270,000,000; wines (domestic), \$29,199,514; wines (imported), \$20,530,930; grand total, \$861,693,832; estimated cost in 1892, on the same basis, \$1,000,884,277; estimated cost in 1891, on the same basis, \$934,813,314. Is not the above full of encouragement to advocates of temperance? There is a wonderful decrease in the use of ardent spirits and wines, and no gain in the use of beer. A comparison of the ten years' record indicates that good times foster the use of alcoholic stimulants. If we study the table showing the consumption of non-alcoholic stimulants, we find the same conditions governing their use. Measured by the number of gallons of the beverage consumed, coffee ranks next to beer as a popular beverage. Assuming that one pound of coffee makes two gallons of infusion, we have a year's consumption of 962,088,692 gallons, at a cost of \$120,261,086. The per capita consumption of tea does not increase; in fact, is less than it was twenty-five years ago, when it averaged one and one-half pounds, against one and three-tenths pounds in 1896. The import cost of the tea received in 1896 was \$15,585,741. The retail cost was, at least, double this, or \$31,171,482. It is safe to say that one pound of tea, as ordinarily brewed, will make five gallons of beverage, on which basis there was last year a total consumption of 466,701,240 gallons, costing 6 3-5 cents per gallon, thus making tea the cheapest of all beverages in general use. The 1896 imports of crude cocoa, leaves and shells, amounted to 23,276,597 pounds, valued at \$2,387,078. A large part of this is used for confectionery and other purposes than a beverage, but it is safe to estimate that the retail cost of the chocolate and cocoa used as a beverage does not exceed \$3,000,000.

Bringing together into one group, we find that the United States consumed in 1896, alcoholic and non-alcoholic stimulants to the value of \$1,016,126,400, as follows: Alcoholic drinks, \$861,693,832; non-alcoholic stimulants—coffee, \$120,261,086; tea, \$31,171,482; cocoa, \$3,000,000; total, \$1,016,126,400. The above represents a yearly per capita expenditure for beverages of \$14.31 for the 71,000,000 inhabitants of the United States, or 4 cents per day. Evidently hard times have cut down the appetite for beverages of all kinds, and render distilleries hazardous industries. Breweries and coffee mills are far better property.

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#### HASHEESH (CANNABIS INDICA) INEBRIETY.

Hyslop gives a review of Mental Diseases in the *London Practitioner* for February, 1897. In its course he remarks that hasheesh as a cause of insanity is the subject of a valuable report by Dr. Warnock, the medical superintendent of the Cairo Lunatic Asylum. He concludes that no doubt in quite a considerable number of cases hasheesh is the chief, if not the only, cause of the mental disease. Hasheesh insanity can scarcely be diagnosed by its clinical character alone. Sudden and rapid recovery on abstinence from the drug is the most pathognomonic symptom. He classifies the usual types of hasheesh insanity as being: (a) Hasheesh intoxication: An elated, reckless state, in which optical hallucinations and delusions that devils possess the subject frequently exist. Sometimes the condition amounts to a delirium, which is usually milder, more manageable, and less aggressive than that of alcohol, and exhibits none of the ataxic phenomena of the latter. Recovery takes place in a day or less, and the patient usually recognizes the cause of his excitement. In connection with these cases Dr. Warnock raises the interesting medico-legal question, "Are such patients to be held responsible for crimes committed during the hasheesh intoxication, as ordinary

drunkards are? or are they absolved from responsibility, as being temporarily insane? Persons chronically insane from drink are held to be responsible for criminal acts, temporary intoxication, on the contrary, being no plea. Will the same principle be applied to hasheesh crimes?" (b) *Acute mania*: In this type terrifying hallucinations, fear of neighbors, outrageous conduct, continual restlessness and talking, sleeplessness, exhaustion, marked incoherence, and complete absorption in insane ideas, are the prominent symptoms. Such cases last some months and do not always recover. (c) *Weak-mindedness with acute outbreaks after each hasheesh excess*: These cases are very numerous. While in residence such patients are usually quiet and well behaved, and only betray the impaired state of their brains by being over talkative, easily pleased, lazy, anergic, excitable on small provocation, unconcerned about their future, and willing to stay in hospital all their lives; they show no interest in their relatives, and only ask for plenty of food and cigarettes. After being discharged such cases soon return in a condition of excitement — in fact, in a mild form of type *b*. They can talk rapidly, and rush about pouring torrents of abuse on those near them, curse and rave on slight provocation, are sleepless, and forever moving in an aimless way; are urgent to be released, deny the use of hasheesh at one moment and boast of its wonderful effects the next. Besides these types there are numbers of cases of chronic mania, mania of persecution, and chronic dementia, alleged to be produced by hasheesh.

Dr. Warnock also quotes some of the conclusions of the "Indian Hemp Drug Commission" of 1893-94. Its moderate use has no physical, mental, or moral effects whatever; its excessive use, on the other hand, injures the physical constitution, and may cause dysentery and bronchitis; it tends to weaken the mind, and may sometimes cause insanity; it induces mental depravity and poverty, but rarely crime. The injury caused by excessive use is confined almost exclusively to the consumer, and scarcely affects society. In India hemp

drugs are regarded as causing insanity more rarely than has popularly been supposed, and the resultant insanity is usually of a temporary character and of shorter duration than that due to other causes.

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## PHENOMENA OF MESCAL INTOXICATION.

BY HAVELOCK ELLIS, M.D., LONDON, ENGLAND.

On Good Friday, being entirely alone in quiet London rooms, I made an infusion of three mescal buttons (a full dose) and took it in three portions, at intervals of an hour, between 2:30 and 4:30 p. m. The first noteworthy result (and the only one of therapeutic interest which I have to record) was that a headache, which had been present for some hours and showed a tendency to aggravation, was immediately relieved and speedily dissipated. There was slight drowsiness before the third dose was taken, but this speedily passed off and gave place to a certain consciousness of unusual energy and intellectual power, which also quickly passed off. So far no visual phenomena had appeared, even when the eyes were closed for several minutes, and there was yet no marked increase of knee-jerk: there was, however, a certain heightening of muscular irritability, such as may be noted when one has been without sleep for an unusual period. The pulse also began to fall. After the third dose, I was still feeling, on the whole, better than before I began the experiment. But at 5 p. m. I felt slightly faint, and it became difficult to concentrate my attention in reading; I lay down and found that the pulse had now fallen to 48, but no visual phenomena had yet appeared. At 6 p. m. I noticed, while lying down (in which position I was able to read), that a pale violet shadow floated over the page.

