

by the Medical Officer of Health for Staffordshire, and was now being introduced into the Lichfield Sewage Farm. The Garfield system was simply a series of tanks filled with common coal—placed in layers of different sizes of slack. The solids were first removed, and the supernatant fluid left to filter through the coal, the effluent being perfectly clear. It would not decompose after having been kept for months. The patentee did not explain the action of the coal. Some said that stones might answer the same purpose. The coal had been examined after having been used in the filter, and no changes, chemically or physically, could be detected. The fact remained that the effluent from the sludge tank, after passing through the coal, became chemically and bacteriologically pure. The coal could be used over and over again. At first, of course, many tons of coal were required, but the cost for renewal was very small.*

Dr. McDOWALL said that at Morpeth they were then increasing their bacteriological tanks. They had tried coal, and found it of no advantage. Small stones or brick (porous material) were better. They only required to form an extended surface for the growth of bacteria, which destroyed the albuminous material. They had got very good results, and now that they were increasing their tank accommodation they had no trouble except as to the disposal of the semi-fluid sludge. Both patients and attendants strongly objected to work in it. He had been advised by an old Yorkshireman to excavate a tank and line it with porous bricks, and to allow the sludge to stiffen in it to the consistency of cheese, the residue being removed from the surface and spread on the ground, forming excellent manure.

Dr. WATSON said that there was some slight misapprehension as to the sludge. At Hawkhead it disappeared entirely, as if it were manure put in the earth. The raw sewage was run upon the bacteria bed, passed through, and produced no sludge; even paper became a pulp and vanished. This went on month after month without any special attention except the alternate use of one or other set of beds, and turning the surface of them over occasionally. If the experimental system turned out as successful as it promised they would try for the whole asylum.

The Mismanagement of Drunkards.† By GEORGE R. WILSON,
M.D.‡

“It is to be hoped and expected that with the spread of knowledge and education alcoholic intemperance may come to be regarded always and everywhere as vicious and

* We hope to publish a more detailed account of this process in a future number of this Journal.—Ed.

† Read at the Annual Meeting of the Medico-Psychological Association, Edinburgh, 1898.

‡ Misunderstandings and misquotation have made it desirable to enlarge upon some of the opinions expressed in the abstract of this paper which was read to the meeting in Edinburgh. There are many verbal changes as well as additions. The former are inevitable in so far as a written statement must differ from what is spoken, and the latter seem desirable because of the nature of the attention which these views have received. Most of the disagreement which has been expressed is from misunderstanding, due to the shortness of the statement which the conditions of a meeting, called together for discussion, imposed. Nothing which was said then, or which has appeared subsequently, has induced me to alter, in the slightest, the significance of what I said. On the contrary, much proof has been forthcoming that the paper expressed, however

reprehensible. It is a grievous matter that it should be lightly regarded in any quarter as a venial offence, and I should gladly support some more rigorous form of punishment for the vice of occasional intemperance than can now be meted out.

"I think the possibility of some legally enforced personal stigma would prove deterrent and wholesome if early applied.

"Inasmuch as many careless and vicious drunkards cannot be made to smart in their conscience, I believe that the infliction of corporal punishment would be useful against repeated lapses from sobriety.

"Vice should always and everywhere be punished, and the present tendency to minimise punishments is unwholesome, and indicative of a general flabbiness and sentimentalism in society which is quite unwarrantable and mischievous."*

This question of how to combat the intractability of drunkenness is one which has exercised many of us for many years, and in 1893, writing of the ill-constituted drunkard, for whom strong measures had been recommended, I used the words: "While out of justice to society it may be necessary that our treatment of him should be severe, it is only fair to himself that it should also be appropriate." That may be taken as the text of this present effort. It must be our aim to determine what kind of deterrent and curative measures are really appropriate in the management of drunkenness.

(It may seem unnecessary, but events have shown it to be desirable, to explain that, while the ordinary man knows quite well what one means when one speaks of a drunkard, physicians must at least be informed what one does not mean. By the term drunkard, as here used, I do not mean a lunatic, nor any other kind of invalid whom our courts regard as, on account of illness, not responsible for his actions. All the same there are many patients, admittedly not responsible, for whom much more rigorous moral treatment than is usual in our asylums would be found to have curative value. On the other hand, there are some who, though perhaps justly called

imperfectly, the opinion of a very large number of those who seriously study the problem of drunkenness.

