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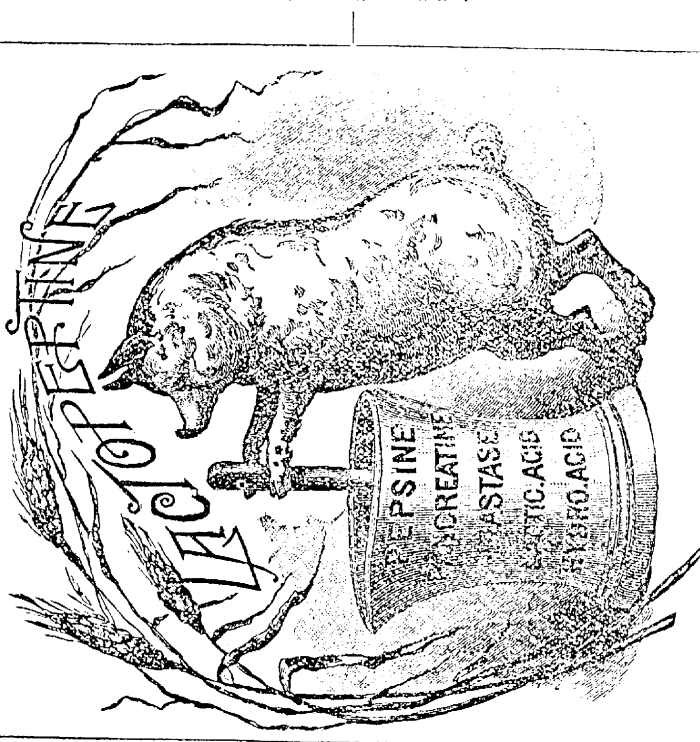
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clear that a general capacity to endure, and a patient resignation to things as they are, must be one of the most necessary qualities of millions of that stagnant, overcrowded country. A race without these qualities would never have solidified itself into the political and social condition of China, and remained in that condition for hundreds, or possibly thousands of years. The political heredity of a Chinaman must be so strong and definite that any other ideas than those of his ancestry must be utterly out of consonance with his mental habit. But even this cast-iron state of feeling from generation to generation cannot have utterly obliterated the spontaneity or the individualism of the *gens homo* in China. Is it a tenable hypothesis that the use of opium there is so prevalent and so keenly craved because it makes the quality of endurance more easy, while at the same time it creates an artificial and purely subjective state of mind in which unlimited scope is given to imaginary individual choice? It takes the Chinaman out of China, where no man has any choice to speak of, into a paradise where there are no mandarins, no struggles for existence under the most unfavorable conditions, and where there is unlimited scope to live. In Europe, and in the only conditions with which we have to do, the opium habit is rare, but it prevails sufficiently to make its study an important one from both the mental and the bodily points of view. Unfortunately, one man of genius has so glorified and idealized the mental effects of opium, as felt by himself, that we poor dryasdusts of science have no sort of chance of correcting and enlarging the picture he has made a part of English literature. He is what the English opium eater says:—

"O just, subtle, and all-conquering opium! that, to the hearts of rich and poor alike, for the wounds that will never heal, and for the pangs of grief that tempt the spirit to rebel, bringest an assuaging balm;—eloquent opium! that with thy potent rhetoric stealest away the purposes of wrath, pleadest effectually for relenting pity, and through one night's heavenly sleep callest back to the guilty man the

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DISEASED CRAVINGS AND PARALYZED CONTROL: DIPSOMANIA; MORPHINOMANIA; CHLORALISM; COCAINISM.

By T. S. CLOUSTON, M.D., F.R.C.P.E.

Physician-Superintendent, Royal Edinburgh Asylum for the Insane; Lecturer on Mental Diseases, Edinburgh University.

(Continued from page 245)

Morphinomania.—The habit of taking opium differs widely from dipsomania in this respect, that the one is an absolutely unnatural and artificially induced appetite, while the other often proceeds out of the ordinary habits and needs of mankind. They differ as a drug differs from a food. But they have this in common, that in nine out of ten cases only certain kinds and qualities of brain can acquire them. Ordinary mankind cannot, fortunately, become dipsomaniacs in the mass, and still fewer of them could take to opium in excess. The greatest tolerance of opium as well as the keenest craving for it seems to exist among the Chinese, in the form of smoking, of any people. We know little of the psychological upbait of the Chinese brain, or of the prevailing morbid hereditaries to which it is liable, but it seems

visions of his infancy, and hands washed pure from blood ; — O, just and righteous opium ! that to the chancery of dreams summonest, for the triumphs of despairing innocence, false witnesses ; and confoundest perjury ; and dost reverse the sentences of unrighteous judges ; — thou buildest upon the bosom of darkness, out of the fantastic imagery of the brain, cities and temples, beyond the art of Phidias and Praxiteles — beyond the splendors of Babylon and Hekatómpylos ; and, 'from the anarchy of dreaming sleep' callest into sunny light the faces of long-buried beauties, and the blessed household countenances, cleansed from the 'dishonors of the grave.' Thou only givest these gifts to man ; and thou hast the keys of Paradise, O just, subtle, and mighty opium !"

"That my pains had vanished, was now a trifle in my eyes ; this negative effect was swallowed up in the immensity of those positive effects which had opened before me, in the abyss of divine enjoyment thus suddenly revealed. Here was a panacea, a *capiteo vivente*, for all human woes ; here was the secret of happiness, about which philosophers had disputed for many ages, at once discovered ; happiness might now be bought for a penny, and carried in the waistcoat pocket ; portable ecstasies might be had corked up in a pint bottle ; and peace of mind could be sent down by the mail."

Here is his physiological and psychological analysis of the difference between the effects of opium and alcohol : —

"But crude opium, I affirm peremptorily, is incapable of producing any state of body at all resembling that which is produced by alcohol ; and not in *degree* only incapable, but even in *kind* ; it is not in the quantity of its effects merely, but in the quality, that it differs altogether. The pleasure given by wine is always rapidly mounting, and tending to a crisis, after which as rapidly it declines ; that from opium, when once generated, is stationary for eight or ten hours ; the first, to borrow a technical distinction from medicine, is a case of acute, the second of chronic, pleasure ; the one is a flickering flame, the other a steady and equable glow. But

the main distinction lies in this — that, whereas wine disorders the mental faculties, opium on the contrary (if taken in a proper manner), introduces amongst them the most exquisite order, legislation, and harmony. Wine robs a man of his self-possession ; opium sustains and reinforces it. Wine unsettles the judgment, and gives a preternatural brightness and a vivid exaltation to the contempts and the admirations, to the loves and the hatreds, of the drinker ; opium, on the contrary, communicates serenity and equipoise to all the faculties, active or passive, and, with respect to the temper and moral feelings in general, it gives simply that sort of vital warmth which is approved by the judgment, and which would probably always accompany a bodily constitution of primeval or antediluvian health. Thus, for instance, opium, like wine, gives an expansion to the heart and the benevolent affections ; but, then, with this remarkable difference, that in the sudden development of kind-heartedness which accompanies inebriation, there is always more or less of a maudlin and a transitory character, which exposes it to the contempt of the bystander."

No doubt De Quincey was thus idealizing the effects of his favorite but fatal drug. We cannot take what he says as a scientific description of even the effects of the drug on himself. His imagination was too strong for that, and his literary faculty exceeded his imaginative. Even the amount of sober fact that underlies all this brilliant picture only applies to the effects of opium on his own brain, and a few others of similar quality. It is utterly useless as a guide to the effects of opium on the brains of ordinary men. It has, no doubt, acted as the lure to entice thousands of people to their destruction, for De Quincey's account of the terrible effects of his drug is not read by one for ten that read his prose poem on its joys. And if they did there are too many minds who ignore the hell that is to follow for the bliss of pleasures near at hand.

No general rule can be laid down as to the psychological effects of the exciting stage of opium, because they differ

so greatly in different persons, but the following symptoms are very general: The higher and finer sense of duty is soon impaired; volition is diminished by even one dose while it remains in the blood; the desire for active muscular exercise, or, indeed, for active energizing of any sort, is much lessened. The appetite for food and the sexual desires are lessened. The intellectual processes are in some cases heightened in intensity; but trains of thought arise more by suggestion, continue more automatically, and are less under control altogether. The imagination is dulled in some cases, but when excited, is no doubt greatly exalted. The feelings are also dulled in some cases, but pleasurably intensified to an extraordinary degree in others. Take De Quincey's description and modify every statement about five-fold, and probably one would get a general idea of the actual effect of opium on ordinary brains. Looked at broadly, opium in single doses or temporarily taken diminishes the intensity of the faculties that lead to action or inhibition, and intensifies those that lead toward a subjective and introspective life. I need not here enter on the physiological effect or the therapeutic uses of the drug.

When taken in excess continuously for very long periods the mental effects are much more marked and the brain damage greater and more permanent than corresponding excesses in the use of alcohol. Intensify and exaggerate the effects of single doses ten-fold, and we get a general idea of the effects of continuous use. In bad cases one may describe the volition, the resistiveness, and the power of attention to objective things, as being paralyzed. One effect is very marked and has not been sufficiently dwelt on, and that is the social condition it produces. The real opium-eater is always a recluse; he shuns his fellows; he lives in the dark; he shirks social engagements; he has lost the sense of comradeship; and he avoids the duties of natural affection because he does not feel its ties. His own too subjective world is all he wants to live in. He is melancholic after the immediate effects of the drug have passed

off. He rejects all the adjuncts and supports of social life, — orderliness, cleanliness, the appearance of his person and his clothes. He prefers to be among a class of society less moral, less educated, less refined, and less evolved generally than that in which he was born. He gets into that state which would at once disintegrate society, and reduce it to barbarism, if not to extinction, were it to become general.

The bodily symptoms and accompaniments of this mental change are well marked. He loses appetite for food, and often has nausea. His relish for exercise is gone; he lies in bed all day. He loses flesh, and looks gray and anæmic. The patient does not sleep well or soundly. The eye is lusterless after the immediate effects have gone, and he cannot look you in the face. Cold is felt intensely; no amount of clothing can keep him warm. The pupils take on a sort of permanent contraction. The tongue is tremulous, like that of a heavy tobacco smoker, or drunkard, or a general paralytic. The hands are often tremulous, and the handwriting altered. The pulse is usually small. The sexual appetite is paralyzed.

But then, is it not the case that many persons take opium habitually for the greater part of their lives, and yet remain strong and healthy, and do good work, often even highly original work? This is undoubtedly so in a few cases; and Christison's remark about persons being opium eaters for years without its being found out by relatives or friends, is certainly true. I lately saw a case where for fifteen years a lady had taken over 19 grains of opium a day, and it had never been suspected by her husband or nearest friends. Still more strange, she had been a typical opium eater at one time, had "been cured" by residence in an asylum, and had, after getting home, begun the regulated use I have described, which she never seems to have exceeded except on Sundays, when she usually said she was not well, and stayed in her room. But such are but the exceptions that prove the rule, for they are the few cases in which the dose is not increased, and does not lose its

effect. These exceptions are usually strong men who go up to a certain point and stop there, just as many men take a large daily quantity of alcohol, some of them going drunk to bed every night of their lives, and yet keep healthy, live long, do good work, and die "natural deaths."

One of the most characteristic facts of the morphia habit is that the dose which this month produced full effects will next month cease to do so, and must be increased, until enormous quantities of the drug have to be taken daily, — quantities enough to poison those not habituated to the drug ten times over. We all know De Quincey's habit of drinking laudanum in sherry glasses just as we drink wine.

The morbid craving for alcohol may be intense, and the power of inhibition entirely paralyzed, but neither the one nor the other can compare with the imperativeness of the morphine craving and the utter lack of any rudimentary trace of inhibition over it.

A morphinomaniac, in an advanced stage of his complaint, is a most miserable object in mind and body. He is manifestly diseased in all his nervous and most of his other functions. There is just one other being on earth who is more miserable-looking and more miserable, and that is the morphinomaniac who is being cured by enforced abstinence. The one is alive; the other is more than half dead. As we shall see, the fight is not altogether for the cure of the deadly habit, but in the first instance to enable the patient to live through the cure.

The following case is a typical one of morphinomania:—
A. B., studying for a profession, had, about the age of 20, an illness which left him weak and sleepless. He was distinctly of a nervous diathesis. He had to go in for examinations, and a friend told him that opium was a good thing to take to steady his nerves and to make him sleep, which was his weak point. He tried it, and found its effects delightful, and just what he wanted. He fully intended to stop it when he got strong, and after he got through his next examination. But he got more and more dependent on it, and the giving it up

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seemed ever harder, and it also seemed unnecessary, for he felt well, ate well, studied, enjoyed himself, and thought the morphia just supplemented his food. He easily persuaded himself that his "constitution needed it," though he always had an uneasy feeling in his mind that it was a dangerous "food" he was getting himself accustomed to, and that its effect might, in the long run, be bad instead of good. Of course it was easy to stifle this feeling by resolving that he would give it up the moment he began to feel the slightest bad effect. By the time he had taken it in moderate doses for a year or two he found that the dose, to be efficient, must be much larger than it had been. He entered his profession, and found that his power of facing up the future, of looking and planning, and resolving on any course, was weakened. He was alarmed, and again tried hard to give up his habit, but could not face the pain it caused whenever he tried it. He lost touch with his friends and relatives and went "to study" in a foreign capital, thinking or fancying that a "complete change" would help him. But the habit grew stronger when there was no one but strangers about him, and settled into a part of his life. He had rheumatic arthritis, and morphia was prescribed for this, which strengthened the habit still more, for he needed large doses; and from that time he knew he was doomed. He again made an attempt to give it up, but could not do so. For about ten years he stayed abroad "studying," now reading a little, going solitarily to theaters and the opera, which he thoroughly enjoyed, like De Quincey, after his dose. He settled down to 10 grains of muriate of morphia a day, taking this usually in one dose in the morning, taking no breakfast, but eating a good late dinner. He was not social, and walked out much at night in bye-ways. He thinks his reason for this was that he knew he was a slave to the habit, and felt degraded and ashamed. It is certain he never wrote to his friends except for money, that he led the life of a morbid recluse, that he did no work, and that he got to be worse and worse in body. When he returned to this country he

was a "broken-down" looking man, older than his age, his complexion gray, his eyes changed in expression, his habits morbid and peculiar, and his capacity for work or continuous thinking or living like other men gone. After some years of this life, and when weak-looking and decrepit, his mind being so weakened that he had delusions of suspicion, being untidy and uncleanly, his social habits so sunk that he would see no relative, living in a lower social stratum, his friends, partly by persuasion and partly by the stern argument of cutting off the supplies of money and morphia, got him to place himself in an asylum voluntarily. On admission, after these twenty-five years of morphia habit, he was a miserable looking object. He stooped; his gait was weak; he could not look you in the face; his complexion was gray; his eyes blood-shot; his body emaciated; his pulse 90, bounding and soft; his temperature 100.4°. His tongue had a large black triangle occupying nearly its whole dorsum, and was excessively tremulous. He had gastric catarrh, and his hand was violently tremulous, as well as his whole body, when he made the least motion. Heard music "as if playing in his ears." Mentally, he presented a mixture of depression, enfeeblement, fear, irritability, and suspicion. He could not think; he could not reason: his whole attention was concentrated on himself and his bad feelings. He was treated with beef-tea and brandy, but the beef-tea caused diarrhoea, and had to be stopped. He could retain milk, liquid custards, and brandy better than anything else. His heart's action got very weak, and digitalis seemed to strengthen it. No morphia was given, but chloral and a little bromide were used—I should now give paraldehyde or sulphonal—to produce sleep. For a week he was "horribly depressed" and debilitated, and his life was certainly in danger. He had a constant burning pain in stomach and bowels, most difficult to bear and dreadfully wearing. He slept restlessly, and awoke with a "rigor of horrors." In a week the temperature was normal, and in a fortnight he had got over all the worst symptoms. He had periodic attacks of irritability

of stomach for a year. He has never got over his long morphia habit mentally—not that he has any craving for the drug—but all the intensity is out of his brain in thought, feeling, and volition. He is hypochondriacal, childishly irritable, and suspicious, unsocial, consciously unfit to face the world, quite unable to do any sort of real work, and never has any feeling of organic satisfaction. He is asexual, and prefers still to walk out in the dusk along solitary roads rather than in public places. In fact, his brain is irrevocably damaged in all its higher functions by its twenty-five years continuous intoxication by opium.

Before commenting on this case I shall relate two others.

C. D. had been a laboring man, and had regularly taken laudanum for twenty years before his admission at 49 to the asylum as a certified patient. For many years his daily allowance had been 6 oz. of laudanum, that is, about 200 grains of opium. He is described as having been "delusional" for three years before admission. Ten years ago he had a "fit" with unconsciousness, and another similar "fit" three days before admission. After it he had been unconscious for an hour. His face had been drawn to left side, and both limbs had been convulsed. He had been "excited" three years ago after a fit. For three months back his wife had noticed his speech to be tremulous. His delusions before admission were grandiose. He had an excess of *bien être*. He had "gold watches" under his bed, was to get a "lot of money," and had exaggerated notions of his bodily powers. On admission he was fairly contented, and said the house belonged to him. His memory was almost gone; he was mentally enfeebled generally. His articulation was tremulous and thick. He gave the impression of being a general paralytic, and one asked: "Is this a case where continuous and excessive use of opium has produced general paralysis, as excessive drinking seems to do sometimes?" He had been in the Infirmary for a few days, and the worst part of the "cure" was over. His tongue was tremulous; his temperature 98.6° at first, but it rose in a week to 102°.

This elevated temperature in advanced morphinism has scarcely been noticed, but is very significant of the deep-seated cortical mischief that is present. For a long time after admission C. D. had, when asleep, a peculiar, irregular breathing, suggesting Cheyne-Stokes breathing, with a slight rhythmical movement of the right arm at a certain point of the inspirations. He never asked for opium, soon picked up in strength, and took his food well, and now remains a healthy, facile, forgetful, partial dement, resembling much the ordinary cases of alcoholic amnesia with general mental damage, plus more speech damage. In both cases the higher strata of brain centers, where volition and craving lie, seem gone. The self-control is also gone, but there are no active brain processes or troublesome cravings to inhibit. He has now remained three years in that state.

I shall now relate a third case, which perhaps should have come first, because the morphia habit was of much shorter duration. It was chiefly used hypodermically, and evidently much less permanent damage was done.

F. G., aged 19, no neurotic heredity admitted, of "self-indulgent" habits, once had a fall, and sustained injury to one hip, which became ankylosed and had to be "broken up." Abscesses formed, and he suffered great pain. For this hypodermic injections of morphia were ordered. This first occurred about five years before his voluntary admission into the asylum for morphinomania. The habit grew on him, so that "it had become a craving, completely demoralizing him." He committed offenses against the law to get money with which to buy morphia, for which he was punished. He has been sleepless except when under the influence of morphia. He was lazy, "self-indulgent," and without any traces of moral feeling or natural affection. He used "immense quantities" of morphia subcutaneously, and took by the mouth as much laudanum and nuphar as he could get. On several occasions he has taken an average of 300 grains, equal to 100 grains of opium.

On admission he was much depressed and nervous, sleep-

less and exhausted. He had no delusions. He was fairly nourished. The tongue was moist, flabby, and furred. The whole of his thighs and groins were discolored from hypodermic injections and the abscesses they had caused. His pulse was 96, of fair strength, and his temperature 98.5°. His weight was 8 stone 7 lbs. The process of cure consisted of stopping the morphia at once and keeping up his strength by special nourishment. He improved rapidly, and in a fortnight he had got over all the worst symptoms. By that time he was sleeping well. He took to heavy smoking, which I allowed. In five months he was discharged recovered, and, I believe, did not at once take to morphia again. He was not a youth with much power of inhibition naturally.

Those cases show — what all who have had experience agree on — that opium establishes a far more dominant habit than even alcohol, and, in fact, cannot be cured by any self-effort after it has been established long, and that its mental effects are more certainly and distinctly an insanity than those of alcohol. This proves that there has been a great disintegration of the highest mental quality, viz., that of volition. The same thing is shown in the constancy of the habit. Periodic dipsomania, with intervals of self-control and a morbid craving, is common; but no such cases of periodic morphinomania are on record. Once established, there is no diminution or cessation of the craving for a day. A dipsomaniac may do some work at times; a typical opium eater never after it is fairly established. As is well known, opium affects the trophic energy of the brain even more than alcohol. There is more loss of flesh and far more gastric disturbance. It is often said that the visible pathological damage to the brain and its membranes is more seen from a long-continued and excessive use of alcohol than of opium. I am not in a position to speak dogmatically on this point, but C. D.'s case does not point that way. If the membranes are less damaged, assuredly the cortex is more so, whether our means of investigation enable us to prove this under the microscope or not. A damaged function implies a damaged

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organ, and the cases of A. D. and C. B. prove both. The sort of damage to the motor functions of the cortex implied in C. D.'s convulsions and impaired articulation has not been much referred to by authors on the subject. It is common for an alcoholic case to simulate general paralysis in its grandiose delusions, its convulsions, its tremulous speech; but this has seldom been recorded of opium before. Such extreme cases enable us to estimate the damaging effect of the lesser doses taken for shorter times.