I had already noted that objects which were not in the direct line of vision showed a tendency to be heightened in color and to appear enlarged and obtrusive, while after-images began to be marked and persistent. At 6 p. m. there was a

slight feeling of faintness, as well as of nausea, and the first symptoms of muscular incoördination began to appear, but there was no marked discomfort. By 7 P. M. vision had begun to appear with closed eyelids, a vague, confused mass of kaleidoscopic character. The visual phenomena seen with open eyes now also became more marked, and in addition to the very distinct violet shadow there were faint green shadows. Perhaps the most pleasant moments in the experience occurred at 7:30 P. M., when, for the first time, the color visions with closed eyes became vivid and distinct, while at the same time I had an olfactory hallucination, the air seeming filled with vague perfume.

Meanwhile, the pulse had been rising, and by 8:30 P. M. had reached its normal level (72 in the sitting posture). At the same time muscular incoördination had so far advanced that it was almost impossible to manipulate a pen, and I had to write with a pencil; this, also, I could soon use only for a few minutes at a time; and, as I wrote, a golden tone now lay over the paper, and the pencil seemed to write in gold, while my hand, seen in indirect vision as I wrote, looked bronzed, scaled, and flushed with red.

Except for slight nausea, I continued to feel well and there was no loss of mental coolness or alertness. When gazing at the visions with closed eyes I occasionally experienced right frontal headache, but as I only noticed it at this time, I attribute this mainly to the concentration of visual attention.

In one very important particular my experience differs from Dr. Weir Mitchell's. He was unable to see the visions with open eyes, even in the darkest room. I found it perfectly easy to see them with open eyes in a dark room, though they were less brilliant than when the eyes were closed. At 10 P. M., finding that movement distinctly aggravated the nausea and faintness, I went to bed, and, as I undressed, was impressed by the bronzed and pigmented appearance of my limbs. In bed, the nausea entirely disappeared, not to reappear, the only discomfort that remained being the sensation of thoracic

oppression, and the occasional involuntary sighing, evidently due to shallow respiration, which had appeared about the same time as the vision began. But there was not the slightest drowsiness. This insomnia seemed to be connected less with the constantly shifting visions, which were always beautiful and agreeable, than with the vague alarm caused by thoracic oppression, and more especially with the auditory hyperesthesia.

I was uncomfortably receptive to sounds of every kind, and whenever I seemed to be nearly falling asleep I was invariably startled either by the exaggerated reverberation of some distant street noise (though the neighborhood was even quieter than usual), or, again, by the mental image (not hallucination) of a loud sound, or, again, as I was sometimes inclined to think, by actual faint hallucinatory sounds; this, however, was difficult to verify. At a later stage there was some ringing in the ear. There was slight twitching of the larger muscles of the legs, etc., and before going to bed I had ascertained that the knee-jerk was much exaggerated. The skin was hot and dry. The visions continued.

After some hours, tired of watching them, I lighted the gas. Then I found myself in a position to watch a new series of vivid phenomena, to which the previous investigators had not alluded. The gas — *i. e.*, an ordinary flickering burner — seemed to burn with great brilliance, sending out waves of light which extended and contracted rhythmically in an enormously exaggerated manner. What chiefly impressed me, however, were the shadows which came in all directions, heightened by flushes of red, green, and especially violet. The whole room then became vivid and beautiful, and the tone and texture of the whitewashed, but not remarkably white ceiling, was immensely improved. The difference between the room as I then saw it and its usual appearance was precisely the difference one may often observe between the picture of a room and the actual room. The shadows I saw were the shadows which the artist puts in, but which are not visible under normal



conditions of casual inspection. The violet shadows especially reminded me of Monet's paintings, and as I gazed at them it occurred to me that mescal, doubtless, reproduces the same conditions of visual hyperesthesia, or, rather, exhaustion, which is certainly produced in the artist by prolonged visual attention (although this point has yet received no attention from psychologists). It seems probable that these predominantly violet shadows are to some extent conditioned by the dilatation of the pupils, which, as the American observers had already noted, always occurs in mescal intoxication.

I may remark in this connection that violet vision has been noted after eye operations; and Dobrowolsky has argued that a necessary condition for such vision is the dilatation of the pupils produced by atropin, so that the color vision (chiefly violet, though to some extent of other colors), is really of the nature of an after image due to bright light. Dobrowolsky's explanation seems to fit in accurately with my experiences under mescal.

I wished to ascertain how the subdued and steady electric light would influence vision, and passed into the next room. Here the richly colored shadows, evidently due to the stimulus of the flickering light, were not obtrusive; but I was able to observe that whatever I gazed at showed a tendency to wave or pulsate. The curtains waved to a marked extent. On close inspection I detected a slight amount of real movement, which, doubtless, increased the coarser imaginary movement; this latter showed a tendency to spread to the walls. At the same time the matting on the floor showed a very rich texture, thick and felted, and seemed to rise in little waves. These effects were clearly produced by the play of heightened shadows on the outskirts of the visual field. At 3:30 A. M. I found that the phenomena were distinctly decreasing, and soon fell asleep. Sleep was apparently peaceful and dreamless, and I rose at the usual hour without any sense of fatigue, although there was a slight headache. A few of the faint visual phenomena

with which the experience had commenced still persisted for a few hours.

Motor incoördination and the thoracic symptoms of cardiac and respiratory depression were in my case the only really unpleasant symptoms of the experiment. They are barely noticed by the American observers, who emphasize the gastric symptoms and headache, in Dr. Weir Mitchell's case persisting for several days. In my case there were practically no unpleasant after results. I cannot say how far the method of administration affected this result. I took the drug in infusion; previous experimenters used an extract or a tincture, or else ate the buttons.