Since the meeting Sir Dyce Duckworth has been good enough to remind me of his address on the subject, published in 1893, and a passage in it is so apposite that I substitute it for the greatly less authoritative quotation with which the paper opened.

* *The Relation of Alcoholism to Public Health*, by Sir Dyce Duckworth, M.D. London, Eyre and Spottiswoode.

drunkards, do not manifest the perversions and weaknesses presently to be discussed, and, in so far as they do not, the remarks which are applicable to the ordinary drunkard do not apply to these individuals. Nothing is of so much importance as that we should regard each case on its own merits.)

To determine what are the kind of ideas and the kind of measures which are appropriate in the treatment of drunkenness, we may consider a few of the many disabilities which a study of our patients' ideas and feelings and conduct lead us to regard as the characteristic perversions and weaknesses of the class.

One of these—*the loss of the power of direction*—will be considered more fully presently, and something will be said of what can be done in the present imperfect state of the law. Physicians as a whole have for many years been convinced that this defect is so great and so important that it can only be satisfactorily dealt with when powers are given to the Bench to confine and detain habitual drunkards in institutions specially organised for the purpose. It is the members of the legal and the political professions who are to blame for the backward state of the law on the subject. Their opinion seems to be that any man and every man is entitled to all the liberties and privileges of a free life until he happens to be caught in the act of breaking the law. And so the drunkard has been taught to believe that the British instinct which so carefully regards the liberty of the subject will allow him to make himself as great a danger and nuisance to society as he pleases until some chance carries him into a transgression of the law. If that were the attitude of the law towards insane persons, if no sheriff might detain a homicidal maniac until he had committed murder, if suicidal insanity must prove its existence by the act of suicide, Parliament might at least have the satisfaction of being consistent in its mistaken sense of justice. But I need not dwell upon this subject, because it is a commonplace with our profession that compulsory powers for the treatment of habitual drunkards are urgently called for. I may, however, be allowed to draw public attention to the fact that this reform is seriously threatened with delay because the Government has chosen to select the most hopeless and refractory kind of drunkards for their promised legislation. As this is more or less in the nature of an experiment, it is a pity that compulsory treatment should be perhaps held to stand or fall according as it succeeds or fails with a class made up of men and women who are the least likely to derive

permanent benefit from any kind of treatment whatsoever. It readily occurs to one, for instance, that it will not be easy to induce these people to forego their habits of idleness and indolence, and it is difficult to see how the very rebellious are to be coerced. I should therefore like to see a clause in the Bill which would make provision for corporal punishment (such as flogging) of refractory drunkards with the precautions necessary to prevent its abuse. The new institutions ought to be regarded as houses of correction rather than as hospitals or retreats. They will, of course, be under careful and periodic inspection. Any abuses of the powers given to the superintendents could be as well prevented as are abuses in asylums in matters such as the use of restraint or of seclusion, which the law allows us to use in the case of insane patients.*

One of the most obvious features in drunkenness is *self-excuse*. The victim of the habit is, even more than his sober neighbours, too prone to find excuse and not ready to accept blame. You will rarely meet a drunkard who acknowledges his vice fully and who is quite alive to his blameworthiness. It therefore becomes physicians and society to try to bring the facts of his case home to him and to offer him just as little excuse as is strictly just. The public mind is very ready to hear and to repeat anything that doctors say about diseases, and still more what we say about vices. That is the fashion of our time. A few years ago—in Scotland, at least—public opinion was much more guided by the pulpit, and then it was the inclination to be very severe and to find no excuse for drunkenness. More recently, when the subject of alcoholism came into prominence, physicians discovered some quite valid excuses for a few drunkards, and now the tendency is to offer these excuses on behalf of all. Those who are called upon to treat patients