The modern habit of the hypodermic use of morphia is more subtle and dominant than even its use by the mouth. The effects are more instant, and the stomach and gastric mucous membranes seem to suffer somewhat less. I lately saw a lady about 30, who had arduous professional work to do, and had, a year or two ago, an accident which left her subject to severe neuralgic pains. To enable her to subdue this, and so to do her work, she had prescribed for her the hypodermic use of morphia. This had the effect desired, but it had to be continued, and within a year a habit was established, and a craving that was masterful and required a very strong exercise of will to subdue it was set up. All fatigue, all pain, and every state of body that implied nerve exhaustion, abnormal nervous depression, irritability, instability, or hyperæsthesia, suggested and seemed to demand morphia as a remedy and a calmative. This was unfortunately yielded to, and the more the remedy was used the more regular grew the occasion for its use. Intellectually she most fully realized the danger she was in, but she had not the courage to stop the drug at once and for ever. She was only taking about two grains a day, but the taking even this, or the leaving it off, meant all the difference between happiness and intense misery. I counselled an absolute and immediate stoppage of the drug, the placing herself with a companion on board ship on a long voyage, or a visit to Sutherlandshire, ten miles from a druggist, with the pure fresh air, no intellectual work, and no avoidable worry, taking some tonic and wine for a fortnight as a temporary sedative to the brain.

I have reason to think that my advice was taken, and was successful. The case impressed me more than any case I ever saw with the subtle psychology that lies in the use of pain-destroying drugs. I never felt before so keenly the responsibility that ever lies on him who prescribes them. I never asked the question with more sadness, "Are there not worse things than pain?" for to deaden pain in this case had been to nearly wreck a life. There was no nervous heredity, no natural infirmity of will, and no lack of high moral qualities in this case. A finer all round specimen of womanhood of the nineteenth century, intellectual and forceful type, it would have been difficult to find; and here she was almost helpless in the grasp of a craving that would certainly ruin all her high mental qualities if it were long gratified.

As to morphinomania, the following is a summary of what I have said:

1. The habitual use of opium is in nine cases out of ten most injurious to the higher mental powers, and more especially impairs the volition.
2. The dose has to be steadily increased till such an amount is taken as tends to impair nutrition and the trophic energy of the brain, to disturb the appetite and the whole alimentary system, and ultimately to destroy the power of natural sleep.
3. The craving set up by such excessive use of opium is one of the most persistent, intense, and difficult to resist of any known morbid cravings. It has no remission or periodicity in it.
4. The nervous constitution of the patient has very much to do with the inception of the habit. It may be said generally that persons of the nervous diathesis, of nervous or insane or drinkers' heredity, all persons who feel and dread pain excessively, and most "excitable" persons, are specially liable to acquire the craving.
5. Given or taken for insomnia or to relieve pain, is the origin of most cases of morphinomania.
6. It behooves medical men to take the constitution of

times severe, occurs in many cases; the bowels are not as a rule constipated; dyspnoea, upon slight exertion, is, in the absence of pulmonary, cardiac, or renal trouble, of diagnostic importance. The circulation is, as a rule, feeble; disorders of the skin persistent or easily provoked; conjunctivitis; disorders a tendency to hæmorrhages to mucous surfaces, also occur. When, with these symptoms, irregularly grouped as they are apt to be, we find a tendency to recurring attacks of cerebral congestion, persistent or frequently recurring attacks of cerebral the evidences of sub-acute peripheral neuritis, the abuse of chloral may be suspected. The pains in the limbs are almost characteristic; they are acute and persistent, neuralgic in character, but not localized to special nerve tracts; they are more common in the legs than in the arms, and occupy by preference the calves of the legs and the flexor muscles between the elbows and wrists; they do not implicate the joints, are not aggravated to any great extent by treatment, and are often temporarily relieved by gentle friction. The pains of chloralism have been described as though produced by encircling bands above the wrists and ankles. The suspicion of addiction to chloral becomes as though produced there be a history of prolonged, painful illness, or prolonged insomnia in the past. The suspicion is confirmed if we remember at the same time perversion of the moral nature, enfeeblement of the wits and of the intellectual forces." Chloral differs from the other drugs, the craving for which we are considering, and from alcohol, in this essentially, that its effect is not stimulant in any dose, small or large, but simply and only sedative and hypnotic. It creates no ideal state of mind, it simply produces self-forgetfulness and sleep. A craving for it, or a habit of it, is therefore a strange and altogether abnormal thing. Why any human being should crave a drug, whose taste is disagreeable, to produce sleep in excess of the normal time, is entirely inexplicable on any hypothesis except that which attributes an essential affinity between the brain and nervous action, not only to alcohol, but to all the class of stimulant, sedative, and hypnotic drugs.

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each individual patient carefully into consideration before opium is prescribed, and to ask, "Is there any danger of a habit being set up?"

7. As to the treatment of morphinomania. I have little hesitation in laying down its principles: Help from without in the shape of skilled nursing; control and never remitting companionship are needed in almost all cases. It is better and safer to undergo the short Hades of absolute stoppage than the more prolonged purgatory of tapering off. While this is being gone through, use the bromides, wines, every form of beef and peptonoids that the stomach or the rectum will retain; bismuth, ice, and counter irritation for the gastric pain and vomiting; digitalis and strophanthus for the weak and irregular heart's action. I should now use paraldehyde or sulphonal to get some sleep for a few nights, but I should not go on for long with them. If there is emaciation I should try Dr. Playfair's recommendation of massage, though I suspect some of the good effect in his cases resulted from the control of the massage nurses, and the taking up of the patient's mind by the details of the process, and the assertions that would be dogmatically dinned into their ears as to its unfailling efficacy. The great things to aim at are good nerve tone, firm muscles, a brown sunburnt skin, steady occupation, as much fat as can be put on, a sound moral sense all round, strengthened inhibition, and a dominating conviction that the drug is poison in any dose, and under any possible circumstances whatever.

Chloralism.—Chloralism for a time threatened to become a rife craving, but chloral is becoming less liked and used than it was at one time, and I believe will be numbered largely with the superseded drugs. Dr. Wilson of Philadelphia thus describes the symptoms produced by chloral used continuously: "There is general and often serious derangement of health without adequate assignable cause; the appetite is poor and capricious, the usual imperfect and slowly performed; jaundice of variable intensity, often slight, some-

The following was a marked case of chloralism ending in insanity:

L. M., aged 47. Father had died of kidney disease at an advanced age; mother "nervous," and died of paralysis; two sisters are neurotic and eccentric; a brother is a confirmed dipsomaniac. Patient had been teetotal for ten years. About seven years before admission into the asylum he had been ordered a mixture of chloral and bromide to relieve a spasmodic retention of urine. He gradually got into a habit of taking a drachm of each of these drugs daily. This continued for six years with no "apparent" bad effects. The patient was, however, aware that a craving had been thus roused which he could not at will control. The sedative effect was craved apart from the medicinal action, the necessity for which had ceased. At the end of the six years he took an attack of bronchitis, and was ordered, he says, this time chloral in 60-grain doses for the breathlessness. The bronchitis was soon recovered from, but the chloral was continued on account of its lethelike qualities; for he was depressed, and had business worries, and sought oblivion in the effects of the drug. He soon began to take 180 grains a day regularly. While this stupefied him greatly, he was able for four years to attend to business in a way. He carried the bottle of chloral solution in his pocket, and took some every hour. It produced a feeling of quiet for an hour. He took only a dose of 10 grains at a time during the day, and a larger one at night to produce actual sleep. If he awoke he took another dose. During the day sleep was not induced, but a soothed feeling, and a dreamy sense of comfort and *bien être*, which drowned his cares. The general effect seemed to be like the sedative effect of opium. He had no actual depression as the result of the drug, but a feeling of lassitude, nervous debility, and exhaustion, inaptitude for work, and incapacity for thought, as the effect of each dose passed off. He got more irritable as time went on, and for all his bad feelings did not miss his pipe-smoke. His digestion got weak, his appetite poor; his food lost its relish,

and he took an insufficient quantity of it. Nausea, sour eructations, and vomiting, and a furred tongue, showed how deeply his alimentary organs and their innervations were affected, as well as the fact that he was constipated, had piles, and the feces were hard and white. Slight jaundice showed that the liver was also affected. By-and-by a moral and affective change took place in him. His character became untruthful and deceitful, and his love for his wife and children changed to dislike and suspicion. He was at times so passionate that he threatened violence to his wife. He would leave the house and wander aimlessly about the streets. He neglected his duty and his business.

Three weeks before admission he stopped the chloral and took to whisky in quantities sufficient to keep himself muddled, but not drunk. In a day or two after beginning the whisky, he had diarrhoea and a great discharge of blood from the bowels. In a few days he became violent and suicidal. Then he got into a condition which resembled delirium tremens, with hallucinations of hearing and sight of a frightful kind. He could not sleep. The next stage was convulsions of a severe kind occurring thrice at intervals of four hours. Then there followed stupor, and then raving delirium, for which he was at first sent to the Hospital, and thence to the Asylum.

On admission he looked old, broken down, anæmic, unable to speak aloud, or to walk. Mentally he was enfeebled, and also slightly depressed. His power of attention was gone, and his memory also. Had vague, fleeting delusions, such as, that the Queen took an interest in him. There was persistent muscular tremor, and none of the finer acts of co-ordination, such as writing, or whistling, or articulating difficult words, could be done at all. The pupils were equal, dilated, irregular at margins, and insensible to light. The right side of the face was paralyzed, the spinal reflexes were dulled, and sensation was hyperæsthetic, but he had no pain of any sort. Bowels were constipated, faces hard and white, tongue white and coated. Temperature was 97°.

The patient had the most intense craving for soporifics, but none were given him. After a few nights of insomnia he slept. He got strychnine, tonics, and gentle aperients; exercise in the fresh air, and constant supervision, and was subjected to a regular regime. He gained in flesh and appearance very fast, and was quite well in three months.

The alcohol he had taken for a fortnight coming on the back of the long-continued use of chloral, may have accentuated and complicated the symptoms of the chloralism to some extent, but there can be no doubt that the chief symptoms present were those resulting from the use of chloral. It is clear that it sets up a diseased craving like morphia and alcohol, and that the power of controlling this is also paralyzed by the drug. The symptoms present are alimentary as well as nervous—more so than in the case of alcohol, opium, or cocaine. The way in which the symptoms of a ten years' abuse of the drug were recovered from in three months shows clearly that chloral is far less permanently hurtful to the nervous centers than alcohol or opium. The wonder to me is that it had not weakened his heart's action more, and so killed him.

Cocainism.—The newest born of all the drug cravings is that for cocaine. It required two of the latest discoveries of science—the hypodermic needle and the extraction of cocaine from the coca-leaf—combined, to create this new vice-disease. So far as I have seen or heard of, cocaine is now always hypodermically taken to get its intoxicating effects. But, historically, its use as a narcotic intoxicant is as old as that of distilled alcohol, for the Spaniards found its virtues held in high esteem by the Peruvians in the fifteenth century. The plant was reserved for the use of the Incas, the coca plantations being owned by the State. The habit, when formed, reduced its victim to a pitiable condition. Its first effect is to weaken digestion. To loss of appetite succeeds an inordinate desire for animal food. Then dropsical swellings and boils come out; the breath is fetid,

the lips pale, and the teeth are discolored; the eyes are dim and sunken, and the skin becomes of a yellow tinge." It was thought to be strength-giving and fatigue-resisting, neither hunger nor thirst being felt while it is being chewed.

This is not the place to describe the physiological effects of single doses, so I shall proceed to relate two cases of excessive and continuous use.

N. O., a young professional man of intellectual attainments far above the average, and of very industrious habits. He was of the nervous diathesis; there was a strong heredity toward mental disease and paralysis, and some history of phthisis also. He took to the use of cocaine eighteen months before I made his acquaintance, using it at first sparingly for its stimulant effect to enable him to do his work. He was in weak health, and had some of the preliminary symptoms of phthisis, being thin, and run down nervously. He says that it did not, like opium, excite brilliant fancies or produce a conscious excitement. He at first gained in flesh under its use, and did his work well; but he had rapidly to increase the dose to get the same effects. Beginning with half a grain, he soon had to take more and more at each hypodermic injection, till in six months he was using forty-five grains at least a day, and probably much more. From what I could make out, he often took injections of ten grains at a time. Rapid mental and moral deterioration followed after three months' abuse of the drug to this extent. He got dirty in his personal habits, eccentric, neglectful of duty, prevaricating when excuses for his conduct had to be made, and very sleepless, often sitting up all night. The next stage in his downward course was that of actual insanity, whose symptoms were hallucinations of vision and loss of memory. He imagined that people talked about him in the streets, and accused him of crimes. He was impulsive, and could scarcely restrain himself from assaulting his imaginary tormentors, with whom he remonstrated on the street. His memory was at times greatly impaired. He had no power to do any work; he did strange, motiveless acts. Throughout all this there was

a half-consciousness that his brain was acting morbidly, and that his false beliefs might be delusions.

When I saw him first he was considerably excited; his memory was fairly good; he was quite coherent, and spoke of his "delusions" freely, as only half believed in. He was pale, his skin muddy, his pupils widely dilated, his nutrition and muscularity fair. He was utterly dirty and untidy—how all the manias take the outward polish off a gentleman! His pulse was good and regular, and was for a time 98. His trunk and limbs were scarred with the hypodermic needle. I gave him within the first forty-eight hours of treatment two hypodermic injections of cocaine of 1 grain each, and then stopped it entirely, giving him liquid food, wine, and plenty of strong tea and coffee, which he found a sort of substitute for the cocaine. He was miserably, and begged for the drug for about a week, but in that time he had got over the effects of stopping its use. He was then sleeping well, eating well, and walking out in the open air a great deal. He became cheerful, and seemed to acquiesce in the necessary restrictions on his liberty implied in the treatment. But it is certain that he could no more of his own accord have carried out that treatment than he could have gone to the moon. Mentally, he showed to a large extent the dipsomaniac's condition. He was plausible, full of promises, cocksure of not again taking to the drug, and suave toward those who had the control of him to a suspicious degree. But the strength of his resolution and the intensity of his craving were soon tested by his taking secretly to his old habit on the first opportunity he had. Every kind of excuse and evasion was practiced. He showed that his moral control was utterly weakened, though his physical health was excellent, and he gained two stone in weight in a month. It was quite clear that to give any such case a proper chance of cure the law should allow him to be detained under supervision and enforced abstinence from the drug for a year after every symptom of intellectual disturbance had passed away. To gauge the strength of

Dr. T. S. Clouston on

the craving and the power of the control is simply impossible. One can only apply a rough, common sense rule regard to the time the highest brain functions are likely to take to recover their normal working, and then the only test has to come, viz., the actual enjoyment of full liberty of action as an ordinary member of society.

The next case in all its essential features was like the last, but longer and more aggravated. P. R., also a young professional man, cheerful, fair, industrious, and steady. Heredity towards paralysis and phthisis on mother's side. Three and a half years before saw him he had begun to take morphia hypodermically for the relief of pain, and continued this more or less, not apparently continuously, till two years ago, when he began to use cocaine to cure the morphinomania which he felt was mastering him. The cure soon was worse than the disease, for he continued the use of cocaine regularly. The result of each dose was at first exhilaration, followed by depression, which for its remedy needed another dose. The morphia habit had caused moral deterioration, but the cocaine habit accentuated this tenfold. Want of system, actual disorder, irregular habits generally, want of attention to ordinary family and social duties, and untruthful excuses, all followed each other rapidly within three months of beginning the cocaine habit. At the end of that time his mental disintegration proceeded deeper, and delusions of suspicion developed themselves, accompanied by hallucinations of sight and hearing. He lost the sense of time, and had not the rudiments of punctuality, even as to important matters. His weakened volition especially showed itself in procrastination, and his weakened control in extreme irritability. His next delusion was clearly suggested by the paræsthesia caused by the drug. He imagined he had a skin disease. He affirmed he felt sensations in the skin that could only be caused by living germs. He used medical means to cure the imaginary skin trouble. He often mixed the cocaine with morphia, and has lately taken ninety grains of cocaine

of the craving for cocaine is perhaps greater than for any other narcotic or stimulant whatsoever.

There are cases now on record where the drug, from being used in the most legitimate way as an external application to subdue the pains caused by skin eruptions and sores, has set up a craving for its continuous use, and for its effects on the higher brain functions quite apart from the analgesic effect for which it was employed.

The chief facts about cocaine in relation to cocaineism may be thus summarized:—

1. It is the acutest and the most absolute destroyer of inhibition and of the moral sense generally that we yet know.
2. The morbid craving is very intense and control is absent.
3. The dose requires to be increased faster than that of any such drug to get the same effect.
4. The delirium and hallucinations of all the senses of single doses become chronic in cocaineism.
5. Its immediate effects are more transient than any such other drug, but this does not apply to the craving set up.
6. The treatment of cocaineism consists in outside control of the patient, in stopping the drug at once, in careful watching—I should not trust a patient under treatment as regards suicide for the first week—nursing, the use of every sort of food that will keep up the strength, and of the bromide of ammonium, brandy or wine, tea and coffee, and possibly a hypnotic, like paraldehyde or sulphonal, for two or three nights at least.

7. A patient suffering from cocaineism can be usually certified as insane so far as the presence of delusions are concerned, but he gets over these so soon, and yet is so far from the real cure, that certification and sending to an asylum is not a satisfactory process altogether. We need cocaineism included in any special legislation for dipsomania.

A physician in practice meets with many cases in which

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and twenty grains of morphia each day, so far as can be ascertained. His irritability, his utter disregard of family duties, his untruthfulness, his sacrifice of everything and anything to get cocaine, his passing as an abused man when efforts had been made to restrain him, had gone the lengths of insanity. His utter want of system is best illustrated by the fact, that for two years before I saw him he had never sat down to a regular meal.

When I first saw him he was anemic, weak, and covered with sores from the use of the needle. He had at last been driven, more apparently by coming to the end of his money than by more cocaine, to place himself under care. Mentally and morally he was broken down, retaining enough of obstinacy, unreason, and discontent, to be a most troublesome and disagreeable patient. I gave him a few small hypodermic injections of cocaine for the first forty-eight hours, and then gave a little morphia, some sulphonal, bromide of ammonium, brandy, tea and coffee. He complained of all sorts of pains, evidently to get morphia or cocaine. He was restless, fretful, irritable, and during the night almost maniacal. He was, as he said, "in hell" during the night. He improved much in a fortnight, and then a change of residence was tried, still under control, and he got over all the symptoms of his disease in a few months. The last accounts I had of him were good.

Looking at cocaineism generally, and comparing the effects of cocaine on the higher functions of the brain with those of alcohol, opium, or chloral, one sees that they are more distinctly in the direction of intellectual perversion, technical insanity, in fact, while they last, but that they are less enduringly hurtful and sooner recovered from than any of the other three drugs, except perhaps chloral. Hallucinations of sight and hearing, paræsthesia, especially of the skin, and insane suspicions, are not so frequent accompaniments of cocaineism. The moral disturbance of a man seems to be the same in all those diseases, but the present intensity

there are neither cravings for drink, for morphia, for chloral, nor for cocaine, but yet where morbid and hurtful cravings exist the same as those in their essential nature, but with different objects. Accompanying such cravings, and evidently the results of the same morbid brain condition, we find the paralyzed inhibition that existed in the "diseases" I have shortly described in the former articles. As I endeavored to point out in the first of these articles, we must not look on any of these "manias" as a distinct disease by itself, but rather as an accidental variety of the same great class of *inhibitory neuroses*. Whether a patient is a dipsomaniac or a morphinomaniac may be the mere accident of whether he had been exposed to the temptation to drink in youth, or had had morphia administered to him for sleeplessness or pain. I am quite sure I have seen very many patients who would have become either dipsomaniacs or morphinomaniacs, and I have seen many who, at different times of their career, had been both, or were subject to a vague but overmastering morbid craving, which either drink or morphia satisfied, and they took the one that was handy at the time. We saw that the chloral-ist L. M. (p. 321) took to whisky for a short time before his final breakdown, and that the cocaine-ist P. R. (p. 326) took morphia, as well as cocaine. Nothing, in fact, is more common than for mixed cravings to exist, and few patients laboring under any of these "manias" will not, when the supply of their special drug is cut off, take to any of the others they can get at the time. All who have had to do with dipsomaniacs know that — falling whisky — chloroform, ether, turpentine, or anything else of that nature, is eagerly sought for and taken. I have heard of two cases where a paraldehyde craving was established, in spite of its bad taste and odor, as the result of its being given for insomnia; and I have now a lady-patient who, when run down in nerve, has, on various occasions, had cravings for wine, whisky, eau de Cologne, bromide of potassium, and chloral, all of which she has taken to excess, and now is developing a craving for the subphosphor which I give her in ten-grain doses for insomnia.