It cannot be said (from my experience) that the pleasure of mesal intoxication lies in any resultant passive emotional state such as is produced by tea or alcohol, but strictly in the enjoyment of the color visions produced. Attention is impaired (and one realizes under the influence of mesal how largely attention is a matter of coördination), but intellectual judgment remains unimpaired. The visions, as I recall them, seem to me (unlike most dream visions) as beautiful in memory as when I experienced them. The sensory phenomena seem to be due to great and general disintegration and exhaustion of the sensory apparatus; in a slighter degree the same phenomena are found in neurasthenia, even the color vision. I am convinced that all the senses were more or less affected. There were vague dermal sensations, and the body felt unfamiliar to touch, just as everything seemed delightfully unfamiliar to the sense of vision. I noticed, also, that any marked casual stimulation of the skin produced other sensory phenomena — a heightening of the visions or an impression of sound. This is a phenomenon which may throw an interesting light on the synesthesiæ or "secondary sensations."

The phenomena of mesal intoxication are thus mainly a saturnalia of the specific senses, and chiefly an orgy of vision. Personally, I have found the penalty of a single dose surprisingly light, though, having learned what the experience has

to teach, I have no special inclination to renew it. But I fully agree with Dr. Weir Mitchell, that there is every likelihood that mescal will become popular. It certainly has a great future before it with those who cultivate the vision-breeding drugs. At the same time, it is of no little interest to the physiologist and psychologist.—*Medical and Surgical Reporter*.

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### PATHOGENESIS OF DELIRIUM TREMENS.

Jacobson (*Hospitalstidende*, p. 143, 1897) has collected 247 recovered cases of delirium tremens, observed by himself in order to study the pathogenesis of this disease. Of these cases 202 were pure and 45 complicated by other diseases.

Of course, abuse of spirits is a necessary condition to the evolution of delirium, but it is not sufficient to bring about the attack, as many potators indulge their vice without ever getting delirium. Among the occasional causes, traumatic lesions have specially been mentioned, and it is true that many of the patients come to the hospital with such; but, on close examination, it appeared that the lesions were acquired either after the commencement of the delirium or in the period of incubation, and, consequently, the traumatic lesion cannot be made responsible for the attack. In 15 per cent. of the patients it was noted that they sometime ago had received a wound of the head; and perhaps a lesion of the skull or the brain, resulting from such a lesion, may be regarded as a predisposing factor.

Twenty-two cases were complicated by pneumonia, and when, also, the lethal cases observed by the author are taken into account, more than 12 per cent. of all cases of delirium tremens were combined with pneumonia.

Generally the delirium commenced on the fourth day of the pneumonia, but the evolution of the two diseases is not congruous; either of them may finish without influencing the

other disease. Although the delirium tremens cannot be regarded as caused by the action of the pneumococcus, it resembles, in all features, an infectious disease: it has a stage of incubation,— a duration of about four days; it ends with a critical sleep; is accompanied by rise of temperature and almost in all cases by albuminuria, and when autopsy is made the spleen is generally found to be the seat of parenchymatous degeneration, as well as the heart, the kidneys, and the liver.

In the opinion of the author, delirium tremens occurs when a brain, deteriorated by chronic alcoholism, is influenced by a toxic agent, either due to the action of bacteria or to auto-intoxication, from diseases of the digestive tract, the kidneys, or the liver. Jacobson regards the therapeutic treatment as quite incapable of abbreviating the duration of the disease; the critical sleep cannot be induced by any drug.

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#### INEBRIATE HEREDITY IN CRIME.

Dr. Laurent, in his work on *Inmates of Prisons in Paris*, says: The prisons of France are inhabited in a great part by descendants of inebriates and degenerates. A total abstainer among criminals is an exception to the rule, while every alcoholic is not a criminal, this is due to accident and care of friends, for alcohol paralyzes the cerebral functions and annihilates the will, then the field is open to anger, impulsiveness, and bad instincts.

Dr. Foli, in a work on *Criminal France*, says: Alcoholism is one of the most potent causes of race degeneration. Crime, which is the most powerful factor of alcoholism, never leaves the family or individual their primitive integrity. Dr. Grenier, in *A Study of the Descendants of Alcoholics*, says alcohol is one of the most active agents in the degeneracy of the race. Such descendants are often inferior beings, a notable proportion coming under the categories of idiots and debilitated imbeciles. The morbid influence of parents is at

its maximum when conception takes place, at the time of drunkenness of one or both parties. Those tainted with hereditary alcoholism show a tendency to excess, and half of them become alcoholics. A large number of cases of neurosis have their principal cause in alcoholic antecedents. A large part of the sons of alcoholics have convulsions in early infancy. Epilepsy is almost characteristic of the alcoholism of their parents when it is not a reproduction in them, or when it is not an index of a nervous disposition of the whole family. The alcoholic delirium is more frequent in the descendants of alcoholics than in their parents, which indicates their intellectual degeneration.

Dr. Baer, in his work on the *Drink Evil*, remarks: In the later stages of alcoholism there is a considerable number of cases of pronounced insanity. The form is usually chronic mania, epileptic insanity, delusional insanity, general paralysis, and other forms of incurable insanity. In other cases alcoholic excess is a symptom of a diseased nervous system, and there has been insanity before the drinking commenced. In the first stages of mania melancholia and general paralysis, many are driven to the use of alcohol. Dipsomania is a form of insanity and is periodic. Besides all these, there are numbers of drinkers on the border-line between health and disease who, on account of their inherited mental weakness and consequent irritability through over-work, are given to alcoholic excesses. There is still a greater number of habitual drunkards, who are not insane, but who, through long abuse of alcohol, cannot resist drinking. They reach such a degree of volitional and intellectual weakness, of irritability and stupidity, indifference to customs and positions, and mistrust, and carelessness in regard to their family, that it is a question whether they are not a common danger to society. Such persons are most dangerous because their condition is latent and their attacks appear suddenly.

These recent utterances are significant of a great change of opinion. The denial of any relationship between inebriety,

heredity, and crime, put forth so authoritively in the face of such overwhelming proofs, can have no possible value. Such papers would be out of place in this journal.

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#### MISTAKES IN DIAGNOSIS OF INEBRIETY.