* At this point it may be well to make clear that the physician's view of punishment must be dissociated from that of those who administer the law to ordinary persons. The latter punish as a penalty for offences committed. We must have nothing whatever to do with that view of punishment. We must put all idea of retribution far from our minds. Punishment must be used on our initiative only as corrective. If the question, for example, arises whether such an one should be flogged, we have not to ask whether the thing that he has done deserves flogging or not, we need not even ask whether he was fully aware of what he did and fully responsible for it. Our only question should be, is this person one who requires flogging, in the sense that nothing short of flogging will affect him, and it is likely that flogging will produce the desired improvement? I do not think we are justified in the use of such severe measures as a warning to others, for the physician has more regard to the individual and less to society than has the judge or the sheriff. But—to return to the point—there are some criminal drunkards who would be improved by flogging and by nothing short of it.

who are addicted to alcoholic excess must feel how serious this difficulty is, and especially those who are at once engaged in the treatment of insane persons and of drunkards. We have learned too well the lesson which our teachers had need to teach us—that the mental and moral symptoms of insane folks are quite as much the results of physical impairments as are their paralysis or their convulsions. And now, when we come face to face in the wards or in private dwellings with alcoholic patients who, perhaps, have bodily symptoms which mask their vice, we too readily forget that the law still regards them, and that society rightly ought to regard them, as responsible for what they say, and think, and do; for the more a man's sensibilities are blunted by the nervous impairments which his vice has brought on, and the more remote he is from ordinary incentives and ordinary discipline, the more need have we to devise measures which may be extraordinary and unusual, and which may also be severe, provided always that they are appropriate, that they are calculated to cure. The same determination which taught the surgeon to amputate in many cases which long ago would have perished because opinion was too ignorant or not daring enough must inspire us to discover how to deal with vice which may have become mixed up with disease.

One excuse we have given the drunkard by our too indiscriminate belief in the importance of heredity. It would be out of place to discuss that question abstractly here. To do so would be to raise an almost purely academic discussion; for, having regard to the fact that the environmental factor is almost never eliminated in those cases which are quoted as proving the first importance of heredity, I differ widely from current opinion on the subject. But granting, for the sake of argument, that a tendency to drunkenness is inborn in the offspring of drunkards much more than in the children of the sober, what has society gained by the information? The drunkard has learned his part of the lesson aptly. He has readily grasped the fact, and makes use of it, that this teaching gives him an excuse for his vice. From the time that he learns that some one of his forebears was a drunkard he begins to regard himself as a victim of an unfortunate law of nature—an object of pity rather than, as he ought to be, an object of scorn. Also our teaching has done considerable harm in its suggestion to the sons and daughters of drunkards. I speak from observation and not at random. Several cases occur to me which prove that young people who have a drunken

family history are, to their hurt, taught to expect that they will likewise become drunken. One striking case came under my notice recently. He is a man nearing the prime of life, several of whose relations have been drunken even to the point of death. For thirty years he has been sober in a very tempting environment. Now at last—from sheer carelessness and foolishness, as I take it—he has begun to drink to excess. It is what the well-informed among his friends have taken for granted all along. It has been at the back of his own head all these years that he was expected to go to the bad, and, more than that, he knows that his family history will be regarded by society as his excuse. Our teaching should be all the other way. A bad family history is a good excuse for total abstinence: it is no excuse at all for promiscuous drinking. It would be quite as sensible if a man who slept in a ditch explained his illness by a reference to a rheumatic or a phthisical family history. A person who has any such idiosyncrasy should be guided and corrected with greater severity, and not with less, than the normal individual. Let us impress on such an one as strongly as we can how important this matter is for him. Let us warn him that there will be no excuse for him; but let us not be so misguided as to tell him that he is likely to become what his father became because there is something in his nature which makes for drinking. Let us tell the son of a drunkard that he must not touch drink until he is twenty-five years of age, and let his guardians in his youth flog him severely if he does. If he is going to drink, let his beginnings be as carefully made as when we begin to administer any drug to a patient who is supposed to have an idiosyncrasy for it. If a medical man were invited to observe the effects of such a youth's first taste of alcohol, and if all his early drinking were carefully watched, the risks, such as they are, would be greatly lessened.