We must look beyond the intoxicants to the brain that craves intoxication. There are many other things that men crave besides the intoxicants mentioned, and they often crave them morbidly, and lose their power of inhibition over their desires. The fiercest conscious craving of higher animal life, after that for food — and not always after that — is the sexual natus in the male. This often enough becomes morbid in strength, and passes from under control, while it also becomes, in some cases, perverted in its object and formed in innumerable morbid ways. It would take a treatise to elucidate even a tithe of what we at present know of morbid reproductive craving and loss of sexual control. Apart from technical insanity, the physiological psychologist who tackles this unsavory but most interesting subject has a great work before him. To say that the normal subject has a craving has created a vast amount of a great literature and poetry, that it has founded sects, religious and irreligious, that it has been the occasion of fierce wars, and that it well nigh dominates humanity in its early ages, and that it well unstable subjects. No wonder that this craving becomes diseased in mania of adolescence with the drink craving, whose early bouts are often indulged in the brothel. Little wonder that it seeks objects and outlets quite apart from its legitimate object of reproducing the species. The gratification of this craving afforded by the promiscuous sexual intercourse of whom of recent years is Mr. Lecky, in a well-known passage of great eloquence and power. If we regard prostitution, not from the social point of view, but from that of inhibition and craving, I think we cannot but conclude that its effects are evil. It tempts where no temptation is needed; it excites cravings where they are strong enough already; it diminishes control where control is hard enough to practice. That surely breaks a law of nature which gratifies a physiological craving apart from the natural object of it. That which entirely parts sexual enjoyment and the reproduction

of the species cannot surely be defended on physiological principles. It is certain that the cases of complete loss of control over sexual desire, which are common enough, are frequently rendered uncontrollable through the brothel; though they occur, too, through evil heredity, through want of normal outlets for the social instincts, and through evil habits other than sexual. Many of them also show loss of control over the drink craving. There is no physician in city practice but knows dozens of them.

Masturbation is an evil practice, the craving for which becomes often enough uncontrollable. Its degraded subjects say they cannot resist it, that it paralyzes their volition, dominates their imagination, and often becomes a sort of automatic habit, performed only half consciously. It is almost always set up in or before adolescence; and I have times without number heard strong men of mature age, whose self-control was in no other respect impaired, deplore their weakness of will in giving way to this habit. It unquestionably has the frequent effect of lessening, or almost abolishing, the gratification from sexual intercourse, and diminishing the desire for it. In the early stages of many forms of insanity it is common enough for the married of both sexes to gratify the sexual nîsus by masturbation instead of intercourse. It affects, too, injuriously the whole of the social instincts, diminishes their pleasures, and sometimes perverts their objects. The following case is a very typical one, showing how volition is paralyzed by indulgence in this vice:

A. B. C., aged twenty, of a nervous disposition, small in size, and of the nervous diathesis, began to masturbate five years ago, but did his professional work, and passed his examination. He went to live in lodgings alone. He now thinks that if he had gone to board in a cheerful family he might have been enabled to lead a more natural life. As it was, he began all right, but found that each day's study muddled his brain, made him feel silly and intoxicated, and seemed to paralyze his volition and sense of duty, and he took to masturbation badly when he that exhausted con-

tion, sometimes without even having any very strong craving. If he went out in that state and met a bad companion he would go and get drunk and go with prostitutes, sometimes even without any sort of strong craving for drink women. When his brain got exhausted in its energy from any cause, his sexual desire or that for drink overcame him he having then no will of his own to resist either a desire from within or a temptation from without. When he was home for his holidays he only practiced masturbation twice in four months, and he otherwise lived a moral and natural life. He is now all the time depressed, unsocial, irresolute and quite unfit for intellectual work. His pulse is weak, his extremities cold, his pupils dilated; he is thin and his muscles flabby; he looks wanting in energy. I recommend his leaving town at once, and going to the country and living a farmer's life for a year, eating unstimulating diet working, walking, fishing, shooting, riding, and cultivating earnestly control in all forms and the sense of duty, always making a programme for his day's work and amusement, and carrying it out resolutely. He had tried local treatment bougie passing, etc., for the masturbation, with no avail whatever.

To treat of the loss of control and diseased sexual cravings, met with sometimes in cases who have taken to the crimes of sodomy, intercourse with children, and bestiality, is almost impossible even in a medical journal, that may come into the hands of lay readers. This is quite certain, that such perversions of the sexual nîsus exceed even masturbation in the utter wreck of control and in the brutal cravings they set up. There are well-authenticated cases on record, and I myself have met with several, in which there seemed to be a congenital perversion of the sexual desire and a congenital non-development of control over such perverted cravings, so that from the earliest sexual age, in one man, boys excited the sexual appetite instead of girls, and in another, young immature girls did so, while women of full maturity were positively repulsive, and her presence could

grace. After this state developed into insanity, one phase of his malady was to stand stock still for hours, never speaking. After this had passed off he would tell me that no power within or without him could at these times have stirred up his volition, and that he could have seen his dearest friend killed without having the power to move a muscle or speak a word to save him. Then the cravings and morbid impulses would get the upper hand, and he would drink to excess, or assault those near him, or break things, or do indecent or improper sexual acts without the smallest power of controlling his conduct. The case illustrates the clinical fact that insane inaction is commonly very near insane impulse, the one being the complement of the other.

The following case was one which illustrated the gradual loss of control in several directions without intellectual impairment; this loss of control being an aggravation of the patient's natural temperament, till the point was reached at which his conduct indicated disease, and medical means had to be taken for the patient's good and recovery:

T. U. V. had been a quick boy, and a very bright, witty, social, and vivacious youth. There seemed to be no mental disease in the family, but some eccentricity; and drunkenness had prevailed in the grandparents' generation. All the family were extraordinarily thin; they had no reserve capital in the shape of fat, even when well. He too had always been thin. His two marked peculiarities from boyhood had been sleeplessness and a disinclination to face difficulties, to do disagreeable things, or to carry out things contrary to his inclination. He was, in fact, morbidly "self-indulgent." He was perfectly correct in his life, both as regards masturbation and sexual intercourse; in fact, he seem to have had less than the normal sexual nisus for his age. He was æsthetic, fond of literature and poetry, and quick at business. About 20 he began to smoke, and soon smoked to excess. By-and-by, after some years, he would also drink too much at times, taking beer chiefly. He drank in an odd way; he seemed to have not so much a craving for it in excess as a want of

scarcely be even tolerated when he was alone with his young and beautiful wife after marriage. Such unnatural perversions and cravings are always accompanied by loss of normal inhibition over them.

The last kind of craving which is essentially connected with the reproductive function is that where the sexual nisus is transformed entirely, and becomes a homicidal or a suicidal uncontrollable impulse. I think few can doubt that the murders of "Jack the Ripper," in Whitechapel, last year, came under that category; and yet it seems almost a contradiction in terms to speak of that monster and a morbid lack of control, for if cunning, scheming, and extraordinary wisdom in the selection of the time and place for his crimes implied control, as it did of one kind, then he had it far above ordinary humanity. Still he had evidently a morbid craving which he certainly did not control, and which all analogous cases would seem to prove was a perversion of the sexual instinct.

I once had a patient under my care, who, before he became actually insane, and afterwards, as one of the phases of his insanity, exhibited many curious symptoms illustrative of paralyzed control and diseased craving. When doing his ordinary work previous to his first attack, he was often conscious of a sudden loss of control over his actions, so that he did not know what he might do next or might not do. If he then saw glass, he was tempted to smash it; if he saw a person whom he was not fond of, he could not feel in the least sure he might not assault him; if he saw anything he liked, he could scarcely resist appropriating or buying it. He bought, at various times, full Highland dress, jewelry, clothes, and trunks, which he did not want and never used; at the same time he had the feeling that he could not then do many ordinary acts which his duty called on him to do. He used to shut himself in his room when he felt these "moods" on him, locking the door, and often trembling with fear and actually weeping lest he should do any act that would be ridiculous or criminal, and bring on him public dis-

power to stop when he began to drink in company. He would go on drinking in a sort of automatic way, and the same was the case with smoking to a certain extent. His habits began to be eccentric, especially in the matter of getting up in the morning. He would not go to business for days. Duty seemed gradually to lose its power to influence him. Sometimes he would lie in bed till the afternoon for days at a time. When drinking, his appetite would evidently disappear, and he would take almost no food for days. He knew quite well he needed it; and if any one applied pressure on him to eat he would do so freely. There happened to be no one with influence over him to get him to live in a physiological way, so he was allowed "to slide" into the most irregular mode of living. For two years he smoked 300 cigarettes a week, and four ounces of tobacco besides. He seems to have almost ceased to sleep. He has lately only gone to business in spurts, when he would do a lot of work, and do it very well. He would lie in bed till towards evening, then go out to some place of amusement for a time, and have a good deal of beer, and return home very late and read novels, and wander about his room all night. He got gradually thinner; he had tobacco amaurosis; his tongue got foul, and his circulation very feeble indeed. His volitional power was more and more impaired, so that he became almost an automaton, doing what he craved at the moment, going and doing what he had begun by a sort of passive habit, resisting nothing, originating nothing. Needed at business every day, he would not turn up at all, or only very late, or occasionally. If he ever did get up in the morning, it was commonly on a holiday when no business was doing, and then he professed himself ready to begin work. All this time he admitted the absurdity of his conduct, sometimes deplored it, but seemed quite unable to mend it so long as he was his own master. At last things got so bad that there was a real danger of his dying from exhaustion. Once he took no food for three days, just because he felt no appetite. Some one who had influence with him told him to begin eating, and he would

scarcely stop. Once he stopped tobacco and drink for three weeks because his doctor vigorously persuaded him to do so. He at last so strongly recognized the fact of his volition being paralyzed that he put himself under the care of his doctor. Massage with suitable diet was recommended for six weeks to put on flesh; then that he was to stay with a medical man whose duty was to take the care of his life, restore normal habits, and cultivate his power of control. All this was done with his intellectual assent, but passively so far as his will was concerned. He would certainly have died of the consequences of his paralyzed volition and morbid cravings if let alone.

In the stage of brain disturbance preliminary to actual insanity it is most common for patients to be conscious of diminishing power of control. They have desires to act to run, to talk loud, to laugh, to swear, to be unreasonable, to annoy others, to thwart, to strike, or to pinch, which they either cannot control or have the utmost difficulty in checking. I had a lady patient once who used to pinch her husband and children black and blue when in this stage. Some patients who never had any sort of desire for drink will take it to excess in this condition. I have a lady patient suffering from a variety of melancholia in which her reasoning power is all but unimpaired, but who has the most terrible craving to destroy her life, so that she begs her hands may be tied, and often gets her fellow-patients to tie her wrists together with a tape or a handkerchief. I had another very interesting case of a lady whose psychological history was shortly the following: She was a handsome, gay girl, whose mental constitution was such that she always was fanciful, and had a difficulty in distinguishing the subjective from the objective. She was in fact a physiological liar. She married young, and had to change her whole mode of life, and breathe a different mental and moral atmosphere. She had children fast. In two years she had become a confirmed dipsomaniac, not, as I believe, a vicious drunkard at all, but she labored under a true disease—a paralyzed con-

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control with a very active craving. She took the drink to strengthen her control and her resolution, and to enable her to do her duty. The usual moral twist showed itself, cunning and deception being freely practiced. How can a lady moving in good society tell the truth if she drinks? Her maternal instincts were also lessened. After some years the drink craving ceased, but she then showed marked intellectual insanity. She had delusions of many kinds, and her conduct became markedly peculiar. I have myself little doubt that while in the dipsomaniacal stage of her brain disease there would have been discovered some intellectual damage as well as the inhibitory and the effective symptoms, if her state had been closely analyzed. But in the stage that followed the dipsomania the intellectual power was clearly perverted, and she had hallucinations of sight and hearing of a peculiar kind, while her affective faculties were impaired in a marked degree. The sequence of symptoms from first to last was, to my mind, an example of a natural evolution of disease in a certain quality of brain, the weakest point of which from the first was its inhibitory power. The stages were the following: The first childhood, with uncontrolled and very strong imaginative faculties, so that the real and the imagined were not clearly distinguished. The second girlhood, during which gaieties of all sorts were the whole aim and object of life, the moral or controlling faculties not being then developed or properly evolved at the time they should have been. The third, that of early married life, during which, for outward appearance sake and against the grain, duty was taken to, not because the sense of it was felt. There was control then exercised, but its sources were not deep or secure. It needed some outside crutch. The fourth stage was that of dipsomania, when an alcoholic stimulant was taken to and relied on to resist nerve weariness, and to give strength for the unequal fight she was fighting. The processes of gestation and parturition would accentuate the exhaustion, and by their reflex effect on an unstable brain help to diminish its inhibitory power. The fifth stage was that of intellectual disturb-

ance, consisting of a belief that she was "acted on," and made to do things by others against her will, and a tendency to mistake her thoughts for words spoken by others. The fact is, she had then no "will" left, and no power of distinguishing the subjective from the objective. The most interesting part of the fifth stage is that it was accompanied by a loss of any craving for alcoholic stimulant. Her teaching her upbringing, her recollection of the drinking part of her life, all united in bringing the evil of her conduct before her, and these accusing thoughts and feelings appeared to her as accusations by voices heard from without. The whole case is one full of instruction to the medico-psychologist. It shows, for one thing, very clearly that morals must have a brain basis, just as technical sanity must have. It also shows the thin border line between paralyzed control and intellectual delusions in certain qualities of brain. I think it will be generally conceded that an intense realistic imagination is apt in many cases to be conjoined with small power of control. Perhaps this is apt to be the weak point in the artistic temperament in all its varieties. The law of compensation comes in here as everywhere. If a man has one good quality strongly, he is, I fear, apt also to have some weak points to make up for it.

There are some cases where the loss of control is in one direction only, while it exists in a high degree in all others. The typical dipsomaniac is commonly a "poor creature" all along the line. But it is certain that an irresistible craving to gamble, for instance, may exist in great natures, and may coincide with remarkable intellectual qualities, with the highest sense of honor, and with unusual power of control in all other respects. The stories of so many of the great statesmen of last century illustrating this cannot all be unfounded. The craving to gamble to excess seems to be one to which all races, from the highest to the lowest, are subject; and all men, from the philosopher down to the imbecile. In a way it is a nobler vice than any of the cravings we have been considering. It is more intellectual and less animal

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han any of these. Many persons are so constituted in brain that they must have some "excitement" in some shape or other. In fact, all sound and normal brains crave stimulants to some extent. It is a law of their existence. The question is always, What is the proper physiological and healthy stimulus to be employed to rouse the normal excitement? Is it to be social intercourse? or happy family life? or some reasonable amount of gaiety not too often repeated? or political activity? or rousing religious services? The excitement and stimulus of being in love must come at some period and in some form to all healthily constituted youths and maidens. It is perfectly possible in the case of persons whose inhibition is weak for any one of these harmless and physiological stimuli to become a strong craving and to run to excess, so that control becomes difficult. It is very common in the early stages of simple mania, which is usually characterized by a partially paralyzed control, for patients to show this by doing perfectly legitimate and simple social acts to excess. I knew one gentleman who, when about to take such an attack of mania, always showed it by calling on all his friends at unconventional times, and never knowing when to leave. His desire for the stimulus of social intercourse was simply not controlled at the time by the conventional rules of his class, which at other times had been powerful enough to influence him. In this stage of mania patients cease to be able to control their own power of attention too.

Paralyzed control often takes the form of morbid indication. In the early stage of melancholia, before depressed emotion comes on, patients constantly complain of this together with a loss of control over their fears. They cannot come to a conclusion quickly, and especially they cannot act on it; and they find themselves conjuring up consequences and risks, that during normal periods of their lives they would never have thought of. This is, to a slight extent, normal after the climacteric in both sexes, and in some persons it is then very marked indeed. To-day in visiting my

patients I came upon a lady who had been very energetic mentally, and whose occupation had been a branch of a She had passed through the more active stage of an attack of melancholia, and was coherent in speech, and almost reasonable in conduct. She was sitting at a table with a pen in her hand, and ink, and a blank sheet of paper before her. The attendant said, "Miss — has wanted writing material every day for a week, and when she gets them she writes a word, but sits for an hour as you see her." I said, "Why don't you write your letter, Miss —?" "I don't know how to begin, doctor." I told her how to begin. "But I don't know which of my friends to write to." I said, "Edinburgh" at the top of the page: neither I nor Dr. Rolleston could get her to do so. She said, "No, I can't possibly do it." Then I said, "Now make an outline of my face, — a sort of thing she had been fond of and clever at. She said, "I can't do it with a pen." I gave her a pencil. She succeeded, after an evident exercise of all her available power of control, in making only two lines, and could do no more. This was an example of a completely paralyzed control over actions of the simplest kind, which in health would have been done at any time almost automatically, without the least effort. She seemed to have no diseased cravings of any kind. I think a few of us but have felt, when ill or tired in a minor degree, such lack of power to originate action — at all events sufficiently to enable us to understand and sympathize with Miss —'s condition. The man who "can't make up his mind" on simple matters is to that extent lacking in the power of control.

The following case is one that illustrates well the paralysis of control over muscular action, that uncontrolled action not being purposive, not being accompanied by any desire to commit suicide or to injure others. P. Q. R., aged fifty-three, unmarried, a hard working, intelligent, and very self-controlled woman, began to be restless and unsettled about two years ago, this being accompanied by some amount of

tends to become the objective. Remorse then stalks, scowls in hand:

"Art thou not, fatal vision, sensible
To feeling as to sight? Or art thou but
A dagger of the mind — a false creation
Proceeding from the heat-oppressed brain?"

It was at night that Macbeth was thus befooled by brain:

"Mine eyes are made the fools o' th' other senses."

Fear then overcame him:

"How is't with me when every noise appals me?"

It was when night was "almost at odds with morn" that the banquet scene took place, when Macbeth's court and his sanity temporarily fled, and he had hallucinations hearing and sight:

"Thou canst not say I did it; never shake
Thy gory locks at me."

And this in a man who, during the day, could not 'taint with fear.' The real never moved him:

"Fear not, Macbeth; no man that's born of woman
Shall e'er have power on thee."

"The mind I sway by; and the heart I bear
Shall never sag with doubt nor shake with fear."

"I will not be afraid of death and ban;
Till Birnam forest come to Dunsinane."

The psychology of the night has yet to be written in scientific sense; but there are plenty of materials for it the dramatists, the poets, and the greater writers of fiction as well as in the medical books. Most men, alone, in the middle of a wood in a dark night, seem to go back sudden and quite unaccountably to a less evolved stage of humanity than that to which they have attained during the day. They are conscious of coming, to some extent, under the dominion of the fears of children and the superstitions of savage. The plain teachings of reason, with the utmost efforts of volition to back them up, cannot fully dissipate such feeling. Control is exercised by a much greater conscious effort than

ression, but no overmastering mental distress. After a while to the country she seemed to recover, but the morbid condition came back when she resumed her duties. Without giving her one day attempted suicide, and by her own hand was thereafter sent to the asylum. On admission she was calm and reasonable, but somewhat depressed, very restless and very dyspeptic. She was thin and generally down. The most striking peculiarity in her case is this, that during the day she feels restless, and has the inclination to move her limbs about, but is able to control this to a certain extent, and to work and walk and take her meals with ease; but when she goes to bed, and especially when she wakes after her first sleep, she at once begins to throw her hands about in all sorts of purposeless ways, rolling about, pacing, and exercising every muscle, as the attendant says, "like an eel in hot water." She does not scream, or cry, or speak, but when spoken to she can cease to move, and talks quite sensibly, saying she "cannot help it;" that she has an irresistible inclination so to move her limbs, and that doing so is in some way a relief to her. Those movements will go on for hours during the night, and are followed by no conscious sense of muscular fatigue. It is a "muscular hyperkinesia," apparently an excitation of the cortical motor centers unconnected with ideation or feeling, occurring at night, just as a febrile delirium occurs at night, or as a morbid restlessness with excitement occurs at night. Motor pressants, like hyoscine, diminish the movements after a dose, but she is none the better afterwards.

The inhibitory function gets weaker at night in all directions. Matter, in fact, at night becomes more automatic, more volitional, and very much less volitional than during the day. Courage fails at night, while gross, unreasoning superstitions then rise up to the consciousness of "strong-minded" men. The moral sense is always at a lower ebb at night than during the day. Groundless fears come up before the mental vision then; while it has, of course, always been the reason for ghosts and apparitions. The subjective then

transformed into uncontrollable impulses toward suicide and homicide.