The Cleveland *Journal of Medicine* gives the following:

“A recent occurrence in this city and one which is not at all uncommon indicates that our police authorities have yet need to learn how to car for the unconscious human forms which are regularly found in a city’s streets. A gentleman returning from the Grand Army Encampment at Buffalo was taken suddenly ill on the train with symptoms apparently of hemiplegia. It is said he took a drink of whisky in the hope of improving his condition and then became unconscious. On arriving in this city the police were notified, and finding a strong smell of whisky on his breath at once concluded it was a case of ‘drunk.’ They hustled him to the police station where he remained over night in jail, having no friends to look after him. In the morning it was discovered that he was ill and he died soon after removal to the hospital. It is not suggested that his life would have been saved by more care in his treatment, but the pride of the city would be less injured if the suffering man had been at once taken to a hospital instead of to the jail. It ought to be made an universal and obligatory rule for the police to have a medical man see at the earliest possible moment every unconscious person who may fall into their hands. The police authorities of this city should at once make such a rule and see that it is carefully observed. By so doing lives may be saved and certainly the good name and self-respect of the city will not be so frequently shocked.”

The following is another illustration of similar errors. A temperate man was found unconscious in Central Park, N. Y., and taken to the station-house. He seemed delirious, and was hit by the officer on the head to quiet him. His unconscious-

ness continued in the station-house, and twenty-four hours after he was removed to the hospital, where he died. The post mortem revealed cerebral hemorrhage.

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### NEUROLOGY.

Influence of Cold Baths in Delirium Tremens. — Litttle recommends as a sedative in delirium tremens a cold bath of 65 degrees F., the patient being immersed in the water to his shoulders, while water of the same temperature is poured over his head. In a severe case in which large doses of morphin subcutaneously and chloral by the mouth had failed to give sleep in two days, and death was expected, a bath of the temperature of 65 degrees F., increased in the first three minutes cyonosis and excitement. In six minutes the aspect of the patient completely changed. His excitement disappeared, he seemed to awake from a dream, asked where he was, drank eagerly two glasses of warm wine, and wanted to sleep. He was placed in bed and immediately fell asleep. The following day, on account of recurring excitement, it was necessary to repeat the bath four times. There was no further delirium and the patient recovered. In a second case it was necessary to leave the patient twelve minutes in the bath, when as suddenly as before there was quiet, thirst, and a desire for sleep, followed by complete recovery in two or three weeks. — *Med. News.*

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### HYPNOTIC MAGAZINE.

Doctor: Your library is not complete without the *Hypnotic Magazine*. Cost of this handsome monthly, including premium book on "Suggestive Therapeutics," is only one dollar (\$1.00) a year.— The Psychic Publishing Company, 56 Fifth Avenue, Chicago, Ill.

*Appleton's Science Monthly* has, during the past year, published the Lowell Lectures on Racial Geography, one of the great contributions to science of the year. Other equally important papers have appeared in this monthly. No other publication contains more valuable and instructive matter.

The *Homiletic Review* is one of the great standard magazines. As the months and years pass we are more and more impressed with the variety, breadth, solidity, and practical value of this standard magazine, published for the special use of the preacher. Published monthly by Funk & Wagnalls Co., 30 Lafayette Place, New York. \$3.00 a year.

THE FORGE IN THE FOREST.— By Chas. G. D. Roberts.

Published by Lamson, Wolfe and Co., Boston. \$1.50.

This novel is historical. Its locale is the region round about Grand Pré; its time, a decade before the exiling of the hapless Acadians, in 1755; and its theme, the exploits of one Jean de Mer, a famous ranger of that day.

It is a charming story, charmingly told. Its diction is delightful — notably so, the foreword. The characters — clean-cut. Strongly drawn — fairly throb with the fervor of wood-ranging life: the interest, strong from the start, keeps steadily up to the finish, and the sweet love undercurrent going on to a happy ending, gives it all a peculiar charm. As poet and historian, Prof. Roberts wears well-earned laurels, and to these this stirring romance will surely add.

THE STORY OF THE HUTCHINSONS. By John W.

Hutchinson, 2 vols., Lee and Shepard, Boston.

The helpful power of music in certain morbid psychological conditions is beyond question. Again and again the writer has had proof of that fact. To its soothing, restful help, when fretted and worn by the cares of his calling, many a medical man can well attest. Save to those under Shakespeare's ban,



its influence, rightly expended, is ever for good, and gauged by such standard the measure of its beneficence to make the world better, admits of no compute. To those of our guild who, half-a-lifetime and more ago, were "moved by the concord of sweet sounds," such as only that "band of brothers" could give. "The Story of the Hutchinsons" comes with peculiar charm. It is the story of a noble work told by the sole survivor of that noble band. Nearly 60 years ago — Thanksgiving Day, 1839 — they began that work, and no one who heard their songs, especially "The Old Granite State" and "Ship on Fire" — sung in a thrillingly inimitable way, can ever forget their charm. To all such the record of these handsome volumes will revive pleasant memories of happy hours under the witchery of their musical spell.

**THE STAR SAPPHIRE.** By Mabel Collins. Roberts Bros., Publishers, Boston.

This is a strongly written story, telling in fiction what, unhappily, so often presents in fact — the tale of a charming woman, tainted with the heritage of rum, going steadily down to a drunkard's doom. It is a study in dipsomania well worth reading.

**NO PLACE FOR REPENTANCE.** By Ellen F. Pinsent. A. D. F. Randolph, Publisher, New York.

This is another novel along alcoholic lines. It depicts one of those heart tragedies so often noted in lives handicapped by ancestral obliquity, and proves that a life devoted to doing good to others under the thrall of drink, may itself go down before the resistless power of this dread disease.

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The sale of cocaine, except upon the written prescription of a legally qualified physician or dentist, has been forbidden by an act of the Colorado legislature.

## Editorial.

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### INEBRIATE DELUSIONS.