Another plea which drunkards use with great effect, in Scotland at least, is what I have no hesitation in calling the myth of the "crave" for alcohol. I know no better illustration of the evil of what one may call the gossip about medical facts for which the public are so greedy. Cases of a real crave have, of course, been described, and are a very interesting fact. But ever since someone wrote of the man who cut off his finger in order to get the brandy which he knew would be prescribed, and of the schoolboy who wore his fingers to the bone in midnight excavations towards his master's cellar, nearly every drunkard in Scotland has been credited with a

crave. For my part I have never seen a case which exhibited what I would dignify by the name of an alcoholic crave. That it exists there can be no doubt. But its frequency has been enormously exaggerated. Very many alcoholic cases suffer from a gastritis which their habits have induced, and the discomfort of which they call a crave for drink; others have induced a disorder of the lower nervous mechanisms which gives rise to a want of the normal feeling of well-being. Let us then teach that a crave is really nothing to boast of, that only ill-constituted persons and those whom showmen call "freaks," ever have it. Let us treat the digestive disturbance by a blister over the stomach, and let us apply a very stimulating plaster over the spine to relieve the feeling of malaise, and 99 per cent. of the craves in Scotland will disappear.*

Disturbances of the functions of control are prominent characteristics of drunkards. The habit which they have acquired is one of very general effect. Intoxication is a state which invades the whole realm of consciousness in greater or less degree. Repeated acts of intoxication, which we designate as a habit of drunkenness, lead to cerebral changes which affect the whole mind. Memory, judgment, reason, imagination, sentiment, all become modified both by the effect of the drug on the brain substance and by the

* Many people seem to have some difficulty in understanding what we really mean by a crave for alcohol, and why it is not true that every one who wants a drink may be said to exemplify it. But there is no very great difficulty in the subject. In an act or choice, and in a habitual act or choice, there is, on the one hand, desire or impulse, and on the other direction or control. The act may become automatic and ungovernable, either because of excess in the desire or impulse (as in a man who has been for days at sea without water), or because of reductions in the functions of control. In nearly all drunkards it is the control which is at fault. That is what Hughlings Jackson calls the primary or negative lesion. It is in the nature of a want. The drunkard takes to drink immediately he feels wrong, not because he has an excessive susceptibility in the part of his brain which represents drink, but because he has closed the avenues of other lines of conduct; he has shut the door on his freedom of choice. The excess of sensation which constitutes a crave is of the nature of a hypertrophy or overgrowth in the organs of sensation, and it is extremely rare. An alcoholic crave proper is characterised by its exclusiveness; nothing but drink will satisfy it. It is generally periodic, coming on at stated intervals. It is due to a peculiar nervous constitution, and not to disorders of the bodily organs. It is generally idiopathic, and not induced (though it sometimes follows severe injuries); that is, it is usually a development of the man's original nature, like a taste for music or an extraordinary interest in colour. As a rule it manifests itself not later than the end of adolescence, and is of irresistible intensity whenever it has realised itself in the taste of alcoholic drink. So one need hardly add that all states of general restlessness and excitability are not a crave at all, but primarily due to impairments in the functions of control.

functional changes in structure which follow from a prolonged subservience to any one interest. Most of all, the will—the function of rational choice—becomes seriously limited. The drunkard's will ceases to be as free as that of a man who has been moderate. The disability of which I wish particularly to speak may be called a *loss of the faculty of direction*. In business, in social and in domestic relations, the drunkard is incapable of behaving wisely and of ordering things aright. Yet we find it an almost invariable rule that, because of his gift for making things unpleasant, he is allowed to have even more of his own way than are those who behave properly. It seems to me quite the most immoral effect of drunkenness that it leads to the complete demoralisation of the home. Be the drunkard father, or son, or brother, all the domestic arrangements are suited to his perverted tastes. People wait up for him far into the morning hours, meals are kept late, every one else is put to discomfort in order to please him. Worse than that, the whole household must learn to shield him, to deceive, to pretend, to lie, rather than admit the facts of the case. This is a mistake for which, of course, the friends are most to blame. It is natural to them, especially to the more tender and sympathetic sex, to sacrifice both their comfort and their consciences to the erring member. But we doctors might inculcate a better way. I do not know what is the general practice in such cases. But when I am asked to treat a drunkard at home, one of the first things I insist on is that there shall be an end to all pampering of the patient. He must be plainly told that he has clearly demonstrated his unfitness to direct his own life, much more his incapacity for the headship of a household. He is by habit over-exacting; he must be prevented spoiling other lives. He is already too self-indulgent; he must be compelled to accept unpleasant things. He is irregular and unpunctual; he must take things when they are due or go without them. He is unkind, inconsiderate, cruel, and sometimes brutal and violent; he should be ignored until he learns to give as well as to take, and if need be he must be cut adrift or forsaken. In short, the mother or father, the wife or sister, the brother (who by the way less often needs the instruction) must be instructed how not to deal with a prodigal in the time of his prodigality. For the fatted calf, which suits the repentant home-comer, is most unwholesome food for the incorrigible and impenitent.