6. Cravings to break and destroy, accompanied by little intellectual disturbance, that cannot be controlled, are often met with.

7. The state of morbid inaction is often closely allied to morbid impulse, one sometimes taking the place of the other.

8. There are cases where there is a morbid loss of control over general conduct in ordinary matters, and craving to do quite harmless acts.

9. There is a morbid condition of brain automatism apart from hypnotism, in which there is little or no power of inhibition, but at the same time no active cravings, the conduct being regulated by the will of others, or by chance suggestion from without or within.

10. Loss of control often precedes for some time the other mental symptoms of an attack of active insanity.

11. Inhibition may be lost in one direction only, while in most others it may be very strong, gambling being often an example of this.

12. All brains must have some "excitement" to keep them healthy, the important question being how to select the kind of excitement that will not lead to morbid craving, and that can be easily controlled.

13. Morbid indecision may be an example of paralyzed control.

14. We may have morbid and uncontrollable muscular action, not purposive, and not attended by ideation or emotion at all.

15. It is a fact in man's medical psychology, that control is almost always lessened at night or in the darkness as compared with the day, the night being the time for morbid indecision, fears, superstitions, and a tendency to mistake the subjective for the objective, his higher powers then undergoing a process of partial "dissolution." Man, in fact, is a less evolved being as regards his inhibition at night than during the day, and his brain is then more liable to disturbances of its controlling functions in disease.

during the day. We have constant experience as physicians of the disturbing effect of the night in disease on most of the higher brain functions, especially the inhibitory power. The patient suffering from mania is always most restless at night; the patient suffering from continued fever then only becomes delirious. It is then that the child with a febrile catarrh becomes delirious. It is then that the neurotic child takes his "night terrors" without fever at all. The case of senile mania that is only confused and restless during the day loses control entirely at night, and then becomes perfectly unmanageable. Our profession pays dearly for this psychological peculiarity of humanity. I am only surprised that some of the sufferers have not drawn more attention to it, and given us more careful psychological analyses of it. Has not every country doctor had to turn out of bed and drive many weary miles, many a stormy night, not because his patient was worse than he had been on the previous day, but because he and his friends had begun to suffer from that nocturnal loss of inhibition, that nightly diminution of control, which are so closely allied psychologically to the paralyzes of control in dipsomania and morphinomania?

We may conclude, therefore,—

1. That many morbid and hurtful uncontrollable cravings exist apart from those for drink, morphia, chloral, or cocaine.
2. That there is a distinct class of "inhibitory neuroses" that may be accompanied by little intellectual or emotional disturbance. The objects of the morbid cravings are often accidental.
3. Some of the most morbid cravings and examples of loss of control are found connected with the reproductive function, in regard to which, too, perversions of object are also very apt to accompany such morbid cravings.
4. For the existence of many cases of such reproductive loss of control, prostitution is probably responsible, and the unnatural habit of masturbation for many more.
5. The reproductive instinct is in some cases morbidly

little DRUNKENNESS AND ITS CRIMINAL RESPONSIBILITIES.

By T. L. WRIGHT, M.D., BELLEFONTAINE, OHIO.

FIRST. — Drunkenness is composite in its nature; and it is idle to speculate upon its accountability in criminal matters without a reasonable understanding of its several component elements.

Intoxication, as a whole, varies in character, accordingly as it may be the outcome of one or another of the many toxic agencies used by narcomaniacs. Several forms of drunkenness may therefore appear, each having characteristics peculiar to itself. It is with intoxication from alcohol that the present discussion is concerned; for many of its most prominent and mischievous features are wholly absent in drunkenness coming from other sources. The alcoholic inebriate is the drunkard *par excellence*.

Insanity may be loosely described to be an aberration of mind, of sensible continuity, involving cardinal mental attributes, and dependent upon morbid or toxic forces that operate independently of volition and in spite of it. In this view of insanity every man really drunk must be esteemed as insane.

The law recognizes the insanity of drunkenness, and, indeed, insists upon it. There is a legal *dictum* founded upon the assumed uncontrollability of the mind in drunkenness; it is to the effect that *drunkenness is no defence for crime*. This appears inconsistent with another legal *dictum*, that *there cannot be crime in insanity*.* But it is said by the same authority: "The law has settled that a drunken intent is just as guilty as a sober intent."† There is no pretense that the law has discovered or proven the equality of

* Judge Noah Davis, *Medical Jurisprudence*, p. 130.
† *Ibid.*, p. 130.

the sober and drunken intent. It has simply "settled," in some way peculiar to its own methods, that point.

But the law claims that the drunken man is a "voluntary madman." There is something contrary to nature in the idea of *voluntary insanity*—that is, insanity brought on through an express purpose to bring it on.

The perfect mind cannot conceive of itself as truly and sensitively insane. The sober *ego* is wholly different from the drunken *ego*. The powers of the two are unlike, and their surroundings, as *presented to them*, also are unlike. Their planes of consciousness are different. The minds act as two, one of them being insane, and they can no more interact or interpret each other than a sound mind in one person can interact with and interpret an unsound mind in another person.

Alcohol always weakens and destroys. It degrades directly all the powers of the mind. But it does not do this *equally*; and thus it happens that, while purpose or will may be *abstractly* enfeebled by drunkenness, still it may be *relatively* intensified. The explanation is this: The grosser faculties and animal propensities are more fundamental and immovable than the finer sensibilities. Hence the inhibitory powers of alcohol have little effect upon the brutish instinct of the animal nature, while they depress and deaden the moral feelings. Thus criminality becomes relieved of th obstructions and protests of conscience.

A distinguished authority, in a recent paper, says: "It now pretty generally recognized that, as the moral faculties were the last to be evolved, they are commonly the first, in brain disease, to disappear." And again: "It should never be forgotten that alcohol poisons as well as exhilarates, affects more strongly the highest brain function of emotion and control."*

SECOND. — The law in America relating to the criminal responsibility of drunkenness has been tersely stated as fol-

* T. S. Clouston, M.D., Med. Superintendent Morningside Asylum, Edinburgh, — *Dipsomania and Paralyzed Control*, etc.

doctrine to insanity as well as drunkenness? By visiting death upon insane homicides a stop would be put to the proceedings of those who feign insanity, in order to commit murder without risk of punishment.

Judge Hale says: "By the law of England such a person shall have no privilege by this voluntary contracted madness but shall have the same judgment as if he were in his senses." Holroyd, J., says: "If indeed the infuriated state at which he arrives should continue and become a lasting malady, then he is not amenable." Continue, and lasting how long? When does the temporary madness merge into the permanent madness, and what is the difference in their capacity of responsibility while actually present? *

THIRD.—The depressing or benumbing effects of alcohol upon nervous sensibility of every kind is well known. This of course, applies to the bad impression of alcohol upon common sensation, and also upon the perfection of the several special senses. If things are presented to the mind by sensation in a dim and incomplete manner, as through a haze or fog, or in false and distorted proportions, the perceptions relating to the external world will be misleading. They will be indefinite, or they will exhibit material things in false and distorted shapes. They will impose false beliefs upon intelligence, and lead to inconsistent and irrelevant thought and speech and conduct. The ludicrous pictures of drunkenness provoke mirth. The imperfections and haziness of sensations exaggerate the ideas beyond what is reasonable and true, while the unconscious comparisons of alcoholic travesties with allied rational concepts in memory produce the most extraordinary mental images, and beget no end of absurd quips and drunken nonsense. The drunkard never tires of rehearsing his paradoxes, his *outré* comparisons, his mental and moral abortions and imbecilities. Not infrequently he "puts pen to paper," and fairly revels in mysterious utterances and allusions—professedly adumbrations of the Infinite, the Eternal, of, in fact, the Divinity itself, while

* See a paper on *The law relating to drunkenness*, by a member of the bar, London, England.

low: "He who, while sane, puts himself voluntarily into a condition in which he knows he cannot control his actions must take the consequences of his acts."** Another legal writer declares: "A voluntary demon who has produced a condition in himself, by his own act, which is not the disease known as insanity, is not excused."† The expression *voluntary demon* was used by Lord Coke in an age when vicious men were believed to come by choice under the dominion of certain vagabond devils. They were held, in public estimation, to moral accountability by reason of their associations, while the truly insane were let go. The excuse for its some bugbear, is still in use, although the excuse for its adoption has passed away. *Voluntarius demon* simply signifies a man who is drunk. But the law is right when it assumes that a man drunken from alcohol cannot control his actions.

The laws of England relating to the criminal responsibility of drunkenness are the same as the American. Lord Coke says: "As for a drunkard who is *voluntarius demon*, he hath no privilege thereby; but what hurt or ill soever he doeth, his drunkenness doth aggravate it." This idea of the aggravation of criminal guilt, when it comes from drunkenness, still holds a place in certain judicial minds as another relic of barbarism. It is a worthy relative of the ancient notion of demoniacal possession, and in all probability it is the legitimate child of that notion.

A case from Vermont is quoted wherein it is said: "Voluntary drunkenness will not protect a person from liability for torts, or for crimes committed while in that situation." The reason given is: "In respect to torts, sound policy forbids that intoxication should be an excuse for crime, for if it were, under actual or feigned intoxication, the most atrocious crimes might be committed with impunity." The lameness of this explanation is clearly displayed when "actual" and "feigned" intoxication are put in the same category. The question is begged. Why not apply this

† Judge Fowles.

* Hon. Clark Bell.

ing feeble admirers of the "perilous stuff" weary their brains in vain endeavors to fathom a meaning where there is no meaning. And this is the sum total of the "brilliance" with which alcohol invests the minds of those who partake of it. Knowledge acquired in drunkenness is imperfect, distorted, deceptive. The drunken man perceives things in false lights and unnatural relations. He cannot be a reliable witness. Not only is he deceived by his morbid sensibilities, but the inner workings of the drunken mind lead to convictions astray. The number of ways in which this may be effected is astonishing.

A lady was sick in bed, afflicted with a painful disorder. She was considerably under the influence of morphine. It became proper to communicate with her mother in a distant city. The lady had written every week to her mother for four years. When requested to give the number of the address, she hesitated, and then said, "Three sixes—yes, three sixes. It is 666 W.—Street." There was reason to doubt the correctness of the reply, but a few minutes later it was repeated. Two hours afterwards, the address was again asked, on the pretext of forgetfulness, and the reply was prompt and decisive—"It is 666 W.—Street; it is three sixes." The address was hunted up, and it proved to be, indeed, 333 W.—Street. The lady then said she guessed that witness, but, after all, not so dangerous as a sober person and testifying as to facts observed when drunk.

The drunkard is extravagant in his language. His ideas are stilted, his philosophy is displayed in iridescent bubbles, soon burst and gone, and his eloquence is a series of empty mouthings. His pretentious efforts in that direction, in so far as they are inspired by alcohol, clothe no useful thoughts and reflect no sublime emotions.

All these things refer to drunkenness in its primary and at least offensive stage, when, like a race-show, it is adapted to attract crowds of laughing and shouting idlers and vagabonds. Of its later phases, when alcohol has overpowered the brain

by evolving a crowd of new and strange poisons, there is not room here to speak at large.

FOURTH.—The mental aberration of drunkenness, however, is not dependent solely upon faults of nervous sensibility. To the defects of sensation and perception there should be added, uncertainty of movement, and absence of coöperation of function amongst the several great primary departments of the human organism. To complete the impersonation of individuality, of self, there must be the elements of function, unity of purpose, between these three primary elements of human nature, namely, movement, reason, and motive—or, as commonly written, body, mind, and soul.

The defects of muscular movement in drunkenness are sufficiently obvious, and so are the defects of ordinary action. Similar incompetencies beset the nervous system elsewhere, so that there is impossibility of free and united effecting any rational design. The mind and hand, for example, do not readily respond to the calls of each other. The torpid and lifeless touch will, perhaps, press with unconscious force upon the trigger, and, the senses being too dull to alarm the rational faculties or to receive warning from the danger impending, the weapon is unexpectedly discharged.

The inhibitory power exercised by alcohol over the sensibilities dulls the acuteness of the moral nature, and withdraws it from the supervision of conduct. In this way also, alcohol acts in preventing the unity of action and purpose which should characterize the fundamental departments of human nature.

There is a peculiar state of mind called *trance*; that is, unusual in drunkenness. It is a condition not necessarily consequent upon alcoholic influences, although alcohol is frequent cause of its appearance in certain constitutions. It is associated with states of mental abstraction and with automatic life. Consciousness is but partially influenced by surroundings when trance is present, and hence there is little or no memory of the things of the life of common rela-

When the trance condition has passed away. But it may be presumed, without violating probability, that some glimmering of ordinary sensibility, mingling with the suggestions of automatic existence, would arouse strange incentives and evolve unconscious motives, greatly at variance with those of rational experience. It is certain that crimes of inexplicable atrocity and motive are not infrequently perpetrated by drunkards during the trance state.

The exact rise and progress of the criminal intent, the actual incitements to crime and murder that are associated with the trance condition, cannot ever be known; for when consciousness resumes its normal sway little or no recollection of the trance life remains.

It is highly probable that *both* — imperfection in the perceptive faculties and absence of coöperation in the mutual interaction of the predominant forces of the human organism — unite in producing unnatural and dangerous courses of thought.

- 1st. Drunkenness seems to be true insanity.
- 2d. It is an insanity intensified by several efficient causes of mental derangement operating together and in the same direction.
- 3d. It is an insanity affecting the whole nature, mental and moral, and even motor; for the whole brain is poisoned by the presence of alcohol.
- 4th. Drunkenness cannot disguise its own features in the smallest degree; in other words, the drunken man is unable to control his own actions.
- 5th. The law declares intoxication to be a crime; yet it affords and protects facilities for unlimited intoxication.
- 6th. The law declares that criminal courses shall not excuse other crimes growing out of them; yet it provides the conditions for the establishment of criminal courses.
- 7th. The public, in its aggregate capacity, knows that drunkenness is unable to control its own actions; yet, by its permissive attitude respecting drinking resorts, it provides to the morbid, or possibly vicious, appetite for intoxication, thus becoming itself, in all fairness, materially responsible for the crimes of alcohol.

TOXIC HYSTERICAL PARALYSIS.

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Two years ago I had the honor of reading before the British Medical Temperance Society a paper on the Absolute and Differential Diagnosis of Alcoholic Paralysis, the essential characters of which are becoming now generally known, viz.:

1. A progressive paralysis affecting the extensor muscles, appearing first in the lower extremities, with loss of patella reflex.
2. Subjective to shooting and rasping pains and hyperalgesia.
3. Rapid wasting of paralyzed muscles, and hyperparadic excitability.
4. Double foot and wrist drop.
5. Static œdema of extremities.
6. A peculiar delirium — denial of drinking habits, with delusions regarding daily pursuits, supported with plausible assurance and cunning.

While on a visit to Paris last Easter, I attended the clinical demonstrations of Professor Charcot at the Salpêtrière, and was struck with the frequency with which hysterical paralysis was associated with alcoholic habits. Professor Charcot regards alcohol as a powerful predisposing cause of hysterical paralysis, especially when traumatism is the immediate cause of hysterical paralysis in men. He has also pointed out that heat acts in the same way, and recently he has added another toxic agent, viz., bisulphide of carbon, to the list of exciting causes of hysterical paralysis. Since the visit to Paris I have had my attention directed to the subject, and have had under my observation and treatment

two women with characteristic hysterical hemiplegia and hemianæsthesia. In one the family history was decidedly alcoholic, although the habits of the patient herself were doubtful in this respect. In the second drinking was directly the cause of the hysterical attacks. To these two cases will be added two others which have been recorded by Professor Charcot in the *Polyclinique* of the Salpêtrière, one of which I had the opportunity of examining.

In conclusion, a review will be given of the symptoms which will enable the condition to be recognized and diagnosed from alcoholic paralysis and paralysis due to organic lesions of the brain and spinal cord.

CASE I.

HYSTERICAL PARALYSIS.

The first case is given as a type of hysterical paralysis: E. T.; age, thirty-one; single; occupation, cook and general servant. The patient came to the hospital, complaining of weakness and cramp on the left side, and was admitted under my charge on May 26, 1888.

The following account is taken from notes by Mr. John Bullen, clinical clerk of the case:

Family history: Father, addicted to drink, died at the age of forty-four from "abscess of the liver." The mother died at sixty years of age in an asylum. She drank to great excess. Out of a family of fourteen children, only four are living. The remainder died of consumption or heart disease before the age of twenty. One sister is living in the country, and is said to be strong and well; the other sister is delicate and nervous, suffers from asthma and palpitation, and frequently faints on the least excitement. One brother is subject to asthma and bronchitis. The patient states that she has always been nervous and delicate, and subject to "fainting fits" and attacks of vomiting, which may last a week or a fortnight. Some years ago she was admitted to St. George's Hospital for rheumatic fever.

In January, 1883, she was cutting her wisdom teeth, which produced an attack like the present. Fits continued until March, 1886, when she was removed to an asylum at Leavesden, where she remained six weeks. After this she returned to service, but being frightened by a dog she had another attack and was taken to hospital, but was discharged at her own request in two days. Returning to her situation she was sent to the Paddington Infirmary, where several teeth were extracted. She got better and resumed work but subsequently came to St. Mary's Hospital, the spasms in her left leg coming on suddenly on the way to the hospital.

Condition on Admission:—The patient is of medium height, rather thin, with sallow dark complexion. The expression is vacant and fatuous, the mouth being held open. The breathing is rapid, 60 per minute, but there are no other indications of dyspnoea. She answered questions well but speaks in low husky whisper. The patient stands with difficulty, and steadies herself against a chair or table. There is a marked limp, the left leg being rigid and circumducted, the toe scraping along the floor very much as in ordinary hemiplegia. The left arm is held flexed and close to the side; the wrist is also flexed, the fingers and thumb being held in the form of a cone.

When seen by the house physician, Mr. Graham, he was in doubt as to whether some peculiarities of manner were due to drink or not.

Mental Condition:—The patient is fairly intelligent, can read, and writes a good letter; but she is evidently weak-minded and emotional. However, during her stay in the hospital she worked whenever she was allowed out of bed, but she also had an exalted idea of the value of her services, and wished to remain as nurse in the hospital. Occasionally she spoke as if she had some delusions with respect to her past history. No fit was observed while in hospital, during a stay of nearly six weeks. The patient slept well and often was difficult to rouse. She is reported to have dreamed a great deal.

Muscular sense is entirely lost on the left side. position of the limb is quite unknown; when her arm is opened to hang out of bed, she called out to the other patient to know when her arm had been cut off, and who had done it. When the eyes are covered the patient is entirely unable to find her left arm or hand; she can only walk when allowed to look down at her foot; if she cannot see it she is unable to advance it, and consequently does not put any weight on it, and hops on the other leg. This peculiar gait was constant.

Sensory Functions.—The patient complains of certain subjective sensations, a feeling of dead sweat on the top of the head and on the forehead. No ovarian pain is complained of. Tingling and formication are absent.

Objective sensations are entirely lost on the left side. The prick of a pin cannot be felt on the face, nose, or lip, or any part of the left side of the trunk and left extremities. The bleeding caused is slight on the extremities. The sensation of heat and cold is lost; no impression is made by applying hot spoon or ice to the skin on the left side.

The limbs and joints can be twisted and contorted with the greatest violence, even to bruising, without causing any pain. The strongest faradic current is not felt, although it produces spasm of the muscles. Hearing is entirely lost on the left side; on the right is very acute. The fact was quite unknown to the patient, and she accused me of having rendered her deaf by the application of the battery to her neck. Taste was not excited on the left side by strong acetic acid, but on the right side it was also less acute than normal. Strong ammonia produced not the least effect when applied to the left nostril, the right being closed. The left side of the palate, tonsil, and pharynx as far down as the epiglottis can be examined with the finger without discomfort to the patient. No hyperæsthetic spot can be detected on the left side; there is tenderness on pressing the spine in the lower dorsal and lumbar regions. All down the right side there is marked hyperæsthesia, especially when tapped on the side

Motor Functions.—The left arm is flexed and in a state of tonic rigidity, the fingers being held in the obstetric position, the carpal joints flexed, the fingers and thumb being slightly extended and adducted. There is no voluntary movement, and a great amount of force does not produce movement in the joints of the wrist or fingers which give an elastic resistance. She can be relieved by gently fanning the extensor surface with the hand, when the muscles are relaxed and the patient is able to move the arm and grasp it with the hand. After a varying interval the spasm returns and is always firm during and after sleep. The spasmodic flexion of the hand is rapidly produced by pressure on the ulnar nerve at the elbow, or by rolling an elastic bandage tightly round the arm. Pressure on the lower roots of the brachial plexus in the neck produces spasm and flexion of the whole upper extremity. The left lower extremity is fixed in extension, the foot being in the position of *talipes equinovarus*, the toe being perper-extended. The limb is absolutely circum-rigid, and only moves with the pelvis *en masse*. Pressure as in over the ovarian region causes the lower extremity to become close flexed, but still rigid, also the flexion of the arm is increased. Friction and massage relieve the spasm. No tremors or chronic movements are observed in either limb. Facial paralysis and spasm are entirely absent. But after testing the faradic irritability of the face on the left side, slight facial spasm was produced, so that the face was slightly drawn to the left for a short time only. The nutrition of the paralyzed limbs is unimpaired, and there is no reaction of degeneration. On the contrary, the faradic current applied on the opposite side of the arm produces alternate powerful flexion and extension of her tension. Then the upper roots of the brachial plexus in the neck are irritated with the current, extension of the arm follows, which is immediately flexed when the lower roots are irritated. The patella reflex is lost on the left side, but exaggerated on the right. The superficial abdominal reflexes are good on both sides. *Talipes equinovarus* was well marked. On the right side there is no spasm or paralysis.