The Boston *Daily Traveler* gives great prominence to an interview with an escaped inmate of the Foxboro Inebriate Asylum of Mass., as if this was a new topic, and the story had never been told before. The narrator, after twenty-eight days' residence, considered himself cured and ran away. During this time he found many abuses which he describes, with the reserve that he could give many more details of similar character. His statement is of interest as illustrating nearly all the common delusions of inebriate degeneracy. First, the dishonesty and hypocrisy of the management; then the abundance of spirits in the institution to be had for money, and the frequent intoxications of the inmates, and the ease with which they could escape at will; then the bad food, and worse treatment, and frequent deaths from want of spirits as medicines, with neglect and use of coarse remedies not appropriate; finally, the officers' partiality and ignorance, with intense prejudices against certain persons. Also the restraint which was cruel and destructive to every nervous person. These general charges are supplemented by various minor claims of wrongs and abuses, with statements of inmates, who have no opportunity to be heard, and who suffer in silence. Nearly thirty years ago a runaway inmate of the asylum at Binghamton made the same particular charges, and a legislative investigation, which cost the state five thousand dollars, found the statements to be delusions and without reality. In every asylum of this kind in the country, the same charges are heard from the inmates daily. The same delusions of wrongs, abuses, and failures of the management and general dishonesty, and

the same stories of ability to procure spirits at all times, are the common talk of inebriates who are restrained in asylums. The prominence of some particular delusions indicates failures of some particular faculty, where the nutrient centers are impaired, delusions of bad food and dangerous, inappropriate medicines, will appear. The craze for spirits will manifest itself in convictions that spirits can be had any time, with but little or no effort, and that others are drinking secretly all the time. The impaired consciousness of right and wrong suggests dishonesty in all persons who have any control over them. The moral palsy, which is always a consequence of continuous use of alcohol, makes them untruthful, intriguing, and incapable of honest open conduct. All the higher brain centers are paralyzed. Such persons are unable to judge of the ethical relations of persons and events. His sense perceptions are injured, and the power of correcting them lost. Such persons may reason and appear well, but it will be along automatic lines, on matters foreign to their own personality. But on matters concerning himself and his relation to the surroundings, he is an imbecile. The Foxboro inebriate, in his charges against the asylum, gives a graphic picture of his own mental disability and unsoundness. No inquiry could bring out a more perfect representation of the faulty delusional mind breaking down in certain directions. The exaggerations, misconceptions, hallucinations, and delusions of inebriates are seen everywhere, in business, in social and professional life, and in literature. When they appear along certain special lines, and relating to certain topics, there should be no mistake about them. An inebriate's opinion of the proper treatment of his malady is of no more value than a lunatic's opinion of asylums or of his own case. These, of all other subjects, he is most incompetent to judge of. He is incapacitated in every way to be a fair, honest witness, and his statements are only of value as studies of his particular brain malady and degeneration.

## THE STUDY OF THE EFFECTS OF ALCOHOL IN THE PUBLIC SCHOOLS.

The compulsory teaching of the effects of alcohol in the schools, is one of the most important preventive measures against inebriety of the century. It is a clear recognition of the disease of inebriety, and the possibility of prevention, by teaching the dangers of alcohol as a beverage, and the growth of inebriety from ignorance and neglect.

The history of the movement which led up to the remarkable work of Mrs. Mary H. Hunt is a very striking chapter of evolution. The early temperance efforts, which finally concentrated in the Washingtonian reform wave were followed by fixed and continuous work through organized societies to make known the evils from the use of alcohol. Then came the scientific study and the asylum movement to study these cases as sick and diseased. The latter roused up a fierce opposition, which brought out a more startling array of facts, with new views of the causes and conditions of inebriety. The early scientists gathered a vast array of facts to prove the presence of disease, and the opponents eagerly grasped and utilized these facts, while denying the conclusions. Out of this confusion the association for the study and cure of inebriety came, and the Woman's Christian Temperance Union, and other societies. One has gathered some of the facts of inebriety, its origin and growth, and the study of alcohol and its action on the body, while the other has reached conclusions, and sought to apply remedies along moral lines. It was the scientific fact brought out by the association for the study and cure of inebriety, that a large proportion of inebriates began to use spirits in childhood; that alcohol as a beverage was dangerous in early life; that hygienic neglect, bad surroundings, with ignorance of the danger of all forms of spirits, was a very active cause of inebriety in later life. Also that inebriety was a disease, the prevention of which must begin in

knowledge and the use of means, applied along exact lines of cause and effect; and that the study of the body and its care, was the great essential in the prevention of all disease. These are some of the facts which were accepted by intelligent men and women, and made it possible to enact laws enforcing such instruction in schools. It was a study of this great drink problem from a scientific point of view, that suggested prevention and the possibility of removing many of the causes, and lessening the disease. Unconsciously both scientists and moralists gathered and scattered the facts which opened a new field of prevention, of greater practical importance, than any other hygienic measure of the past century. The work of Mrs. Hunt in securing laws in congress and all the states but three, making the study of hygiene and the effects of alcohol compulsory in the common schools, is literally phenomenal. In addition to this, arranging and preparing the books required for this work, in this Mrs. Hunt has accomplished a pioneer work, very rarely seen in a single life.

The study of inebriety and the effects of alcohol is passing a tremendous evolutionary epoch. This explains the marvel of a talented energetic woman, who practically, alone, influences the legislatures of forty-one states and the national congress, to pass laws, that conflict with the strongest personal prejudices, and the present and future pecuniary interests of many persons. The bitter detraction and opposition which has opposed this work, beat in vain against the evolutionary march of truth, and Mrs. Hunt, as its apostle, was invincible. The laws in these states may be altered and the text-books improved, but physiology and the effects of alcohol on the body, has become a national topic for instruction in the common schools. A great advance along the line of preventive medicine has been made. The work of our society in the study of the facts of inebriety, is looming up like distant outline peaks, and not only the prevention, but the cure, of this great border-land disease, is becoming more and more possible every year.

## ALCOHOLISM, OPIUM, AND OTHER NARCOTICS.

We give below a record of leading papers on these topics, copied from the "Index Medicus."

These are the titles of papers published, noted during the past six months, from January to July.

This list is supposed to be confined exclusively to leading medical papers which have appeared in the medical journals of the world.

While the list is by no means complete, yet it approximates, and includes most of the articles on this subject. Several papers in the *Journal of Inebriety* are unnoticed, and one paper published in three different journals is noticed three times. Of course these are faults which can be corrected, and show that the literature has attained a degree of prominence which calls for mention of all the leading papers which are appearing with increasing frequency.

We shall continue to publish a record of all papers and books published on these topics.

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- Del Valley Aldabulde, R. Sobre el Alcoholismo Oranieo. Rev. de Med. y. Cirug. Pract., Madrid, 1896, XXXIX, 241-254.

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- De Fournes et Marandan de Montyle. La Therapeutique de l'Alcoolisme par l'Internement Prolonge des Bunerers. J. Hyg., Par., 1897, XXII, 63, 68.
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### THE INTERNATIONAL ANTI-ALCOHOL CONGRESS.