This question of shielding the drunkard and practising

deceit and lying on his behalf is a difficult and important one. An obvious disability of the drunkard is his *want of a sense of sin*, and a great dishonesty about his vice. I am convinced that it is largely due to impairment of memory. He does not recall the facts of his intoxication; he does not remember how often or how much he has been drinking; he has a very imperfect recollection of the various acts of misconduct to which his drunkenness has given rise. Whatever the reason, the fact remains that the drunkard does not appreciate the badness of his case. That is one of the greatest difficulties in treatment, and it wants careful consideration. It is, again, a symptom to which the relatives pander by their management of the case; and we are called upon to point out the mistake of shielding the patient from the ignominy and other unpleasant effects of his vice. This is a good example of what I mean by saying that the drunkard, by reason of his disabilities, requires more, rather than less, severe treatment than an ordinary offender does. Any ordinary bad habit need only be mentioned, and the offender will think upon it for days; the word of correction will rankle in him; the subject will be a tender one for a long time, and will be avoided by anyone with tact and generosity. But generosity is quite out of place with the drunkard, and to spare his feeling is to do just the worst thing possible. All the evil and the danger of his vice should be brought forcibly home, not in a petty way, but in a manner which will be impressive and permanently convincing. I believe that a great step to the reformation of any drunkard would be taken were he persuaded to admit publicly—that is, to make no secret of it in society, that he had been addicted to the vice. And if he will not do so himself, the next best thing, in my opinion, is that his friends should expose him. Let the publicans be told the facts of the case, and let a careful statement be made to relatives, friends, and casual acquaintances in the nature of a warning that the patient must not be encouraged to take drink. Let it be understood that it is a shameful thing to offer drink to him, or to drink with him, and let us have no hesitation in saying what we think of those who encourage him. There is no question of ill feeling at all towards the patient when we insist that he shall bear the full brunt of the consequences of his drunken acts and that they shall be exposed rather than concealed. It does not matter who calls such treatment cruel or barbarous, provided only that it induces the patient to take thought and mend.

The feelings of relatives are the chief barrier to such a method of managing drunkenness. If the truth were told they need have little scruple in acknowledging the facts; for, as a rule, the patient's habits are known to all his acquaintances, and, moreover, there is nothing at all exceptional in having a drunken relative. There are very few people who have not some such acknowledgment to make concerning near or distant kinsfolk, and we may safely rid our minds of the idea that vice in one member of a family implies evil potencies of an extraordinary kind in each of the other members.

The difficulties of managing a drunkard at home follow him to any institution where he is sent for cure. Not only do the disabilities of the patient prevent successful treatment, but the mistaken kindness of relatives is also in the way. People are anxious that the poor man should have plenty of amusement, whereas one wishes him to learn how not to be amused. He is of idle habit, but he and his people seem still to think work unnecessary, if not an injustice. For years the man has been a slave to his palate and to his appetites, but his friends are still very anxious that he should be richly fed. He has made a long practice of the art of lazy comfort, and still it is expected of us that we should provide a lap of luxury for him such as might be fitting for a worn-out and conscientious martyr to good works. To be appropriate, it seems to me that institutions for drunkards should teach habits of regularity, hard work, and forgetfulness of bodily states, except in so far as is necessary to health. A well-conducted monastery would be a good place for a drunkard, or such a *régime* as used to be prescribed for an athlete about to undergo a severe trial of his powers. Similarly, his mental state should be treated so as in every way to induce him to see the nature of his vice, to realise his weakness of will, to sink his own selfish desires, to rid him of self importance, self pity, and self confidence. Meanwhile drunkards would not stay in such a place, and the law says it is wrong to compel them. The public also will not stand views so severe, and would condemn anyone who tried to put them to the test.