Th of the head. Pressure on the right ovary discloses great tenderness, accompanied with a rising in the throat, increased dyspnoea, flexion of and cramping pains in left leg.

Eye.—The conjunctival reflex is lost on the left side. On testing the field of vision, it was found the patient's left eye was blind, and the field of vision was much and irregularly restricted for white on the right side, that there was no field for green, and practically none for red.

Color Vision.—The patient fails to recognize any color in a bouquet of flowers except red. With colored wools she was able to select yellow from red; with all other colors she failed, especially with blue. During her stay in the hospital, the distribution of the anaesthesia and muscular spasm varied much, and eventually disappeared almost completely. By various means, including magnetism, the anaesthesia and spasm were transferred from one side of the body to the other. But I will not detain the society on this occasion any longer with details of many interesting experiments.

Voice.—The patient generally speaks in a hoarse whisper without effect.

Respiratory System.—Respiration rapid, chiefly abdominal. The right side of the chest moves more than the left, and there is some dullness in the left apex, where the entry of the air is feeble.

Circulatory System.—Heart sounds weak; no murmurs; regular; pulse 76; regular; temperature normal.

Digestive System.—Tongue rather large, slightly tremulous. Bowels are habitually constipated, only opened as a rule once a week. Vomiting comes on sometimes without applic pain.

Menstruation is very scanty and frequent, sometimes with only a few days interval. Much pain precedes the menstrual flow, and thus has determined a fit. Urine is passed about once in the twenty-four hours, and sometimes less frequently. The urine is normal in color, acid. The sp. gr. 1030; contains much vaginal epithelium, a few pus corpuscles, and some mucus, but no albumen.

It is not maintained that this case is in any way directly due to alcohol, but rather to a neurotic inheritance, in which alcohol has been a potent factor.

CASE II.

HYSTERICAL HEMIANÆSTHESIA WITH ALCOHOLISM.

L. G., aged twenty, a girl of the unfortunate class, came to the out-patient department of St. Mary's Hospital, on June 9, 1888. The patient had felt pain over the cardiac region for twenty-four hours, of a stabbing and cutting nature, which came on suddenly, and attended the hospital for medical treatment. While in the waiting-room the patient had a convulsive attack, which caused alarm among the patients, who directed my attention to the case. The convulsions were general, violent, and demonstrative. The head was tossed from side to side, the hair dishevelled, and the dress disordered. The hands were clenched, arms flexed, legs extended for the most part. Several piercing cries were given. Firm pressure was made on the groin over the left ovary, which caused the convulsion to cease almost at once, the patient calling out, "Leave off that—won't you?" Some time was given to the patient to compose herself and tidy her hair.

For the record of this case I am indebted to Mr. P. J. Kingston.

Previous History.—The family history was not obtained, the patient being unable, or, more probably, unwilling, to communicate any of her antecedents. After gaining her confidence and promising that no students should examine her, it was elicited that for years she had lived on the streets, and that she had no permanent address. She had been a patient in most of the London hospitals, having, the previous year, been treated in St. Mary's Hospital for contusion of the hip joint. The patient had also been in the Home of the Lock Hospital, as well as in several refuges. From these institutions the patient seems to have been dis-

way directed, frequently at her own request, but also for disorderly conduct, in which she had been taken to a hospital or police station in a fit, and been discharged the next day or convicted for drunkenness.

At eight years of age, there is said to have been an attack of rheumatic fever. There was a distinct history of syphilis which has been confirmed by inquiry at the Lock Hospital, but no special signs were observed.

HISTORY. I must apologize for the incompleteness of the notes, the cards which were made with some difficulty in the out-patient and cutting room, much against her wish; the girl was persuaded to become an in-patient, with the view of recording her symptoms more fully. During the night she caused much disturbance, and accused the nurses and other patients of robbing her. When mention was made of the electric battery, she refused to remain, dressed herself, and left the hospital the following day after admission.

Present Condition.—The patient is of medium height, fair complexion, with a blotchy, rather puffy face. She is well nourished. The breath is strongly alcoholic. The expression is sullen and cunning, the lips full and pouting, the upper eye-lids drooping, the eyes suffused and slightly jaundiced. The head is inclined forward and to one side, furtive side glances being taken like a dog on the watch. The nostrils are dilated and move rapidly with respiration, especially when attention is directed during the examination. The left arm hangs by the side and is not used. The patient unwillingly shuffles along with a limp, the left leg dragging in walking. She stands steadily.

Mental Symptoms.—The mental condition of the patient on this is very peculiar, the striking feature being resentment, and a suspicion of that which is going on around her. She insists on having, then, handling, smelling, and licking all instruments before they are applied, forming her own opinion as to their probability of danger in use. This method of judging of the properties of objects is no doubt greatly due to the loss of sight, which will be afterwards explained. The patient refuses to close

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both her eyes at the same time, in case something is done to her, but she shows considerable intelligence, speaks distinctly, and often sharply. Although perverse, she is otherwise apparently truthful. When the anæsthesia is tested there is much sobbing, also when the patient finds that there is blindness in one eye, after which she submits more willingly to examination, with the hope of having the sight restored.

Motor Functions.—There is no facial paralysis, strabismus, or myastamus. The left arm shows very impaired movement, the hand can with difficulty be raised to the head, the right arm being used to assist the left. The grasp of the left hand was very feeble; paresis in the left leg was also marked. Spasm and rigidity are quite absent, and cannot be induced by pressure on the ulnar nerve or by bands around the arm. Reflexes superficial and deep—appear to be normal. Slight tremors of hands and tongue are present. The muscular sense on the left side is markedly deficient, and as far as can be ascertained nearly absent; the patient is quite unable to find her left hand with her right when the left is concealed from view, except by passing her right hand down from the left shoulder, the position of the left arm being quite unknown unless seen. Coins can be picked up with the right but not with the left hand, and all co-ordination is lost when the eyes are covered. The right arm and hand can co-ordinate perfectly. Nutrition of arm and leg is not affected; the electrical reactions were not ascertained.

Sensory Functions.—The patient complains of a subjective pain which she calls her knife, at a spot in the axillary line over the right rib; the slightest touch over this spot causes the patient to shout and declare that a knife has been used. She examines the spot, and insists in satisfying herself that there is no knife concealed in the doctor's coat-sleeve. It is from this hyperæsthetic spot (over the splenic area) that the pain rises before the onset of the fit, at which time the globus hystericus is also felt. No other subjective sensations are complained of except while under examination—a

feeling that her arm or leg has been cut off; to prevent this possibility, she holds her left arm tightly to her side with the right. Formication, shooting, and darting pains are absent. Objective sensation to touch and pain is entirely lost on the whole of the left side, the anæsthetic and analgesic area being definitely limited to a line drawn front and back down the center of the body. When the patient's attention is diverted, a needle can be thrust into the skin and muscles at any point except the hyperæsthetic spot already mentioned, without causing any feeling, and little or no bleeding. Also the deep sensation of joints is lost, as the fingers, wrist, and elbow joints can be hyperextended or flexed in a manner which would cause great agony under normal conditions. Sensation of heat is also lost, a hot spoon causing no impression. In the same way, if ice is applied to the left side it is not observed, but instantly that the right side of the face or body are touched, the patient protests, and wipes the part dry with her handkerchief. The tongue is protruded straight. The left side has also lost sensation; it can be transfixed with a needle; sulphate of quinia and strong acetic acid cannot be tasted, but when the acid touches the right side, it is so acrid that no coaxing will permit the patient to allow the experiment to be repeated. The pharynx on the left side is so insensible that the finger can be passed down to the glottis and larynx without causing the least irritation. Instantly that the finger passes to the right side, the patient resists and pulls the hand of the operator away. Strong ammonia applied to the left nostril is not objected to, and does not even cause lachrymation, until the fumes arise directly to the eye. On the right side of the nose it is quite sensitive.

Examination of the Eyes.—The pupils contract sluggishly to light; it is impossible to test the reaction for accommodation, as vision is so imperfect. Conjunctival reflex is absent on the left side. No changes in the discs are found by ophthalmoscopic examination.

Color Vision.—When asked the color of any substance, the patient glances at it sidewise with the right eye, feeling

it carefully with the right hand, holding it with the left; she then tastes and smells of it before giving an answer which is generally wrong, unless the color contains red or green. When trying to name colored wools, she compares the wools with portions of her own dress; after some difficulty she recognizes blue, but cannot in the lightest degree find yellow or violet, calling violet black and yellow white.

On testing the field of vision with the perimeter, the sight of the left eye was restricted to a point, and the spot could only be seen with difficulty. On the right side the field was irregularly constricted to 15°; there was no field of vision for green, practically only a central point for red.

The left ear is quite deaf; the ticking of a watch can only be heard when brought into contact with the ear. Hearing on right side good. There are no contractures of the joints, deformity of the spine, or tenderness over the vertebra. There is no difficulty in micturition or defecation. Vomiting is sometimes present, which the patient admits to be due to drink.

The circulatory and respiratory systems seem normal; the pulse is 108 and regular; the temperature 98°, and the same on both sides of the body; respiration, 60 per minute. Mentation is irregular. The subsequent course of the case I have not been able to follow, but inquiries have been addressed to me by a philanthropic lady, who had found a home for the patient from which she decamped, and one night she was brought to the hospital in a drunken, hysterical fit by two policemen. I think there can be no doubt that, in this case at least, alcohol was the direct exciting cause of the fits and of the hysterical paralysis. No doubt, the patient's mode of life incurred sexual excesses which also contributed to the neurotic condition.

DIAGNOSIS.

The diagnosis of hysterical anæsthesia from anæsthesia due to capsular lesions in the posterior horn is not always easy. Dr. Ferrier has reported cases in which the anæsthesia was thought to be due to hysteria during life, in which

loss of special senses, restriction of field of vision, and color blindness. The mucous membranes are affected by the anæsthesia, but it does not extend to the viscera. Hysterica not troubled by, the anæsthesia. Hysterica not troubled by, the anæsthesia.

Paralysis and the contractions are on the anæsthetic side. Hyperæsthesia generally exists over the ovary opposite to the anæsthesia. It is quite impossible for these symptoms to be produced in any other condition. Hemianæsthesia due to spinal lesions, differs from that produced by cerebral disease, inasmuch as the face is not attacked, and the anæsthesia is on the opposite side to the paralysis.

CASE III.

TRAUMATIC HYSTERICAL PARALYSIS AND ALCOHOLISM.
The third case is described in the *Polyclinique*, April 19, 1888.

The patient was a decided sot, and Professor Charcot considered his attack to have been induced by the toxic effects of alcohol, although directly excited by the toxic Hystero-traumatic paralysis is of fairly frequent occurrence, especially in men who are subject to chronic occurrence, The following is a typical case:

The patient, a laborer engaged in a brass foundry, was apparently vigorous but addicted to drinking, of which habit he carried the unmistakable signs. Three weeks before admission to the Salpêtrière, this man was engaged in hammering out a plate of brass which he was holding with his left hand; the plate slipped and the mallet fell on his left hand; is good reason to believe that the patient was rather drunk at the time of the accident.

The first effect was to cause swelling of the hand, which was distinctly bruised; this disappeared in about four days. But then it was found that the hand was quite powerless; the wrist dropped, and the fingers could not even be moved. On admission there was some return of power in the hand,

after death lesions were found in the sensitive region of the posterior part of internal capsule.

Hemianæsthesia is so rarely observed in hemiplegia of cerebral origin, because hemorrhages and degeneration so rarely take place in the posterior part of the internal capsule. One of the principal arguments for establishing that a patient suffering from hemianæsthesia and hemiplegia is not hysterical is, that the facial nerve is paralyzed on the same side. Hysterical hemiplegia affects exclusively the limbs, and the facial nerve is not implicated as is so often the case in organic hemiplegia. The paralysis is most absolute in ordinary hemiplegia, and the anæsthesia is much less marked. Several authors, including Todd, Althoses, and Weir Mitchell, have described hysterical cases with facial paralysis and deviation of the tongue to the paralyzed side. But this facial paralysis, due to supposed organic lesion with deviation of the tongue to the paralyzed side, can be imitated in hysteria so as to produce confusion of the two conditions by an affection of the lower facial muscles, which is not paralytic, and which Professor Charcot has called pseudo-facial paralysis, and is due to gloss labial spasm which is not in any case connected with or subsequent to facial paralysis.

In a case of this kind, in the Salpêtrière, anæsthesia on the left side was well marked. The patient had hysterical attacks, and had restriction of the field of vision. When protruded, the tongue was directed to the left side and curved; the inner side of the tongue seemed thicker and narrower; but, when the patient was asked to show his teeth, the face was drawn to the left also, and the lip and chin were much puckered. When the spasms were severe, the patient was unable to protrude the tongue. In paralysis the tongue is protruded to one side, but is not curved. Anæsthesia, complete on one side, which passes to the muscles and articulations, with loss of common sensation, analgesia, insensibility to heat and cold, and also loss of muscular sense, belongs to hysteria alone, especially when accompanied with

and he could press the dynamometer to 18 kilos. There was total anaesthesia of the hand and of the forearm nearly up to the elbow, which was abruptly defined by a line drawn round the arm at right-angles to the axis of the limb. When the eyes were closed the patient was quite unconscious of any movement of the wrist, and torsion of the fingers produced no pain.

A cortical lesion could not produce such a condition, as the motor and sensory centers are distinct, whereas in this case the motor and sensory functions are affected in parts physiologically associated. Also, here the distribution of paralysis does not follow the area supplied by any particular peripheral nerve. In addition, this man has a distinct contraction of the field of vision, with a central scotoma for colors in each eye. The latter is more a symptom of alcoholism than hysteria. The patient showed tremors of the hands and hips.

The paralysis is not alcoholic, from the fact that it is one-sided and is limited to the area of anaesthesia, also from the absence of hyperalgesia.

CASE IV.

TOXIC HYSTERICAL PARALYSIS.

The last case which I wish to bring to your notice is a toxic hysterical paralysis produced by bisulphide of carbon, which has been described by Professor Charcot in the *Polynique* of November 6, 1888. The nervous affections produced by bisulphide of carbon were first described by Delpsch, in 1856. And again, in 1863, he attempted to establish a distinct paralysis attributable to bisulphide of carbon, having distinct clinical characters as those belonging to lead and alcoholic paralysis. Professor Charcot draws attention to the present case in order to emphasize the fact that toxic agents, such as alcohol, lead, and bisulphide of carbon do excite hysterical paralysis, though they may also produce a paralysis characteristic of each of them.

Toxic Hysterical Paralysis.

Bisulphide of carbon is chiefly used as a solvent in the manufacture of vulcanized india rubber.

The case is thus described. The patient is a man of sixty; he was formerly very vigorous, but has lost strength lately. However, the paralysis from which he now suffers came on suddenly six weeks ago. The family history of the patient discloses no neuropathic disorder. On the contrary, the patient claims to have several ancestors who have been centenarians. There is every reason to believe that the man has always been strictly sober and not addicted to alcoholic excesses; for many years he was a shepherd, and not having learned to read, it cannot be his intellectual culture which has caused the nervous break-down.

Since 1872 he has been employed in a vulcanized india-rubber factory for varying periods, working as a ground laborer in the intervals. Previous to September 24th, he had worked for four months in the factory exposed to the fumes of bisulphide of carbon. Suddenly, after a feeling of suffocation and a burning sensation on the scrotum, the patient fell suddenly without a cry as if struck by apoplexy. His fellow workmen thought he was asphyxiated, as often happens in this manufacture. During an insensibility of half an hour there were no convulsions. On recovering consciousness he was confused, but was able to walk home. He remained at home for two days without knowing exactly what took place, but on the third day the right arm felt numb, and the next day it was quite paralyzed; the same day the leg on the same side became also weak, but the patient was always able to walk.

It was on the 28th of September that the patient entered the hospital first at the Pitie, and then at the Salpêtrière.

In walking the patient drags the paralyzed limb after him, according to the classical description given of hysterical paralysis by Todd. The limb is quite flaccid, and no effort is made to raise it from the ground. There is no circumduction as in ordinary hemiplegia of organic origin. The right

arm is pendant without rigidity except the fingers, which are extended together and flexed at the carpo-phalangeal joints, so as to make a right-angle with the palm. There is a spasm in the fingers, as can be ascertained by the elastic recoil on forcible movement; the position is not that of claw-hand assumed by the fingers after muscular atrophy. The right hand can only press the dynamometer to 11 kilos, whereas, the left gives 120 kilos. There is no increase of reflexes in the arm or leg. This again points to the absence of spastic paralysis, secondary to an organic lesion.

On the whole of the right side—limbs, head, and trunk—there is complete anæsthesia, a rare condition in ordinary hemiplegia due to a lesion in the posterior part of the internal capsule. The joints can be distorted without causing pain, and there is loss of muscular sense. These symptoms would suffice to establish the presence of hysterical paralysis, but there are other signs. There is no facial paralysis on the right side, but there is slight spasm which draws the face to the right or the paralyzed side. The tongue is also hooked toward the right side when protruded. There is restriction of the field of vision on the right side only. No loss of color vision, but anæsthesia of the pharynx; also deafness, and loss of taste and smell on the right side. All these confirm the diagnosis of hysterical paralysis.

In this case there have been no convulsive attacks, and one can find no hyperæsthetic or hysterogenic zones, but these are not necessary to establish a case of hysterical paralysis. Hysteria has many developments, and all cannot be found together on the same person. Hysterical men of the laboring class, observes Professor Charcot, are always dull, melancholic, depressed, and discouraged, as is the case with the present poor patient since the commencement of this attack, due to the toxic action of bisulphide of carbon. Before this he entered into his daily work with a certain amount of resolution; now he is persuaded that he is good for nothing, and gives up entirely to despondency. This man has also terrifying dreams, which are of frequent occurrence

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with hysterical men. Four cases have now been discussed, in which the following symptoms of hysterical paralysis exist:

1. A more or less sudden paralysis of limbs accompanied with total loss of muscular sense.
2. Complete anæsthesia superficial and deep, the affected regions being sharply defined without reference to nerve distributions.
3. Flaccidity of paralyzed limbs, or spasms without increase of deep reflexes.
4. Loss of special senses on affected side, color blindness, and restriction of field of vision.
5. No failure in nutrition of muscles.
6. Absence of facial paralysis.

The point which I wish to enforce is, that hysterical paralysis, occurring as it does more often among women, due to a neurotic inheritance, sexual disorders, emotional attacks, debility, and other exciting causes, can also be excited in both men and women by injury and toxic agents, of which alcohol is one of the most common, although it may also produce other disorders peculiar to its destructive action on the nervous system, such as delirium tremens and alcoholic paralysis. Epilepsy, general paralysis of the insane, and chronic dementia, are also attributed to the degenerative changes produced by alcohol, so that the addition of hysterical paralysis to this list of neuropathics is justified by the analogy to be drawn from the facts stated in this paper.

THERE are two hundred and fifty thousand saloons in the United States. East of the Mississippi there is one saloon for every one hundred and seven voters; in the eleven Mountain States and Territories, one for every forty-three voters. There are seventy thousand criminals in this country. The population doubles once in twenty-five years; while the criminals double in ten years. — MRS. WILLARD.

INEBRIETY NOTES.

By S. V. CLEVENGER, M.D., CHICAGO.