The International Congress against the Abuse of Alcoholic Drinks was held at Brussels from August 30th to September 2d, under the presidency of the Minister of State, M. Lejeune. A number of members of the medical profession, and of clergymen, teachers, and representatives of Belgian and foreign temperance societies, took part in the proceedings. Dr. Motet, of the Paris Academy of Medicine, in an address on "Alcohol, the Family, and the Working Classes," pointed out that the loss to the exchequer which, it was said, would result from the general prevalence of temperance principles was largely imaginary, inasmuch as the bulk of the revenue derived from the sale of intoxicating liquors had to be expended by the state in the discharge of burdens imposed upon it by the consequences of alcoholism. Dr. Destrée dwelt on the unfavorable influence of alcohol on work, whether of body or mind. Dr. De Boeck related experiments on students, which went to show that alcohol, even in small doses, tends to paralyze the higher cerebral centers. M. Roubinovitch gave an account of a systematic effort to check intemperance by teaching in schools; the experience of a three years' propaganda of this kind had convinced him of its efficacy. Mr. J. Whyte, of Manchester, gave statistics from the Reclabite Societies, showing the greater longevity of total abstainers. In dealing with the causes of alcoholism, M. Van den Corput said it was the direct outcome of the storm and stress of life under the conditions created by modern progress. Neuropathy was a sign of the times, and

the remedy for this was intelligent feeding, with the use of beverages, such as "sound and generous beer," milk, tea, coffee, etc. Drs. Romi e and Bienfait urged that it was the duty of the medical profession to co operate strenuously in the struggle against the abuse of alcohol. "Doctors," said one of the speakers, "should not only preach, but practice abstinence," at least as far as brandy, gin, rum, etc., were concerned. Dr. Forel, of Zurich, insisted on total abstinence as the only cure, and spoke well of hypnotic suggestion as an auxiliary means of treatment in alcoholism. Dr. Legrain proposed an international organization for the propagation of temperance principles. The discussion of this question was referred to the next meeting of the Congress, which it was decided should be held in Paris in 1899.

To the above, which appeared in the *British Medical Journal*, we would add that this was the sixth International Congress which has been held in different cities of Europe. Each Congress lasts five days, and the following topics were discussed in separate sections:

1. Alcoholic legislation, sociology, and political economy.
2. Education and instruction.
3. Alcohol in medicine and hygiene.
4. Woman's battle against alcohol.

It will be seen that the studies of alcohol in these meetings cover a very wide field, and enlist the moralists and scientists collectively. Mrs. Mary H. Hunt, the great pioneer leader of temperance instruction in schools, was vice-president, and delivered an address on this subject, which was very highly praised. A dinner was given Mrs. Hunt in London by the Temperance League, at which Dr. Kerr presided, and made an address.

These great biennial congresses are most significant movements, indicating both evolution and revolution from the present theories of alcohol and its place in the progress of the world.

## DIET IN THE TREATMENT OF INEBRIETY.

For a long time persons have urged that diet was the real remedy for inebriety. Yet, when it was applied in certain cases, no better results were obtained. The drink symptom remained. Occasionally, the change from a meat to a grain diet, or the reverse, was followed by the subsidence of all desire for spirits. In a continuous drinker, a general diet of both meats and grains appears to meet the demands of a disordered nutrition and semi-starved condition, better than any special articles of food. In the periodic cases, an albuminous or proteid diet is often decidedly injurious. In some cases an intense craving for meat precedes the drink paroxysm, or for starchy foods, which subside when the craze breaks out. The intimate relation between foods and the drink paroxysm is very prominent in many cases. In some cases excessive meat eating is associated with great irritability and sensitiveness of the brain and nervous system. The change of diet is followed by a great improvement of mental activity. It would appear from a study of many cases that so far no general rule can be found, and each case must be studied from the facts of its history. Thus, in some cases, a meat diet is literally poisonous, and its removal is the first essential for a cure. Again, a grain or fruit diet is clearly injurious, and more rapid recovery follows a change. In all cases states of starvation and anti-intoxications exist, the removal of which are of equal importance to that of spirits. The study of the diet brings out many unsuspected causes, which require removal and treatment before a cure can be effected.

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The mortality is strikingly low among brewers in early years. Up to the age of forty, or thereabouts, brewers seem to be about as good risks as any one else. After that age the mortality rises high, and at fifty or sixty about three brewers may be expected to die where one other person dies.

## MORAL PALSY.

It is asserted that four per cent. of all persons are born without any moral conception of right and wrong. The moral sense is congenitally absent, and no matter what the surroundings or training may be, this faculty is wanting.

From education and surroundings it may seem to be present, and such persons may pass a long life without markedly showing this defect. It would seem that this faculty might be cultivated, and the constant exercise of the higher moral brain would develop in some degree this part of the brain. Yet, experience shows that it is never changed. Cultivation and exercise only conceals, and gives a superficial gloss and facility to cover up this defect. Many persons pass through life, as strange eccentrics, without this malformation being discovered.

Fully ninety per cent. of all inebriates suffer from palsy and derangement of this moral faculty. In a large per cent. it is congenital from inebriate and insane parents, in others it is acquired. In all cases this faculty is the first to suffer, and the one which becomes most seriously injured. Injury to all the organs and faculties may be removed, and a degree of restoration follow. But this faculty is never restored when once paralyzed by poisons. It is claimed that wine and beer drinkers in so-called moderation, have a weakened and low grade moral sense. A study of this faculty brings out the disease element clearly in most cases.

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**DRUNKEN BUMBLEBEES.**

The latest contribution to the personal habits of animals has just been made by M. J. Lloyd Williams, and, curiously enough, it deals with the "drunken habits" of certain bumblebees. He shows that these insects, in frequenting the crowded flowers of some of the composites, as *carduus* and *centaurea*, and of a species of *scabiosa*, become infected with their

honey to a state of intoxication; and that they give expression to this intoxication by rolling on the back, striking the legs wildly in the air and general helplessness. The bees rapidly recover from these effects, but, strange though it may appear, they eagerly renew the debauch. One individual, however, as Mr. Williams informs us, manifested the next morning a praiseworthy remorse and disgust, "raising its head and fore-legs as high as it could above the plants, then precipitately hurrying away as soon as released." The most dissolute species was a neuter bee of the species *bombus lapidarius*.