Now and again one comes across relatives who have the sense and the courage to coerce the drunkard into obedience. Nearly all who become addicted to drink become cowardly; but most of them are at the same time either of a bullying or cringing manner, and it really requires a great deal of pluck, especially on the part of wife or mother, and a great deal of resolution, to deal wisely with them. On several occasions,

and sometimes with excellent results, relatives have been persuaded to intimidate the drunkard into obedience. One wife I remember who was told by her husband that if she rebelled against what was considered good for her the house would be shut to her, and her children denied to her; the police would be instructed to take her in charge if she was importunate in her attempts to resume her place in the family; public repudiation of responsibility for her debts would be made; relatives would be instructed as to the facts of the case, and requested not to acknowledge her or give her any assistance; and, if need be, her acquaintances and neighbours would be informed as to her habits, and the reasons for the treatment proposed. In the case of husbands I have advised similar measures; and especially in the case of young men who have an employer, men who hold public offices, and those who have farms, &c., on lease, the further step has been taken of enlisting the employer or landlord in the attempt to coerce the drunkard. It is also of value to let it be understood that business men and others will be told the truth about the patient, should they think of giving employment or other assistance.

When such things are threatened—and it should be done in the form of a letter from a law agent—it need hardly be said that the drunkard may generally be trusted to choose the easier course, and to comply with the demands of relatives. He is generally a coward, and his fear of public opinion, the dread of inquiry and exposure, as well as the occasional lingering affection for those who seem about to abandon him, induce him to acquiesce. But it may be added that, if the drunkard can be proved so, and if he resist such steps as have been suggested, even to the extent of going to law, the law, in Scotland at least, is largely on the side of those whom he has wronged.

What can be done by spiritual ministrations for the victims of the alcoholic habit it is not for me to say. We are all familiar with cases of complete and permanent reformation following a religious experience of an impressive kind. As was said in the eloquent speech by the clerical guest at the dinner of the Association, ministers are learning that there are states of mind, even in those who are still sane, which the physician can most effectually deal with, and there are cases, even within the walls of our asylums and retreats, who most require the help and guidance of a pastor. But the clergy are not without blame in this matter of too lax a view of

drunkenness. They also have learned the lesson which our too easy doctrines have taught. And if we are to call in the minister to help the drunkard, we must see to it that he is one who will not be afraid to speak the truth as his religion teaches it without any importation of mildness from medical and scientific doctrine. The teachings of the great Calvin, whom we might call relentless in his views of sin and in his practice, who more than "shared the common opprobrium of all European Christendom" in prosecuting Servetus to the death for blasphemy, who regarded all men as born to condemnation because of innate sin, who refused to entertain any hope for any man, however unfortunate, except he repent and be regenerated and sanctified, who would regard all constitutional disability as a warning and a danger but never as an excuse—such a teacher has scant support from the compassionate and easy-going doctrines of to-day. But in so far as modern teaching repudiates moral responsibility because of "flaws in the flesh" or "taints in the blood," it is an instruction which is only harmful to the victim of vicious habits. Here again we have a good example of the necessity for exceptional severity in that, while a more mild theology may be best for the man of ordinary uprightness, it takes something like the fear of hell or of the pains of purgatory to convert a drunkard instantly and for ever from his sin.

The subject is endless, the side issues are without number. It is not to be supposed that one can lay down a law for all sorts and conditions of drunkards. But at least we can indicate a point of view and a method which will determine the general lines of treatment of usual cases, and which can be modified in detail to suit the peculiarities of the unusual. I would reiterate the text with which I began—that we must see to it that, in our severity, our treatment of the vice is appropriate. The only criticism which is important is that which says that this does not effect the end in view—to induce a sober life. For years we have taught that vice is partly a disease, and I do not for a moment repudiate the general doctrine. But it is not enough to discover the disease, or even to give it a name. Let us caricature the situation and suppose that our able pathologist has discovered that sin is a specific disease. He has made cultures of the germ, and he finds that, when he inoculates others, all the characteristics of the disease are forthcoming. What have we gained unless the pharmacist or the bacteriologist devises a drug or a serum which will make the sin germ of no effect? Let us call vice disease if

you will, let us say that we are only treating symptoms when we try to reform the drunkard ; but, until we have got at the root of the whole evil, and have discovered the treatment effectual for it, surely it remains true that a specially strong discipline is required for a specially weak nature.