An interesting case of dipsomania was afforded by one of my patients, a well educated, honorable man of fifty-five years of age. He was skilled in an artistic branch of architecture, and usually earned five thousand dollars yearly. Almost invariably his spree were preceded by a week or so of over-work at his office, far into each night, and this extra labor was recognized by his employers and friends generally as the active cause of his attacks. He would never profit by the past, but as he grew more exhausted, would laugh at all remonstrance, and suddenly abandon business, and go from one rum-hole to another, until crazy drunk. During one of his prodromal periods, he, with his family's consent, authorized me to lock him up in the Alexian Hospital, if he were found drunk. He doubtless had no expectation of drinking at all, but appeared at my office in a few days thereafter and hilariously surrendered himself. In two days' time he seemed to be his normal self, but I was not able to argue him into consenting to stay any longer. He used only the most gentlemanly expostulation, stating that his children needed him at home as a daughter was about to be married, and that certain matters of business had to be arranged or he would suffer great loss. Against my better judgment I allowed him to go, as I doubted the legal validity of his former consent to be detained, and in an hour after his release he was furiously drunk.

From six months to a year would pass between attacks, and during his sane intervals he would discuss his ailment with great intelligence, and express heartfelt regrets that he should be liable to make a periodical ass of himself. These relapses would last from one to two weeks, when he would go to work again with all regularity and his usual ability. It

did not seem to matter whether he totally abstained or took a few drinks daily as to the sooner return of his lapses. What seemed to astonish him most was the fact that he would be on his way to the office some morning and suddenly find himself many miles away from where he should be and in some vile stock-yards' whisky den, a place utterly repulsive to him when himself. The epileptic-like automatism of this act reminds me that one of his daughters has *petit mal*, about monthly, and a severe convulsion yearly, and, further, overwork or anxiety about her father invariably precedes the *haut mal*.

We have in this case some justification for believing that there is a neurotic epileptic-like predisposition akin to what his daughter has inherited (all other members of the family are healthy), suggesting that some inebriates might be benefited by amylnitrite, at the onset of a paroxysm, and by digitalis, ergot, strychnia, at times, to regulate the circulation and prevent relapses.

The neurotic origin of some forms of dipsomania is still better illustrated in the following case, the antecedents of which are traced back to the last century:

The paternal first generation was descended from Swiss Huguenots, with all the sturdy characteristics of a people who braved death for what they considered the right. They were farmers and American soldiers in time of war, one of whom earned great distinction for bravery in the Revolution. They were healthy, temperate, upright, and religious, but not dismally so.

The maternal first generation also had soldier representatives in the war of 1812, and were devoted Methodists of the hyper-conscientious kind, temperate in liquor using, but decidedly neurotic. One female suffered from profound melancholia for three years during the menopause. She lived to her eightieth year, however, and was the immediate ancestor of the next maternal generation.

The second paternal generation was untainted by nervous disorders or intemperance; one male, in the direct line,

rose to distinction in civil life, and all were esteemed for integrity and industry.

The second maternal generation held a preponderance of neurotics, two men died drunkards, two women were hysterical—A and B;—another, C, was a sufferer from periodical headaches and in lesser degree inclined to hysteria; D was very obese, but E was mentally and physically the healthiest of all, though from her seventieth to her seventy-fifth year was greatly depressed over a dissolute son. A was also choreic in youth and died of phthisis; B died of uterine cancer, C of phthisis, D of nephritis, while E is living and enjoys fair health.

The third paternal generation turned out fairly well, but the stock was diluted by marriage and the appearance of one or two inclined to drink too much, a single instance of mania from overwork, who fully recovered in three months; the children by union with E to be separately considered.

The third maternal generation affords from A one feeble minded, one choreic and hysterical, one dipsomaniac; from B, one dipsomaniac, three healthy; C had no descendants; D, one insane since puberty, two healthy. The offspring of E were Thomas, who was healthy, Jane eccentric, bordering on paranoia at times, and though strictly speaking not hysterical, she was over nervous. James was the youngest, and his case we will specially consider later. E's first husband died, and by a second marriage, this time with a dipsomaniac who died of phthisis, Robert was born, and it was this son who grieved the mother nearly to death by his long spree and reckless extravagance in dissipation. He is now forty years old, and has been sober probably half his years, but he cannot be utterly condemned for exhibiting what he has honestly inherited through the union of a drunkard with a most excellent woman whose immediate relatives were pronounced neurotics.

James lost his father early in life, but the perfections of that parent were always held up to him for emulation and to be proud of. The influence of this, combined with the trans-

mission of these good qualities, he felt throughout his life, sustaining, often against temptation, and greatly helping him in his battle with what he came to recognize as a decided weakness for drink, in which he began to indulge when sixteen years old. From this age up to twenty he averaged about one drink of wine or whisky weekly. There did not seem then to be any great desire for liquor, and he very rarely drank alone, but when in the company of those whom he looked up to he at times drank to excess, invariably followed by a long period of remorse, and fairly well-kept resolutions. At no time in his life did he ever start on a bout by himself; and beginning with a recognition of there being a strong neurotic predisposing influence held in check by good heredity, mainly paternal but also maternal, we need only now regard the exciting causes, the first of which is conviviality, and right here a good inherited trait was made to contribute to his suffering, for he had an insatiable desire for learning, and he made boon companions only of those whose education or abilities he respected, dropping them as soon as they had no more to impart and reaching higher always. "But," I objected at this point, "you don't mean that you could only learn from drinking men, and that there were not also learned men who were sober." His explanation was that being at work he could not secure a systematic education, and was somewhat repelled from orthodox methods of learning, anyway; preferring to think out what he incidentally gained by conversing with well-posted fellows, and reading. He is also tenacious of the belief that until, and unless, the deteriorating stage of intemperance is reached, if there is any difference mentally, morally, or otherwise, between the drinker and the abstemious, it is in favor of the general absence of hypocrisy among the former; the successful gambler, not daring to risk a test of "*in vivo veritas*." Hence he thought he found as much ability among drinkers as elsewhere, and decidedly more communicativeness. But with all this he would arise the morning after a "time of it," with the utmost detestation of

his weakness, and for weeks could not be induced to touch liquor. He says that he observed that dipsomaniacs preferred each other's company and shrank from the common soaker.

Upon reaching his majority, he entered the army during the late war, and soon became an officer of artillery. Here he met bright men, and while in charge of an arsenal, studied the subject of heavy and light ordnance, to such purpose as to enable him to write a standard work thereon. The discipline of army life, and responsibility as an officer, subdued his failing somewhat, but he recalls two or three nights with brother officers with anything but pride.

At the close of the war he began a practical study of bridge and railroad building, and soon pushed his way to the front as an authority in his science. I do not know anything about his speecs except what he tells me, as in the day-time he avoids drinking, and while his occasional night drunks are more widely rumored than his good qualities, as is usually the case, his business friends never complain of these as having ever interfered with his duties. Nevertheless, he suffers anguish over what he calls his Jekyll and Hyde career, and further narration of his case can be given in his own words:

"The task you have set me, my dear doctor, is not pleasant, and I have often determined to beg a release from my premise, but it struck me that compliance might not only benefit others, but myself as well, by trying to analyze what you are pleased to call my disease, but which some of my intimates insist is a folly that I could avoid if I wanted to. Probably both views are correct; I can't say. Sometimes it seems one thing, and then the other. Is any one at all times so coolly, calculatingly master of himself, his promptings and performances, as to be able to account to himself for everything he has done in his life? Has not each a grief over something done or left undone because his will was weak or emotion too strong?

"Well, it appears to me as though something of that sort

happens to me with regard to a particular affair oftener than is reasonable.

"It is no solace that I have lots of company in my 'affliction,' that there are legions far worse than myself; but there is comfort in knowing that I have sense enough to be able to hedge myself with all sorts of safeguards in the way of routinizing my affairs with reference to reducing my chances of tipping to a minimum. During the day I keep too busy to drink, and located my workshop so that my route homeward would be unobstructed by saloons. Mindful of Josh Billings' truism, 'After forty a man had better steer his habits, rather than contract new ones,' I have tried various steerings with variable success, until I grow suicidal over being made the sport of malevolent unseen powers.

"During thirty years my tipping has varied from steady to interrupted, with years, sometimes, of abstinence, depending much upon what occupied my time. My life has been one of determined planning, study, and working toward some goal, the attainment of which would require several years. Much has been realized, but at vastly greater cost of effort, time, and money than was expected; and so long as things went smoothly liquor had little, if any, apparent effect upon me, or, what was most frequently the case, I did not drink at all. When trouble came, lethal draughts were indulged in, but never continuously, for a revulsion followed *invariably* the next day, which would last till the next time, which might be a week, months, or a year or so away. As Herbert Spencer claims, resolutions are kept, as a rule, in proportion to the intensity and duration of the impressions that induce them. A particular object for which I worked might require all my energies, thoughts, and means to accomplish, in which case not a drop was taken. Success or non-success brought back the old habit, and, in the latter event, it seemed to take less to affect me badly. Prettexts to justify imbibing were never lacking when inclined to yield, nor would any sort of allurements at other times induce me to touch the cursed stuff, no matter how badly I felt. It

was this sort of combined or alternating strength and weakness that puzzled me, but I usually ascribed it to inherent wickedness, and a few glasses would suppress further moralizing. One feature never has ceased to amaze me: probably one or two days I had been enjoying the most torturing remorse, sincerely determined never to indulge again, when, presto, away would go not only resolutions, but *remembrance of ever having made any*, not only when taking the first drink, but before doing so. I cannot recall a solitary instance when tight, that I regretted my habits. The nearest to this was once or twice endeavoring to brace up, and feeling angry at not succeeding. At times, to all appearances, I would be as sober as a judge, and suddenly collapse, usually when there was no further occasion for struggling against the stupor.

"About a dozen times in my life, I can cudgel my brains into recollecting everything that happened up to a certain moment, when the memory of everything was blotted out until the next morning, when I awoke to an agonized realization that I had repeated my folly. Later I would ascertain that I had, may be, walked or ridden miles and gone through the many complicated motions necessary to reach home, and preserved not the faintest idea of any circumstance. Time and repetition seem to have adjusted these machine-like movements to a groove, or some influence from my sober life prevails to keep me out of mischief and move me homeward. Being a bachelor, there is no one to suffer by my doing. Women must suffer greatly when linked to such defectives.

"As deterrents from a relapse I would try to keep in mind that I always felt upset, melancholy, lost my self-respect, after a bout; that bar-keepers were robbers, utterly unprincipled, poisoners, indifferent to the death and degradation dealt out; that their occupation hardened them to the suffering they caused; that I had lost money by patronizing them, and had even had my pockets picked in their dens; that drinking, even without losing myself, lowered the moral

tone, produced recklessness, apprehensiveness, dread of awakening in the morning for fear of finding that I had not done right the day before. I would look at my altered, bloated visage in the glass, and note an evil expression about the eyes that made me hate myself. Altogether, I was downright unhappy over matters, with the same old slips recurring. Drink seemed to set the whole world perfectly right, and I would then laugh at reproachful friends.

"As incentives, I would try to remember how thoroughly well and clear-headed I felt when abstaining, that business moved along better, my draughtsmen, clerks, and mechanics experienced the change for the better, and mechanics plished more, my food agreed with me, I took renewed hope, felt my self-respect return, always had more money, and, in short, the earth wore a different look.

"But I did not sleep well long after a break-off, and for this you gave me salines, sulfonal, and cut down my tobacco-using. I incline to think that much sleeplessness is due to the tobacco habit, and that whisky-taking sometimes results from it.

"To show you how circumstances affect my habits, I will mention that I have been about a week in writing this to you, and having the matter before me as a deliberate study I have been able to keep away from temptation. I could say much more, but hope it will suffice for your purpose."

This case reveals a healthy, if not overstrung, conscience, inherited with his defects, and it is quite possible that complete recovery may be secured. Good results have been obtained by using euonymus atropurpureus when there was hepatic sluggishness. In hospital satisfactory effects followed the use of this drug in the bloating of old beer-swillers. I think euonymus has not been sufficiently appreciated; but be sure to get a good article, for some manufacturing prostitutes sell a very impure imitation.

A Polish female was sent to me while writing this paper by Dr. O. L. Schmidt. She certainly presents a suggestion of the occasional neurotic origin of inebriety. As far as can

e learned from her unintelligent relatives, there is no heredity, and she was free from all sickness or "vices" up to her thirtieth year, when, to the astonishment of all, she was often found dead drunk. She would sober up, and epilepsy would begin. From what I can gather, fits alternate with drunks. It may be epilepsy due to drunkenness, or both troubles may originate from some unknown cause.

I have a case of agoraphobia, and what some alienists call panphobia, who finds relief from nothing but drink. He had a severe fright when a child, and pericarditis supervened. I shall report this instance in full in Hughes' *Alienist and Neurologist*.

PROF. OSLER writes to the *New York Medical Journal*, that in all the large hospitals of Germany, cases of diseases of the heart coming directly from excessive use of beer are common. Dilatation of this organ seems to follow where enormous quantities of beer are used. Hypertrophy is another common disease, due directly to this cause. Some authorities think that large quantities of beer and hard work raising the aortic blood pressure are the common causes. Others assert that excessive use of beer alone is the principal cause.

In Munich, the average consumption of beer for every individual is three quarts a day. Some of the men who work in breweries drink from three to six gallons a day. After a few years shortness of breath comes on, with oedema of the feet, and general anasarca of the body, and loud systolic murmurs, then heart failure and death. Most of the workmen at the large Erlangen breweries break down at forty or before, and die in this way.

The beer production for 1889 was, in this country, 234,761 barrels more than in 1888, over six per cent. New York city produced 8,644 more, the largest increase of any city in the country.

Abstracts and Reviews.

REPORT OF INEBRIATES LEGISLATION COMMITTEE TO BRITISH MEDICAL ASSOCIATION.

The attention of your committee was, during the past year, specially directed to the reception and collation of replies to an inquiry issued to boards of guardians, as to whether in their opinion guardians should be empowered, for curative purposes, to detain habitual drunken pauper inmates, either in the work-house or in some special home for the treatment of the disease of inebriety.

Three such circulars have been issued by your committee. The first was sent out in 1881, the second in 1882, the third in 1889. To the first 36 replies were returned, to the second 49, and to the third no fewer than 229. The affirmative responses were, in 1881, 14; in 1882, 27; and in 1889, 131.

Your committee congratulate the association on this remarkable advance of their proposals in the estimation of poor-law guardians, as shown by the total replies in 1889 having been fully six times and the favorable replies nearly ten times as numerous as in 1881. The affirmative responses during the past year have outnumbered by 13 the total number of the opposed and the neutral, while many of the neutral are from boards which have had no experience of drunken "ins and outs."

Your committee have been gratified by noting a corresponding advance in public opinion on compulsory legislative provision for the treatment of inebriates. Several public bodies, including the Royal College of Physicians of Edinburgh, the Society for the Study of Inebriety, Justices of the Peace at Manchester, and the Birmingham Prisoners' Aid Society, have passed resolutions in favor of such a pro-

cedure. In Scotland, the medical and legal professions have largely signed a memorial to the Lord Advocate in support of the leading provisions of Mr. Charles Morton's proposed measure for the compulsory reception and detention in Reformatory Homes of diseased inebriates, for the reception and detention of voluntary inebriate applicants without the ordeal of an appearance before justices, and for contributions from the rates. These proposals have also been approved by your committee and by the association.

On the Continent, resolutions were agreed to at the Congresses of Belgium and Paris, approving of the interdiction of the diseased inebriate whose will-power has been broken down, and his detention in a special institution for the treatment of his malady. In the United States of America, under the presidency of Mr. Clark Bell, of the New York bar, the subject has been prominently discussed by the Medico-Legal Society, and by the International Congress of Medical Jurisprudence; while the American Medical Association devoted an entire sitting to the question. The American Society for the Study and Cure of Inebriety has celebrated its nineteenth anniversary by a dinner to the president, Dr. Joseph Parrish, on his 71st birthday, a record of the jubilant addresses at which is published by Dr. Crothers in the QUARTERLY JOURNAL OF INEBRIETY.

With a view to bring these with other encouraging signs of advancing public opinion, as well as the gratifying experience in the treatment of inebriety at the Dalrymple Home and other places for the therapeutic cure of inebriety, and the results of the working of the Inebriates Acts, before the legislature, your committee, conjointly with the Society for the Study of Inebriety, have memorialized the Prime Minister, the Home Secretary, and the Government for a Parliamentary inquiry into the practical operation of existing legislation. Dr. Cameron, M.P., has given notice of a motion for the appointment of a committee for this purpose.

The committee recommended their reelection as follows: President and President elect, *ex officio*, the President of

Council; Dr. Norman Kerr; Mr. D. P. Balding, J.P.; Dr. T. Bridgewater; Dr. C. Cameron, M.P.; Dr. Alfred Carpenter, J.P.; Dr. G. B. Clark, M.P.; Dr. C. R. Drysdale; Mr. George Eastes; Dr. J. W. Eastwood, J.P.; Dr. R. Farquharson, M.P.; Sir Walter Foster, M.P.; Dr. W. P. Gairdner; Mr. W. C. Garman; Dr. J. Hill Gibson; Dr. A. Grant; Mr. F. J. Gray; Mr. C. J. Hare; Mr. R. H. B. Nicholson; Surgeon-Major G. K. Poole, M.D.; Mr. J. Prankerd; Surgeon-Major Pringle, M.D.; Fleet-Surgeon G. Robertson, M.D.; Dr. Grainger Stewart; Dr. G. Danford Thomas, Coroner; Dr. H. W. Williams; Dr. Wynn Westcott; Dr. E. Hart Vinen; and Mr. H. R. Ker.

NORMAN KERR, M.D., Chairman.

The Influence of Heredity on Alcoholism. By PAUL SAL-
LIER, M.D., PHYSICIAN IN PARIS HOSPITAL, FRANCE,
1890.

Alcoholism in Women. By DR. THORNEUF, PHYSICIAN TO
LORIENT HOSPITAL, PARIS, FRANCE, 1890.

These two works are published in Wood's Medical and Surgical Monographs for July and August, 1890. The first is a prize essay, of one hundred and eighty pages, giving a historical sketch and resumé of the views of the leading authorities on this topic, and illustrating them with histories of cases. Chapter second is devoted to statistics. Chapter third to the influence of heredity on the manifestations of alcoholism. Chapter fourth to influences modifying heredity. Chapter fifth to the psychopathic family and alcoholism. Chapter sixth the neuropathic family and alcoholism. The treatment of this subject is exceedingly clear and suggestive, and there is probably no book published more thoroughly scientific and exhaustive.

The second work is more brief, and gives the studies of the author in both hospital and private practice. It is based on the histories of three hundred cases of women, and the

conclusions are illustrated by many suggestive histories, and the whole forms a very valuable contribution to the very meager literature of this subject. These two works are indispensable to the library of every specialist and neurologist, and comprise the most important addition to the subject which has been made for a long time. We trust the publisher will issue them in a separate volume soon. Copies can be had from Wm. Wood & Co., New York city, publishers.

SPINAL CONCUSSION SURGICALLY CONSIDERED AS A CAUSE OF SPINAL INJURY, ETC.;
By S. V. CLEVELAND, M.D., Consulting Physician to the Reese and Alexian Hospitals, Chicago, Ill.; late Pathologist County Asylum, etc., etc. F. A. DAVIS, publisher, Philadelphia, Pa., 1889.

The author, in the introductory, invites criticism in regard to his views, which is always a shrewd advertisement for any work. The critic who accepts this invitation always gives both the publisher and author an immense advantage, and extends the natural life of the book. The purpose of the work is evidently to condense and bring together all the latest facts and data on which they are based, concerning spinal concussion, and its medico-legal relations. Cases and authorities are given to aid the student and lawyer who may be working in this field, and the general style is clear and forcible. Chapter five, which gives a full translation of the Oppenheim brochure is the most valuable part of the work.

This, with the cases that are given, will long be the great authority on this subject. The chapters on diagnosis, pathology, and treatment, are all good, and the medico-legal considerations indicate the lines which should be taken in court to arrive at the exact facts. The chapter on traumatic insanity is very rich in suggestive facts. The following are a few sentences: "Alcoholic complications (in these cases of spinal concussion) are very numerous, and are often compli-

cated with wife murder, as these lunatics have always delusions and hallucinations of marital infidelity, and commit peculiarly horrible crimes. Both alcoholic and traumatic insanities develop murder, with but little provocation.

"Alcoholism may in the ancestry predispose through transmitted nervous or mental instability, so that traumatism will more likely induce insanity in a descendant. It renders the individual liable to accidents, despite the old saying that drunkards escape injury.

"Previous alcoholic habit complicates and aggravates traumatic cases as it does pneumonia, and may be the determining factor in insanity, when abstemiousness with the same injury would survive and remain sane. The proneness to alcoholic addiction is observed as more frequent after head injury, sunstroke, or over-heating. Traumatic cases are quickly and badly affected by small amounts of liquor, which previous to the injury would have little if any effect."

The author will be remembered by our readers for his excellent paper on "Traumatic Insanity in Inebriety," published in our journal. Also for a suggestive work on comparative physiology and psychology, which was reviewed in the columns of this journal. The reader will find in this book the best discussion and summary of the facts on this topic, which will make it very valuable to every physician. For the specialist it is a text-book that will be often consulted. The work is well printed and well arranged, to the great credit of the publisher.