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#### TREATMENT OF DRUNKARDS.

The Rev. Dr. Strong, Melbourne, told the Royal Commission on Old Age Pensions that "Drunkenness should be made a crime, and habitual drunkards should be locked up"; not merely for a night that they may be brought before the magistrates in the morning, and let off with five-shillings fine, but that they should be treated as lunatics and shut up until they are cured.

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The American Medical Temperance Association has one hundred and fifty members. The German Medical Temperance Association has one hundred and eighty members, and the British Medical Temperance Association has over three hundred members, and nearly a hundred associate members.

These three societies are alike in purpose and plan of organization, and have among their members some of the leading medical men of the world.

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Several prominent insurance companies refuse to consider an application from a "graduate" of a Keeley-Cure, no matter how good a risk otherwise the man may seem, or how little of an inebriate he may have been. The reason given is that persons who have undergone this "treatment" are prone to premature death, due, supposedly to the severe drugs used.

## Clinical Notes and Comments.

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### CLINICAL NOTES ON LACTOPHENIN.

BY A. H. ROLER, M.D.,

*Late Resident Physician United States Marine Hospital.*

Although one of the newer products of the laboratory, lactophenin has taken its place as one of the foremost in efficiency as an analgesic, an antipyretic and a sedative; it is now a well-established fact that it is practically devoid of many of the drawbacks which some of the other drugs, used for the same purposes, have, but which, in all other respects, are equally valuable and useful. Some of the after-effects resulting from such drugs, such as depression of the heart, increase of respiration, etc., we do not find following the use of this remedy. By virtue of its use not being followed by ill effects on account of its harmless nature, yet at the same time being very potent, we find it a very convenient and safe article for use in many distressing ailments, such as migraine, insomnia, la grippe, etc. It has been used with repeated good results in more serious troubles, such as typhoid fever, suppurative tonsilitis, and even in septicemia; in fact, its use seems almost unlimited. Its action is similar to that of phenacetine, not, however, so rapid, at the same time being more of a sedative. It has been used with marked success in typhoid fever, scarlatina, acute tuberculosis, measles, and many other ailments. On account of its harmless nature it especially recommends itself in diseases of children, doses of 3 to 6 grains being given with impunity, and almost invariably with the desired result.

For the purpose of testing its value I have used it in a series of cases of different troubles, and append a report of a few of the more prominent ones.



Case 1.— Mrs. A. T., age 32, married, has been a sufferer from periodic attacks of migraine for ten years. Has taken morphine, but is afraid of contracting the habit, consequently she has tried almost every available remedy, without obtaining relief. She was given lactophenin in 5-grain doses every 2 hours, and reports that the relief obtained was such as she had not before experienced. She had no ill after-effects such as formerly appeared, especially on taking morphine.

Case 2.— R. S., age 28, by occupation a bookkeeper. Has been troubled for a number of months with severe intermittent headaches. He was advised to see an oculist, who fitted him with glasses, and these in a measure gave him relief. As he still continued to have some trouble he was given 5-grain powders of lactophenin to be taken 2 hours apart. He says he almost never has to take the second dose.

Case 3.— One of suppurative tonsilitis in a girl, Mary S., age 18. The trouble had been present for 10 days, the pain being so very intense as to cause her to cry out. She was given 10-grain doses of lactophenin, to be repeated every 4 hours. On the morning of the second day her temperature, which had been on the day previous up to 103, was reduced to 99.2°, and she was able to partake of soft diet, which she had not done for two days previous.

Case 4.— Another case of quinsy in a young boy of 12. The result was equally gratifying, the fever and pain subsiding within 12 hours. He had repeated attacks of the trouble, and his mother says he has had quicker relief at this time than at any other time.

Case 5.— John P., age 35, had all the symptoms of la grippe, headache, backache, fever, congestion of the conjunctivae and restlessness. As he expressed it, "felt as if pounded with a club." He was placed upon lactophenin in doses of 10 grains every 3 hours. In 12 hours he was perspiring very freely and the fever was reduced 3 degrees. During the day following the beginning of treatment he felt able to attend to his work. The dose was now reduced to 5 grains every

4 hours. The temperature did not rise above 100°, and the feeling of soreness entirely disappeared. He was able to be about on the 4th day.

Case 6.—Minnie C., age 18, has had pain of a more or less distressing character one day previous to the beginning of her menstrual flow. On various occasions she has been obliged to go to bed. Two 5-grain powders two hours apart relieved her greatly, something she has not been able to obtain before except with morphine.

The above cases would seem hardly sufficient to form a basis of opinion, but in 30 cases, of which these are a part, the results have been equally good. In only two cases was there unsatisfactory results. One of these was a habitual morphine user. In view of this fact it is not unfair to assume that lactophenin is useful, and that in it we have a safe and efficient drug.

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In a well written brochure on *Alcoholism*, Dr. J. I. Fellows groups some very interesting facts concerning inebriety and crime, insanity, dipsomania asylums, state control, disease, predisposing and psychic influences, together with other influences. In the therapeutics he points out the special value of Fellows' Syrup of Hypophosphites as being of great use in correcting the cardiac and cerebral deficiencies which are at the root of the desire for alcohol. He points out clearly that in many cases disorders of the digestive organs, with inactivity of the liver, and general anæmia, also nervous prostration, are primary conditions of inebriety, which the hypophosphites effectively removes. The following sentence we heartily commend: "There is no more useful medicine than Fellows' Hypophosphites to assist in recovery from the weakness consequent upon recent illness." To this we add that the degeneration from alcohol is removed more quickly by this drug than by other means.

## AN ANTIDOTE TO THE TWO GREAT SYMPTOMS.

The value of Antikamnia consists in its rapid effect in alleviating the suffering of the patient while more radical treatment is working a cure. While endeavoring to rid our patient of his neuralgia, rheumatism, typhoid, intermittent, or malarial fever, we secure him relief from pain and intermission of fever. We have, in short, in this drug not a remedy for any disease, but a most useful antidote to the two great symptoms—Pain and Pyrexia.—*Medical Reprints*, London, Eng.