We shall be told without fail that, in promulgating such views as these, we are going back upon the scientific view of vice which a generation of wise physicians have propounded. One may be pardoned if he think, on the contrary, that he is going a step further. In the beginning of this century drunkards were probably of very much the same nature as they are to-day. But, at that time, they had not been carefully observed by medical men, and they were not understood and described as they are now. We have certainly learned a very great deal as to the causes and the conditions, the nature and the effects, of drunkenness. But surely no one will claim that we have made proportionate advance in the treatment of it. Excluding those who arrive at the stage of insanity or other malady which necessitates asylum or hospital treatment, drunkards are in as hopeless a position as regards cure as they were fifty years ago. This is to be accounted for, I believe, by the fact that, having put the vice on a scientific basis, and having demonstrated its neuropathic relations, we have stopped there, forgetting that after all it is the moral functions which are chiefly impaired, and that therefore strict moral treatment is called for. In our analysis of the physical causes of drunkenness we have discovered the importance of heredity, of a constitutional susceptibility to alcohol, and of other factors which predispose to excessive drinking. It is high time to deal with these factors seriously and vigorously. And in our analysis of the drunkard's state of mind, in so far as we find him defective in shame, in honesty, in self-respect, in respect for others, weak in memory, foolish in judgment, silly in imagination, blunt in his affections and impotent in control, surely, whatever be the physical impairments which accompany these symptoms, it is sound therapeutics to take active steps to arrest the intellectual degeneration and to re-establish the moral functions.

Discussion.

Dr. STEWART (Clifton) made bold to enter the lists with such an excellent authority as Dr. Wilson because he thought it was a dangerous thing if an association like theirs should in any way countenance the opinions he had formulated, or go back from the position that he believed medico-psychologists had hitherto occupied in regard to the subject of inebriety. He had been the unhappy victim of an

onslaught by one of the giants of this Association, Sir John Bucknill, who said that he (Dr. Stewart) was a faddist; that he was one of those who would fain ignore the vice of drunkenness. When in this city the Medico-Psychological Association discussed the definition of insanity, Sir John Bucknill was one of those who was most in favour of the simplest definition, to the effect that it was a disease of the brain which had gone so far as to affect the mind. He asked in what way he was a visionary if, similarly, he asserted that inebriety was a disease of the brain which had gone so far as to affect the will power. He wanted to know in what way Dr. Wilson's arguments would help them as physicians to deal with an injured brain. If they sanctioned such "Calvinistic" treatment, if they gave it any support, they would be putting the hand back years and years, and would discredit the name of the Association.

Dr. CLOUSTON said that they needed some such talking to as Dr. Wilson had given them, and he trusted that what he had said would be spread abroad, and would take hold of the medical profession and the general public. There was no doubt whatever that they had to some extent lost sight of the true nature and right treatment of some early cases of drunkenness. In reading some books on the subject one got sick of the mawkishness, the want of vigour, the absence of any real scientific method. They had something different from Dr. Wilson. He did not say that he agreed with everything which Dr. Wilson had said, but he affirmed that they required some such vigorous ethical statement in regard to the treatment of the man who had thus lost his self-control. There was no doubt that the medicine they required for the early drunkard was not to be poured out of a bottle, but was to be brought from some such laboratory as Dr. Wilson had indicated. He had no hesitation in saying that a number of the persons who became disgraceful inebriates had at one time passed through a stage when they might have been saved if they could have received such treatment as Dr. Wilson had recommended. He had watched the effect of it on men who had begun going on the down grade. He had appealed to such a man for the sake of his honour, for the sake of his wife and family, and he had said, "You are going to lose your income and to fall into social disgrace. For my part, I shall have nothing more to do with you if you do not at once reform"; and he had seen the man reform out of pure fear. The ethical point of view was in no way inconsistent with the medical, which regards the man as weak, wanting in courage, inhibition, and other moral qualities from a brain defect that will soon become a disease. He most heartily sympathised with the greater part of what Dr. Wilson had said, and thanked him very heartily for his admirable paper. If it did not cover the whole ground it hit the nail on the head in regard to many cases. We must in medicine apply the physic that will cure, no matter how strong it may be.