PHYSIOGNOMY AND EXPRESSION. By PAOLO MANTEGAZZA, Senator; Director of the National Museum of Anthropology, Florence; President of the Italian Society of Anthropology. Two double numbers of "The Humboldt Library," price 50 cents each. THE HUMBOLDT PUBLISHING CO., 28 Lafayette Place, New York.

Professor Mantegazza is the leading anthropologist of Italy, and his work has been already translated into several

European languages. He has written a new chapter for the present edition, which contains his latest views on the subject which he has made his own. Taking up the study of expression where it was left by Darwin, Professor Man-tegaza has treated the subject in a style that is at once popular and scientific. He has endeavored to distinguish observed facts from mere opinion or imagination, and he has given definiteness and coherence to the many new facts already collected.

The ancients, from Cleanthes up, believed that they could recognize dispositions from the looks. Lavater, who was a physician, a naturalist, and, above all, an enthusiast, first gave something of a rational form to physiognomy. What the volume proposes is, "to restore to anthropology and to psychology that which belongs to it by right, and to make known the positive documents which we possess to-day on the human countenance and on expression."

IRREGULARITIES OF THE TEETH AND THEIR

TREATMENT. By EUGENE S. TALBOT, M.D., D.D.S., Professor Dental Surgery Woman's Medical College, Chicago, Ill., etc., etc. P. BLAKISTAN, SON & CO., Philadelphia, Pa., publishers, 1890.

This is one of those exceedingly practical works that every physician should have in his library for aid and consultation. It is well written, and contains many very suggestive chapters and hints on a topic that the average physician is not well acquainted with. We commend this work as a very valuable addition to any library. It is printed in a tasty form, and well illustrated.

The Popular Science Monthly, D. Appleton & Co., publishers, New York city, has been unusually rich in strong suggestive papers during the summer and fall months. President White's articles, "On the Warfare of Science," attract great attention, and the large variety of scientific topics presented by leaders of thought in all the fields of advance, make it one of the most attractive monthlies published.

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DARWINISM AND POLITICS; By DAVID G. RITCHIE, M.A., Fellow and Tutor of Jesus College, Oxford. To which is added ADMINISTRATIVE NIHILISM. By Professor HUXLEY, F.R.S. Paper, 15 cents. THE HUMBOLDT PUBLISHING Co., 28 Lafayette Place, New York.

In his able essay Mr. Ritchie contends that the phrase "survival of the fittest" is very apt to mislead, for it suggests the fittest or best in every sense, or in the highest sense, whereas it only means, as Professor Huxley has pointed out, "those best fitted to cope with their circumstances."

The publication of Professor Huxley's "Administrative Nihilism" is well timed, and fits in with the preceding essay. The two essays form a very interesting number of The Humboldt Library of Science.

THE QUINTESSENCE OF SOCIALISM; By Professor

A. SCHAFFELE, former Minister of Finance in Austria. Translated from the eighth German edition by Bernard Bosanquet, M.A. Paper, 15 cents. THE HUMBOLDT PUBLISHING Co., 28 Lafayette Place, New York.

This number of the Humboldt Library is from the pen of one holding high rank among the economists of Germany as well as in the political councils of the Empire of the Hapsburgs. What we need at the present time is an accurate knowledge of what Socialism really is, for there is no gaining the fact that it is a mighty movement of ideas fast razing to the ground the old order of things.

Recent events in Germany give striking attestation of its stupendous power. If, therefore, we desire to get a thorough knowledge of the subject from a scientific standpoint we must read "The Quintessence of Socialism."

The Scientific American needs no comment. It has won a place in the homes of thousands of thinkers and science lovers all over the land.

THE INDUSTRIAL REVOLUTION OF THE 18TH CENTURY IN ENGLAND. BY ARNOLD TOYNBEE. In two parts, 30 cents each. THE HUMBOLDT PUBLISHING COMPANY, 28 Lafayette Place, New York.

The point of view of the author of this important work is that of one who, while he admits the benefits conferred upon mankind by the old school of political economists — Adam Smith, Ricardo, Malthus, and the rest — believes that their work is done, and that the world has got beyond them, and stands in need of something more. The work is a history of "the bitter argument *between economists and human beings*," to use the striking phrase of his chapter on "Ricardo and the Old Political Economy." When the economic relations of men are studied by an observer who to abundant learning adds the quality of human sympathy, the result is no "dismal science." Beside the treatise named above, the present work contains three popular addresses on "Wages and Natural law," "Industry and Democracy," and "Are Radicals Socialists?" as also papers on "The Education of Coöperation," and "The Ideal Relations of Church and State." There is a memoir of the author, by B. Jowett, Master of Balliol College, Oxford, England, in which college Toynbee was a lecturer on political economy.

The American *Law Register*. D. B. Canfield Co., Philadelphia, Pa., publisher, and *Current Comments*, by the same publisher, are two very pleasant publications, that are welcome to every library. They are of great interest to medical as well as legal men.

Send to 20 Liberty Street, New York City, for a copy of *The Doctor*, a journal of preventive medicine, full of valuable facts presented in a most graphic way.

The *American Journal of Psychology*, edited by President Hall, at Worcester, Mass., grows in value with each issue. It is one of the most creditable publications in American scientific literature.

LEGAL TREATMENT OF INEBRIATES.

We have many times referred to the stupid blunders of courts in sentencing inebriates to prison for petty crime and alcoholic excess, on the assumption that such means would deter others from like offense and reform the victim. Recently we have received the history of two cases which bring additional interest to the subject. Briefly, two young men were sentenced to jail thirty days for intoxication. The odium and personal condemnation following this event forced them into the lowest society, and from this time on they rapidly grew worse. Ten years later one was hopelessly insane, and the other was a cripple in the alms-house. During that time they had cost the State for court expenses and board in jail over three thousand dollars each. Both had been implicated in fatal assaults and had been arrested for various petty crimes, and both had been centers of lawlessness and loss to the community. The conclusion sustained by all the facts of their histories showed that the mistake of the first sentence to jail was the active cause of their final ruin.

Such cases are not unusual, and yet notwithstanding the evidence which can be found in every court-room, the same terrible blunders are repeated over and over again. The assumption that the abnormal condition of the inebriate is a matter of free will and choice by a normal mind, and full consciousness of the nature and consequences which might follow, is not supported by the facts from any scientific study.

The jail is a training school for the inebriate; the younger he is the more certain the influence and training becomes. It is literally a "hothbed" where physiological and psychologi-

al degeneration is actively stimulated. The contagion of criminals growing out of the intense interest relating to acts and conduct which brought them to prison, corrupts the already damaged brain of the inebriate, and still more infits him for restoration and recovery. The great English authority on prisons and prisoners, Rev. Mr. Horsley, declares all "prisons and jails miserable failures in deterring from crime or reforming the criminal. For petty criminals and inebriates, they are simply refined forms of Lynch law, in which all possibility of normal living for the future is destroyed." Another English authority, a prison chaplain, says: "If the law was designed to manufacture criminals and defectives that are beyond hope of restoration, no means could be more certain than short and frequent sentences to the common jails and prisons of the land."

Judges in courts of France have asserted over and over again, "that the increase of drunkenness and petty crime which comes before the courts is due largely to prisons and their faulty management, where such offenders are confined."

M. Lalone, Inspector-General of prisons in France, stated that twenty-four hours' imprisonment in certain cases would "ruin a man." The explanation was this: A man arrested and sentenced for inebriety or any petty crime might in that short time make prison acquaintances whose influence would destroy him with great certainty. Several authorities and commissions for the examination of prisons in this country have asserted boldly, "that jails and prisons (with but few exceptions) were moral pest-houses and schools of crime." A recent authority thus sums up the question of treating habitual inebriates who come before the court: "Such classes must be dealt with by special methods. The present means of short imprisonment is glaringly ineffective, and not only is a waste of time and money, but increases the disability of the victim and makes him more dangerous to society. Such cases must be recognized as diseased persons, and treated on rational principles, beyond their own will or voluntary agency. They are more dangerous to society than

the insane, and demand more prompt care and recognition than the insane."

The criminal inebriate should be sent to special reformatory hospitals for an indefinite period, depending on his condition and recovery. Such hospitals should be training schools on a military plan, where labor, duty, and obligation should be added to all physical remedies for restoration. Such a hospital is a practical reality in many ways to-day. Its success is assured, and the individual or State who will put it in operation will achieve fame, and mark the beginning of a new era in the humanitarian history of the race.

THE execution of Kemmler by electricity was one of the great sensational events of the day. Volumes of comments were made by the press, pulpit, and medical journals, that exhibited profound ignorance of the real meaning and significance of this event.

While the method and manner of carrying out the death penalty seemed of greatest interest, other far more important questions were overlooked. Thus, has humanity outgrown the savage instinct of vengeance, on which the death penalty is based? Has civilization carried us beyond the barbaric law of blood for blood? Is the law of capital punishment an evolutionary growth, along the upward march of mankind? Or is it a survival from the childhood and brute age of the world? Does not all scientific advance protest against the use of its marvelous forces, in perpetuating savagery and ignorance? These are some of the questions that have received a new impetus in Kemmler's death. Other questions appear of most vital importance—demand recognition and answer. Is the extreme punishment of alcoholic dements in accord with the teachings of experience, and the clearer knowledge of the brain and its manifestations? Have the legal conceptions of responsibility and crime grasped the whole truth beyond possibility of change from any advance of science? Shall we continue to trust to the

shifting judgments of stupid jurymen questions of brain capacity and responsibility — questions that baffle the highest skill and learning? How long will criminals and murderers be trained and permitted to poison themselves, and send down to the future a stream of defects, then be destroyed as a retaliation? How long shall the terrible blunder be repeated of punishing by death criminal lunatics, from alcohol or other causes, whose entire history and heredity contradicts the assumption of sanity and legal responsibility? Science, humanity, and justice are outraged by the capital punishment of such cases as Kemmler. Crime is not made odious or deterred. The defective and criminal mind is only fascinated by the publicity of the punishment. Society gains nothing, human rights gain nothing, and the causes of crime are not removed. Kemmler's unjust and sensational death will be the birth of a new and more rational jurisprudence, founded on the teachings of the nineteenth century. The superstitions of the dark ages must give way to the newer lights of advancing civilization.

DR. KERR's vigorous protest against the therapeutic use or value of hypnotism in disease, before the British Medical Association, has roused up much interest in many circles. His claim that hypnosis always favors states of mental unsoundness, and tendencies to develop morbid nervous susceptibilities and unstable brains, is supported by some experience. Its value in the treatment of inebriety has roused extravagant expectations, and the supposition that the hypnotic impression of the idea of inability to drink can be made permanent, is not sustained in the history of cases. The damaged brains and perverted functional activities of inebriates are not controlled long by mind impressions from without. The subsidence of the drink paroxysm is often followed by the most intense mental horror of spirits, and a profound impression never to use it again. This is far more powerful than any external hypnotic suggestion, and yet it is

evanescent and seldom permanent. The intense solicitude and personal thought which is often concentrated about inebriates — should, according to the teachings of hypnotists, be powerful in protecting them from relapse. The opposite is more often the history of such cases. Practical workers in the treatment of inebriates are unable to confirm the experience of hypnotists and their friends who claim to have made so many cures by this means. The suggestion of Dr. Kerr is no doubt true, that the present enthusiasm over hypnotism is an epidemic, which will die away after a time. Also, that its value as a therapeutic agent will be along far different lines than any which are known at present. In the meantime, Dr. Kerr deserves the thanks of the profession for his most suggestive warning of the possible dangers which may follow from its use.

From a long letter written by an eminent medical man, we condense the following: "I was greatly shocked at the number of persons intoxicated at the banquet given to the International Medical Congress at Berlin. My surprise was increased to note that many of them were eminent German and French teachers of medicine. I had supposed medical men, accustomed to use wine and beer daily, were less likely to be intoxicated than the partial abstinent American or Englishman, who naturally are more easily affected by large quantities of wine. At the banquet given to the congress at London, a small number of medical men were stupidly intoxicated, and at Washington the number was still less. As far as could be observed those cases were mostly persons not well known. At Berlin it was the opposite; many very prominent men and leaders were offensively hilarious or stupid. The drinking seemed to be of a reckless, impulsive character, which is only seen in low life in this country. At London and Washington, men who were notably excessive users of spirits drank with reserve and caution, and gave no evidence of intoxication, but at Berlin it was the contrary.

DR. BROADBENT, in his late address before the British *Medical Journal*, says a mark of a weak medical man "is the indiscriminate use of stimulants in fevers, a ready resort to narcotics and sedatives, treatment directed to symptoms only, and a fondness for new drugs of high-sounding names."

In all cases of inebriety there are certain general characteristics that are common to each one.

When the symptoms are grouped and compared, some of them are found to be identical in heredity, development, progress, and termination. In some cases traumatism, disease, environment, contagion, neurotic disturbance, conditions of exhaustion, and other causes, are followed by identical symptoms, along exact lines, that rarely vary. The more thoroughly these cases are studied, the more apparent the similarity becomes.

Cases which seem most anomalous, in their history and progress, are found to be alike in heredity and other respects. This close identity of history and symptoms indicates distinct classes and groups that are unknown. It points out ranges of causes, governed by laws and conditions also unknown, and suggests that we have scarcely touched this subject scientifically.

Dr. Descartes of Paris writes, that over half the income of all medical men of France comes directly or indirectly from excessive use of spirits.

This is true of the medical practice in large cities in this country, especially in practice among men.

A chocolate inebriate has appeared. His addiction has been for three years, and his general health is much impaired, principally the digestion. His only thought night and day is how to get chocolate.

In France, from 1827 to 1880, about two hundred thousand persons committed suicide. Of these, over fifteen thousand men and eleven hundred women were inebriates, and intoxicated at the time of death.

The doctor concludes, that the moderate beer and wine drinker has far less power of control, and is far more likely to be delirious or stupid from excess of spirits, than the self-reliant occasional drinker in America or England. He believes that the American physicians are the most temperate in the world, and exhibit more pride of character and personal respect at banquets where there is a general unbending of social restraints."

To this we would add, that in our opinion it is always a sad reflection on the manhood of the medical man, who after a protracted study abroad, brings home with him foreign customs of moderate use of wine and spirits. It implies a degree of ignorance and parrot-like imitation that becomes more and more apparent every year. The physician, of all others, should be the last one to use spirits in moderation or excess. The use of alcohol as a beverage is direct evidence of ignorance of the teachings of modern science, and failure to keep up with the growth of medical advance. We believe no facts are sustained by stronger evidence than these.

DR. MATTISON, the well-known specialist, is organizing an asylum for the special treatment of opium, chloral, and cocaine inebriates. It is proposed to endow a certain number of beds for the indigent, and apply special personal treatment not easily obtained in other asylums. Dr. Mattison has for many years treated these cases exclusively in a small family home, and this effort to enlarge and extend his unusual facilities should receive the warmest support and endorsement from all charitable persons.

If the law in force in Bulgaria that advertised medicines which failed to do what was promised, should make the manufacturer and vendor responsible, the opium cures and many other remedies would disappear at once from the market.

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MORE STRINGENT LAWS AGAINST INTEMPERANCE.

The only possible way to effectually supervise the liquor traffic, is to exact from distillers, brewers, and wholesale dealers, monthly or quarterly statements of customers and of amount of liquor sold to each. The retail dealers should make specific reports of the amount of liquor sold, pay a license fee proportionate to the value of liquor bought, and be forbidden to keep the liquor in the same room or compartment where it is drunk. Where the officers of the law are loath to arrest drunkards, a warrant should be issued for the immediate apprehension of a drunken person accused before a magistrate by the sworn statement of two citizens. When the accused is brought before the magistrate, the latter should then and there give a decision without further assistance from the witnesses. If the accused cannot be produced before the magistrate within two or three hours after the issuing of the warrant, the accusation should become void. Besides the penalty imposed upon drunkards, a fine should be assessed on the owners of railroads or other carriers who have conveyed a drunken person from one city or town to another. If a person convicted of drunkenness is not able to pay the fine imposed, such fine should be levied on the dealer or dealers who have sold or given liquor to that person on the day of conviction. If no guilty dealer can be found, the single fine should be imposed on the combined dealers of a city or town. It would be within the boundaries of justice thus to compel the liquor dealers to contribute freely towards caring for those whom liquor has sent to penitentiaries, prisons, asylums, and almshouses. — *Handicrafts for Alcoholism*, Rev. G. Zurcher, Buffalo Plains, N. Y.

WHEN IS A MAN DRUNK?

Recently it was stated in the House of Commons that it was a publican's business to know when a customer was drunk. A few days previously, a metropolitan police magistrate was reported to have censured an inspector for calling a medical practitioner to pronounce whether an accused was drunk or sober, and to have stated that no doctor was needed for such a purpose, a policeman being competent to determine the matter. These parliamentary and magisterial dicta are somewhat dogmatic, and are not warranted by all the phenomena of intoxication. I have seen a gentleman, after copious libations, appear perfectly sober till he emerged into the open air, when he became noisily and offensively drunk. I have had patients who maintained a consistent character for sobriety, who drank freely but who never seemed "the worse for liquor," till, on an emergency, they had to go out in response to some unavoidable summons, when their intoxicated condition was made manifest. I have seen case after case, which if I had testified to truthfully in the witness box, I would have deemed drunk, and yet a few hours revealed a fatal intercranial lesion. Prisoners have frequently been found dead in a police cell, because the officials in charge looked upon the *détenu* as simply "drunk." The determination of whether any one is drunk or sober, is often, even to a medical man experienced in such cases, extremely difficult, as well as unreliable. If it were not so, the ominous heading of "Drunk or Dying" would not be so conspicuous in the columns of our newspapers. The smell of drink proves nothing, for if the most rabid teetotaler became unconscious on the street from any functional or organic derangement or from an accident, at least one average Englishman will assuredly rush to the nearest public house, and, armed with a supply of brandy, *vi et amicitis*, pour a quantity of this British panacea for all the ills to which flesh is heir down the nephalian throat. I have noted only two definite discriminating symptoms, temperature and contraction of pupil.

The temperature is usually subnormal in drunkenness, while either normal or supernormal in apoplexy or shock. In intoxication both pupils are contracted, in its absence only one is affected. But here again there may be confusion from the effects of alcohol administered by a bystander, though usually this administration has been too recent to produce a marked alteration of temperature or of the pupils. Neither excitement, violence, nor coma, is necessarily of alcoholic production. I have given evidence at inquests on persons who had died unexpectedly without medical advice, simply because they had repeatedly been apparently in the same condition before, and, after a "dead drunk" sleep, had awoke all right. The friends had said "drunk again," and the unfortunate victims on the last occasion never awoke. The term "drunk" is not satisfactory. I prefer "intoxicated" or "poisoned," and I define intoxication as "that state in which any person who is affected by an intoxicant, says or does anything which he would not have said or done had he not been under the intoxicating influence." There are degrees of intoxication, such as in excitement, without loss of control, in maniacal disturbance or drowsiness with loss of control, in paralysis, and in coma. This applies equally to the judge on the bench, the doctor in his consulting-room, and the clergyman in the pulpit. — *Annual Address, Dr. Kerr.*

WHAT is the remedy? We have tried penal measures. These are worse than useless. By a short imprisonment we have refitted the shattered drunkard, under abstinent and healthful conditions, in one of Her Majesty's teetotal club houses, for going forth and renewing the excesses which he had been temporarily incapacitated from continuing. Thus the wife and family have been neglected and starved, while their bread-winner was being cared for in our present government training school of inebriety.

Temperance hysterics, religious sensationalism, mesmerism, and a host of other reputed "cures," have been loudly

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applauded, yet the mischief goes on apace, and inebriety is to-day the scourge of modern civilization. We have been sailing on "the wrong tack."

Inebriates are laboring under this disease. Let us treat them as sick persons. By all means, let us, by wise prohibitory legislation, withdraw our licensed temptations to drink. Let us promote educational, intellectual, artistic, recreative, hygienic, moral, social, and religious efforts to drink and ennoble humanity. But let us not turn a deaf ear to the heartrending cries of our many brothers and sisters who are handicapped in the race for temperance and who are prone to proclivities, or bowed down under the inherited inebriating depressing environment, are gallantly, though often ineffectually, struggling for deliverance from the terrible weight of bondage on earth. Let us establish hospitals for the treatment of the poorest victims of this dire and fatal disease. Let us enact measures for the compulsory reception and detention, for curative purposes, of all inebriates, whatever their worldly circumstances, whose will-power has been so broken down by drink that they are unable, themselves, to strike a blow for freedom.