The *Gallard's Medical Journal* for September contains the following: Dr. Theo. W. Peers of Topeka, Kan., says: I desire to report two cases in which I used Papine with very gratifying results. The first case was that of a man suffering with a non-operable case of epithelioma of the left side of the face. He had been operated on by a surgeon here, but on recurrence of the disease went to a "cancer doctor," who used a paste which "burnt" out a large amount of tissue, and started up a very rapid growth of the tumor.

When he came into my hands, in October, 1895, the disease was so extensive that to make him comfortable was all I could hope for. Morphine, cocaine, and codein were tried, but with such distressing after-effects that they had to be abandoned. I then began using Papine, and two to four doses a day of a teaspoonful each kept him comfortable, with absolutely no unpleasant after-effects and with no increase in the amount given per day. The rapidity of the growth was decreased so that he lived until June, 1896, whereas, when I first saw him I did not think he could live three months.

The other case was one of probable tubercular peritonitis. I used it for six months with no after-effects, and always with relief to the patient. I know of no other anodyne that could be used for so long a time without unpleasant after-effects and without increasing the dose.

The well-known *Hosford's Acid Phosphates* has been on the market a quarter of a century, and has passed a period of criticism and doubt, and became established as a remedy of value. It has been asserted, with some excellent reasons, that this acid medicine is a great temperance reformer, and both directly and indirectly it has restored many persons to sobriety, and broke up the drink craze. Nothing is more clear than the oft-attested fact that, as a remedy in inebriety, this drug is in many cases of almost specific value.

Every physician who uses electricity should send for a copy of *The Electro-Therapeutist*, a monthly journal devoted to electro-therapeutics for the general practitioner. Write the editor, Wm. F. Howe, M.D., Indianapolis, Ind., mentioning this journal, and he will send you sample copies gratis.

*Fellows' Hypophosphites* is one of the very few remedies which have held a place in rational therapeutics for a quarter of a century. It is even now more popular than it has been before, and has a wider demand and sale wherever used. Its use in neurotic cases is nearly specific in many instances. This particular remedy can be given with great certainty in nearly all the neurasthenics.

*Wheeler's Tissue Phosphates* has won a place in the therapeutics of anaemia and general nerve exhaustion that is without a rival. In all cases of neurasthenia it can be used with great satisfaction and certainty. It has proven to be of exceptional value in poison cases from alcohol and narcotics.

The *Arcthusa Spring Water*, of Seymour, Conn., has all the excellences and many of the virtues of the most famous spring waters of the world. Wherever it is used it wins a name and reputation that is lasting. With patient, persistent effort this water can have a demand all over the world. It has the merits which would create a market for it in every city of this country.

We have examined three excellent preparations made by the Charles Roome Parmele Co. of New York city. One, called *Caroid*, a vegetable digestive ferment, which has proved, by experience, to be far superior to any other drug for various forms of indigestion. It is the concentrated extract of *carica papaya*, and is prepared with soda and charcoal, and other well-known drugs. The second preparation is *Marcuaro*, and is a rare and most agreeable form of an old and well-tried remedy, whose value, in many cases, is beyond all question. *Arsenauro* is the third preparation of equal value. The last two have a special value in all toxic cases, especially inebriety and its disorders. Every physician should use these remedies, for they are the essentials to every successful practice.

F. E. Harrison, M.D., Abbeville, S. C., says: "I have used *Celerina* in appropriate cases, and can heartily recommend it to all who wish an elegant preparation, combined with undiminished therapeutic activity. It is peculiarly fitted to such cases as delirium tremens, headache from debauch or excessive mental or physical exertion."

To this we add that *Celerina* can be used to break up the drink storm in advance, and when it is present will markedly lessen its intensity, and produce disgust for the taste of spirits.

A practitioner of wide experience says: "I have used Lambert's *Lithiated Hydrangea* on various persons affected with diverse and painful manifestations of chronic rheumatism, gout, lithiasis-urica, nephritic calculus, and functional disturbances of the renal system, with excellent results, and I consider it a valuable remedy for normalizing the renal function, for promoting the active elimination of uric acid, and to calm the congestive conditions of the kidneys and of the urinary mucous membrane."

*Listerine* is a standard antiseptic prepared by the same firm, and is of marked value in various affections of the mouth and stomach.

“Plymouth, N. H., May 1, '95.

“I find *Pond's Extract* a very different thing from what is sold by the average druggist hereabouts — about as much alike as Hyperion to a satyr. *Pond's Extract* is *all you claim for it*. I consider it one of the most valuable remedies for a great variety of ailments we mortals are subject to, and should hardly know how to get along without it in my home, and consider it one of the greatest boons in all the materia medica. I have used it more or less for many years in my practice, and shall continue to do so as long as I can get money enough to buy the *true article*, for I *must* have it by me as long as I live.

C. K. Keeley, M.D.”

*Haematherapy* is the new application of a very old principle of using blood as a great natural remedy for disease. New researches proves that many diseases are due to toxic process, and low powers of resistances in the blood cells. To introduce fresh blood cells from without is to directly remedy this evil. In the poisoning from alcohol, the leucocytes of the blood are especially crippled, and their power of resistance lessened. The first indication is to restore this last power if possible, and *Borinine* is prepared to meet this exact want. This is composed of beef blood, treated so that decomposition cannot take place; then made palatable by the addition of other tonic drugs. In the treatment of inebriety *Borinine* is found to be of striking value in giving a certain vigor and power to the system to overcome the toxine of alcohol, and also build up a certain vigor of blood and tissue, to destroy the desire to take spirits. In some cases *Borinine* produces a repulsion for spirits and all disposition to use it. In all cases where spirits are withdrawn, this remedy is of great excellence and marked effect. In all cases it can be used with the most satisfactory results in all these cases.

We have used *Vino-Kolafra* as a substitute for spirits in many cases with the best results. That is, to lessen the shock from the sudden withdrawal of large quantities of spirits. In some cases this is a psychical fear which cannot be overcome, and the gradual withdrawal of spirits is not satisfactory. The use of *Kolafra* is more effectual, and can be abandoned far more easily than spirits. The kola without the wine is a most excellent remedy in all cases of nerve exhaustion following from alcohol. Combined with wine its value is particularly marked in the cure and relief of the distressing neuralgias which follow from alcohol.











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