There is no "short cut" to sobriety. But, for the cure as well as for the prevention of the disease of inebriety, one essential condition is persistent abstinence from all intoxicating liquors. — *Dr. Kerr.*

IN Dr. Day's admirable report of Washingtonian Home, at Boston, Mass., occur the following passages:

It has been usual to consider that a sudden discontinuance of the use of intoxicants after a protracted excess is the ordinary immediate cause of an attack of what is called *delirium tremens*. My own experience, however, has been uniformly of an opposite description. It is a fact not well known, I believe, that when excess has gone to that degree where delirium approaches, the victim will abandon the usual

alcoholic indulgence. For thirty-two years I have treated from seventy-five to a hundred cases of delirium tremens each year, and I do not remember a single case where the patient has cried out for liquor, as is sometimes stated for sensational purposes. They constantly call for water, but not for rum.

To me one of the most painful results of intemperance is, that it often transmits epilepsy to the offspring; such children will appear to be bright and healthy until they arrive at the age of fourteen or fifteen years, when suddenly they will begin to have epileptiform seizures, and as years pass the fits become more frequent and the mind gives way to a condition of imbecility, and death usually comes to the relief of the poor victim at an age between twenty-five and thirty years. It is not necessary for the drinking parent himself to have such fits in order to transmit epilepsy.

Any constant drinker of alcohol, to that extent which may seem to him moderate, may, and often does, transmit to his children this fearful disease, epilepsy, or some other form of nervous and depraved moral or mental condition.

ENGLAND'S DRINK FOR THIRTY YEARS.

An important document has just been issued, showing the consumption from 1856 to 1888 of tea, coffee, cocoa, and chicory, of alcoholic beverages, and of tobacco, compared with the increase of population, an inspection of which is, in our judgment, a complete answer to all the teetotal agitation of the day.

The non-alcoholic drinks — namely, tea, coffee, cocoa, and chicory — have taken a tremendous leap upward, continually advancing, with only some four fluctuations of no great moment. In 1856 the consumption was a little more than 100,000,000 pounds; in 1888 it rose to about 247,000,000 pounds. The amount consumed per head of population had almost doubled meanwhile. In 1856 it was 3.64 pounds; in 1888 it was 6.58 pounds. The only considerable decline was in 1861

and 1862, co-incident with a decline in the consumption of wine and spirits. This return does not include mineral waters, the consumption of which is known to be very large.

Turning to British and foreign spirits and wine, we observe that in 1856 the consumption was 1.26 gallons per head; in 1876 it rose to 1.83 gallons; but in 1888 it had fallen to 1.29 gallons, or practically to the same level of thirty-two years ago; but during the last twenty years a gradual and steady diminution is observed. The liquor which has fluctuated the least is our national beverage, beer. In 1856 it was 22.6 gallons, in 1888 it stands at 26.8 gallons, and with no material ascent or descent during the interval. Our population was set down as 27,000,000 in 1856, and, moving regularly, expanded by an unbroken series of ascents to 38,000,000, at which it stood in 1888. There has been an increase during the same period in the amount of beer consumed. The 17,000,000 barrels which quenched the national thirst in 1856 rose finally to about 27,500,000 in 1888, reaching the maximum of over 30,000,000 in 1874, and thence descending in 1877 to something very near the figures at which they finally stand, appearances being in favor of a steady increase.

The main facts developed by the diagrams are these: That the consumption of spirits is steadily decreasing, but that with respect to beer, its position is as firm as ever it was, and we may fairly anticipate an increase rather than a diminution in its use.—*From the Licensed Victuallers' Gazette.*

Copies of an excellent lecture on sexual perversions, by G. Frank Lydston, M.D., of Opera House Block, Chicago, Ill., can be had by addressing the author.

The Homiletic Review is unsurpassed in the field of suggestive practical theology. It is also of great value to the general reader, and comes each month loaded with the best current religious thought of the day.

ENCOURAGING SCIENCE.

The Vermont Microscopical Association has just announced that a prize of \$250, given by the Wells & Richardson Co., the well-known chemists, will be paid to the first discoverer of a new disease germ. The wonderful discovery by Prof. Koch of the cholera germ, as the cause of cholera, stimulated great research throughout the world, and it is believed this liberal prize, offered by a house of such standing, will greatly assist in the detection of micro-organisms that are the direct cause of disease and death. All who are interested in the subject and the conditions of this prize, should write to C. Smith Boynton, M.D., Secretary of the Association, Burlington, Vt.

TO MEDICAL MICROSCOPISTS.

In behalf of "the American Association for the Study and Cure of Inebriety," the sum of one hundred dollars is offered by Dr. L. D. Mason, vice-president of the society, for the best original essay on "The Pathological Lesions of Chronic Alcoholism Capable of Microscopic Demonstration."

The essay is to be accompanied by carefully prepared microscopic slides, which are to demonstrate clearly and satisfactorily the pathological conditions which the essay considers. Conclusions resulting from experiments on animals will be admissible. Accurate drawings or micro-photographs of the slides are desired. The essay, microscopic slides, drawings, or micro-photographs, are to be marked with a private motto or legend, and sent to the chairman of the committee on or before October 1, 1890. The object of the essay will be to demonstrate: *First*, Are there pathological lesions due to chronic alcoholism? *Secondly*, Are these lesions peculiar or not to chronic alcoholism? The microscopic specimens should be accompanied by an authentic alcoholic history, and other complications, as syphilis, should be excluded. The successful author will be promptly

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notified of his success, and asked to read and demonstrate his essay personally or by proxy, at a regular or special meeting of the "Medical Microscopical Society," of Brooklyn. The essay will then be published in the ensuing number of THE JOURNAL OF INEBRIETY (T. D. Crothers, Hartford, Conn.), as the prize essay, and then returned to the author for further publication or such use as he may desire. The following gentlemen have consented to act as a committee:

Chairman — W. H. BATES, M.D., F.R.M.S., London, Eng.,
(President Medical Microscopical Society, Brooklyn.)

175 Reimsen Street, Brooklyn, N. Y.
JOHN E. WEEKS, M.D.,

43 West 18th Street, New York
RICHMOND LENNOX, M.D.,

164 Montague Street, Brooklyn, N. Y.

LUNIER PRIZE.

The French temperance society against the use of alcoholic beverages have received from Mrs. Lunier one thousand francs, to be called the Lunier prize, to be given to the author of the best essay on the following questions: *What are the consequences of hereditary alcoholism, and what are the best means of prevention, or means to limit or lessen its effects?* Authors are expected to follow out the lines of inquiry suggested in Lunier's work "on alcoholisms."

The society does not limit this study and research, but wishes it to embrace all the questions of moral, social, and therapeutic means, for prevention and restoration of inebriety. The society will accept parts of printed works, as pamphlets on this topic that have appeared before January 1, 1890, associated with what has been written since this date, to compete for the prize. All manuscripts should be received before December 31, 1890, and should be addressed, Dr. Motet, secretary-general of the French temperance society, 161 rue de Charonne, Paris, France.

"THE MONIST," a new quarterly devoted to philosophy, science, religion, and sociology has appeared, published by the Open Court Company of Chicago, Ill., and is extremely robust in both quality and vigor of thought. A long list of writers that are leading thinkers of the age, are announced to contribute to its pages. We welcome it to our homes and firesides.

INSANITY is essentially a disorder of the process of adjustment of the organism to the surroundings. The use of alcohol always breaks up this power of adjustment, and the insanity of his inebriety grows more and more prominent.

In a certain number of cases inebriety is an expression of deficient nutrition, which is remedied by a rich, regular diet and healthful exercise.

We call especial attention to *Park, Davis & Co.'s* note on back cover page on eligible vehicles for quinine.

The *Merritt Typewriter* is a handy, cheap machine of much value.

The *Maltine* preparations are of great virtue in nervous cases, and should be used in all cases.

The *Victor Safe and Lock Co.* offer a fine safe for physicians at a very low price. This is one of the most practical pieces of furniture a physician can have.

Schiffelin & Co.'s *Sulphenal, Phenacetine*, and other new remedies are among the most valuable on the market.

Dr. Erush, of Mt. Vernon, N. Y., prepares a most excellent kourmiss that is of great value in many cases.

Filloc's Hypophosphites is one of the best nerve tonic combinations that can be procured. For general debility and neuralgia it is invaluable.

Bromidia is a safe and most reliable hypnotic that can be taken at home according to the directions. It is valuable in inebriety.

Dr. Strong's Sanitarian at Saratoga Springs, N. Y., is an excellent place for invalids who wish rest, splendid baths, and fine mineral waters.

The *Bromo-Potash*, a fine, effervescing combination of bromide, caffeine, and sodium, by W. R. Warner & Co., is sold in enormous quantities, and has become a great family remedy for headache and insomnia, also any general debility.

Lactopeptine is a standard remedy for digestive troubles, and combined with tonics, both mineral and vegetable, is a valuable remedy.

Our personal experience with *Horsford Acid Phosphate* as a remedy in the complex neurotic cases that come from alcohol and other drugs, has extended over a period of ten years, during which time we have used large quantities of it yearly, with the best results. We have compared it with other acids of substantially the same composition, and always found it superior in every way. A recent comparison showed that it was longer tolerated by the stomach, and when combined with nux-vomica, had remarkable tonic effects. We repeat what we have so often said, that no remedy for alcoholic and opium inebriety comes nearer a specific in itself alone or combined with strychnine than this acid phosphate. Many of my patients have continued its use long after treatment at home, and have most unbounded faith in its medicinal value. There can be no question that it has been found valuable in nearly all neurotic and nutrient disorders.

The *Bromine Lithia Water*, from Lithia Springs, Ga., is both practically and theoretically the ideal mineral water for neurotics of all degrees. It is a bright, sparkling water, containing bromides of potassium and magnesium with bicarbonate of lithia, and, so far as we know, has no rival in this country. Its value as a nerve sedative will be apparent to all physicians without comment. This water can be procured and taken at home, or the patient can go to the springs sanitarium where the water is a large part of the medicine.

THE QUARTERLY JOURNAL

OF

INEBRIETY.

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

T. D. CROTHERS, M.D., Editor,
Hartford, Conn.

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A MENSTRUUM.

Horsford's Acid Phosphate

This preparation has been found especially serviceable as a menstruum for the administration of such alkaloids as morphine, quinine, and other organic bases which are usually exhibited in acid combinations.

The admixture with pepsin has been introduced with advantage when indicated.

The Acid Phosphate does not disarrange the stomach, but, on the contrary, promotes in a marked degree the process of digestion.

Dr. R. S. MILES, Glencoe, Minn., says: "I use it in a great many cases as a menstruum for quinine, when an acid is necessary."

Dr. J. L. POWERS, Reinbeck, Ia., says: "I have used it as a satisfactory menstruum for the administration of quinine, when the combination is indicated."

Dr. O. J. PRICE, Chicago, says: "I am using it either alone or in combination with such agents as quinia, nux vomica, pepsin, etc., in certain forms of dyspepsia, characterized by lack of tone, or deficient muscular power, and have derived very satisfactory and beneficial results."

Dr. A. S. MAY, Forest, O., says: "I find it an excellent menstruum for the administration of comp. tr. cinchona, in recovery from malarial fevers, where there is impaired digestion."

Dr. A. H. SAGER, Williams Centre, O., says: "I have found it to be one of the best menstrua to administer quinia, or any of the alkaloids, that I have ever been able to procure. It is an admirable solvent."

Send for descriptive circular. Physicians who wish to test it will be furnished a bottle on application, without expense, except express charges.

Prepared under the direction of Prof. E. N. HORSFORD, by the

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Beware of substitutes and imitations.

CAUTION.—Be sure the word "Horsford's" is printed on the label. All others are spurious. Never sold in bulk.

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WE CHALLENGE THE WORLD!

The attention and careful investigation of the Medical Profession is earnestly invited to this wonderful Water. It is pure, bright, and powerful. *Samples free to all Physicians.* Correspondence solicited, which will be promptly answered. Physicians are cordially invited to visit the Spring, which is located at the village of Lithia Springs, Douglas County, Georgia, on the Georgia Pacific Division of the Richmond & Danville Railroad, 20 miles west of Atlanta, Ga., a ride of less than an hour from the city. Three trains daily. Handsome, comfortable city coaches and Pullman Palace cars.

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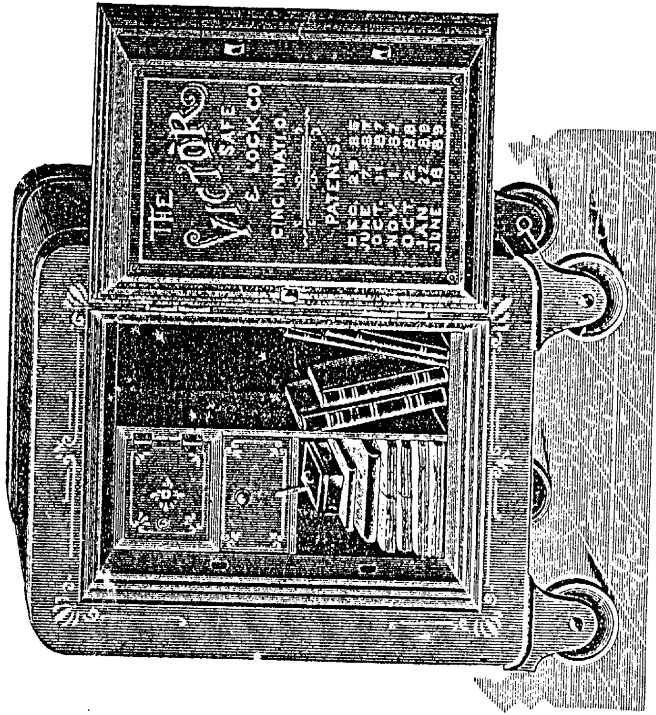
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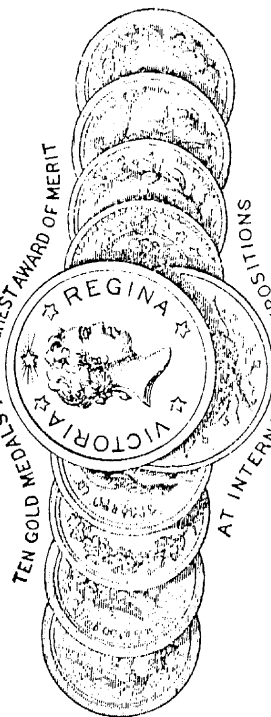


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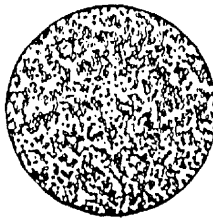
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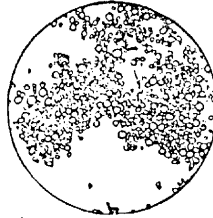
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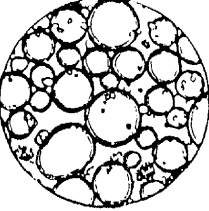


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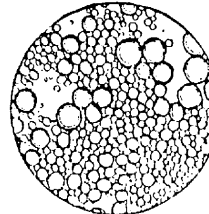


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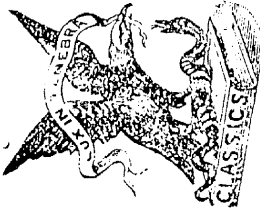
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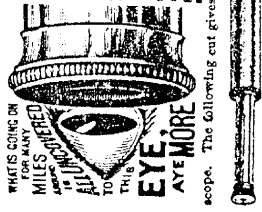
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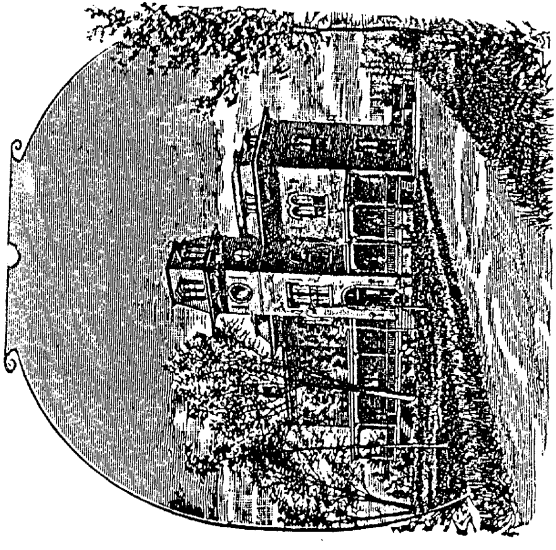
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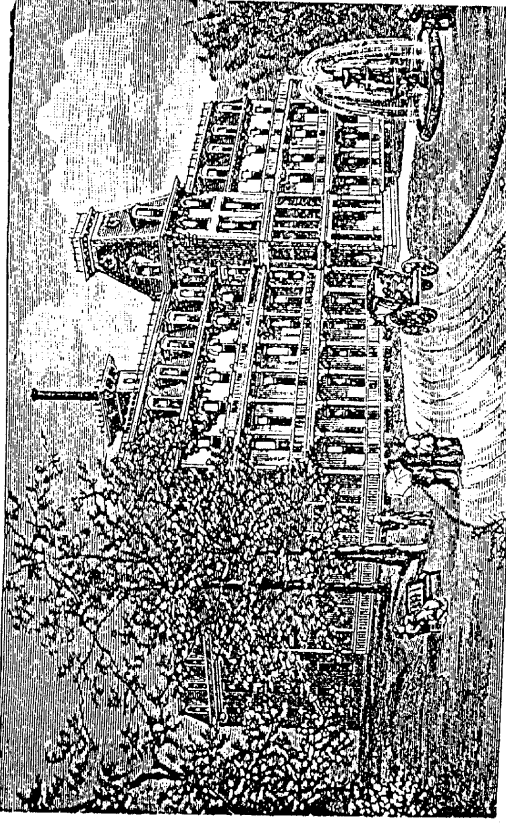
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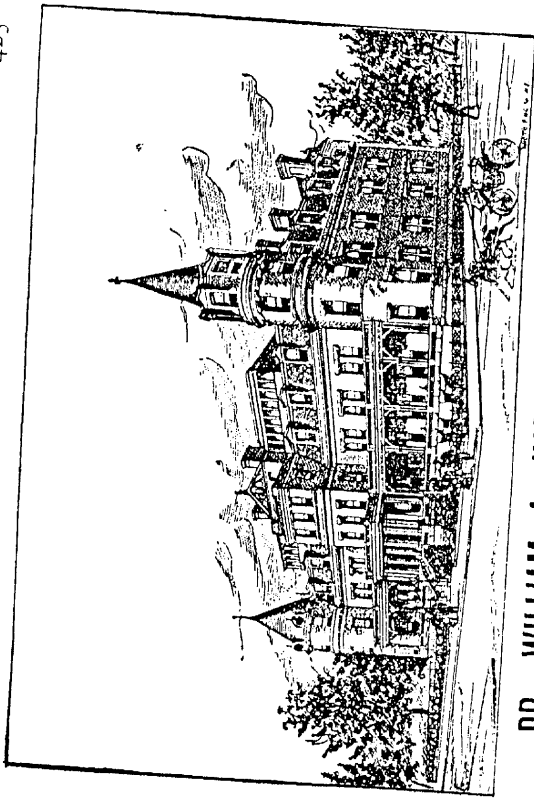
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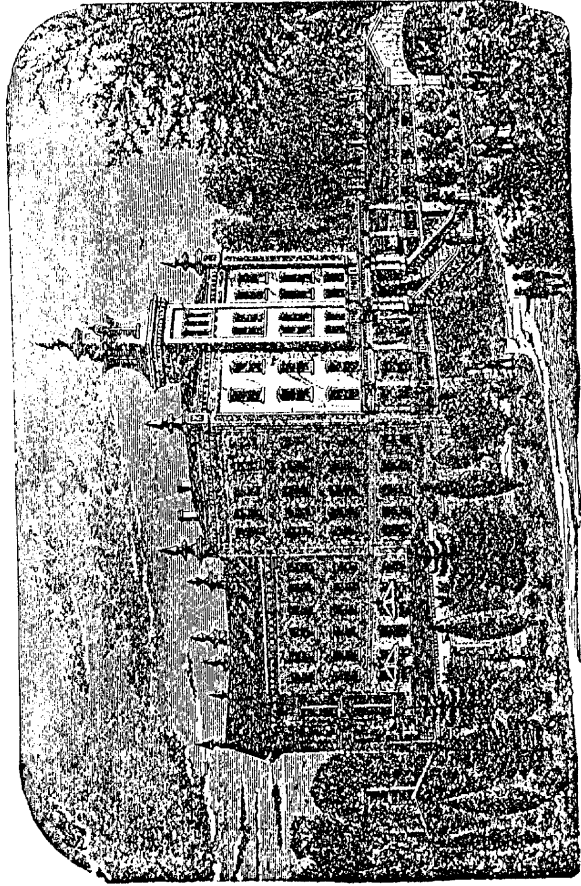
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