Dr. RAYNER said that it seemed to him that Dr. Stewart was wrong in looking at disease as an entity, which it certainly was not. Disease was only abnormal physiology, and therefore the treatment of a child diseased and the treatment of a person who begins to get diseased were to be dissociated. In practical experience what Dr. Wilson had said, and properly said, in regard to the point was often borne out. He remembered a very striking inebriate case who laboured under hallucinations. One medical certificate was signed, and he (Dr. Rayner) was sent to complete the second. Rather than go to an asylum he promised that the man would attempt to control himself. After removal from his pernicious surroundings he did control himself, and had continued master of himself ever since. He (Dr. Rayner) had also been very much struck with the rarity of the "drink crave."

Dr. CONOLLY NORMAN agreed with a great deal that Dr. Wilson had said, but he could not approve of his "Calvinism." He thought that was about the worst possible solution of the difficulty; not Calvinism, but casuistry was the true guide in dealing with drunkards. It was the treatment of the individual case that they were chiefly concerned with, and not the laying down of hard and fast principles, chiefly inapplicable when they came to deal with men and women *seriatim*. He came from a country where they heard so much of high principles that he did not hesitate to say that he had no principles at all; or if he did possess any principles in

the treatment of drunkards he was extremely inconsistent in carrying them out. He thought inconsistency in the present state of their knowledge was the truly scientific attitude. He himself, taking certain risks, occasionally told a man that he would not let him out of the asylum until he had taken the pledge. The pledge was generally taken, and sometimes kept. He could not quite agree with Dr. Wilson on another point. He had talked of the sense of right and wrong being absent in drunkards. No doubt on the whole he was right, and there were great numbers of confirmed drunkards who had lost their sense of right and wrong. That did not help them much in dealing with early cases. The backslider who was constantly conscious that he was giving way appealed to them to help him; the speaker at least saw such cases frequently. He often saw drunkards whose sense of right and wrong seemed to be as acute as any one's, and entailed the greatest mental suffering. He supposed that when Dr. Wilson referred to flogging it was meant as one of those pleasant elaborations which served as sauce to season the argument. He would be afraid of the ensuing delirium traumaticum, erysipelas, death, coroner's jury, which would follow on its application in real earnest. He did think, however, there was a great deal of truth in what Dr. Wilson had said in regard to heredity. It had become such a gigantic generalisation that it included everything, and so included nothing, and left them hopeless of progress. They heard a great deal about the heredity of drunkenness; because our grandfathers drank too much, therefore we were bound to be drunkards. The absurdity of this kind of twaddle is apparent, and the more they discouraged it the better for the world. They should encourage drunkards to think, what they all needed to remember, that "man is man, and master of his fate."

Dr. MACDONALD (New York) said he had been very much interested in the paper. They had gone through all the stages of treatment of drunkenness as a disease in America. The hospital system had been abandoned on account of its weakness and failure, and the fact that the patients could not be so detained after the early stages of recovery. These hospitals consequently became refuges for drunken husbands or wives, or those whose relatives wished to keep them out of the public view. He thought that the solution of the question was to be found along similar lines to those which Dr. Wilson had suggested. The change which had come over the popular treatment of drunkenness was more effective than any other agency. The feeling on the part of the people, and especially on the part of the women, that drunkenness would not be tolerated now as it used to be, that it was not so excusable as it used to be, had done more to bring about the change than either medical treatment or absolute compulsion.

Dr. McDOWALL (Morpeth) said he agreed with Dr. Wilson. In their treatment of early cases of drunkenness their present method was altogether absurd. Men were taken up to the police court and fined a paltry sum, and with a hardened sinner that soon became a farce. If these men knew that they would have a very sore back every time they got drunk instead of being fined half a crown, they would very seldom go into the public-house. They ought to have recourse to corporal punishment, and he certainly approved of a vigorous treatment of drunkards.

Dr. HAYES NEWINGTON held that what Dr. Wilson had said was partly true, and what Dr. Stewart had said was partly true. There were some cases of drunkenness which were not pathological, and there were other cases that were undoubtedly pathological. What was a drunkard? A great many men went to the public-house every Saturday night, and there misspent their wages. Were they drunkards? How much was a man to drink before being thought worthy of corporal treatment? All the whipping in the world would not save some of them. They all knew drunkards who had cast happiness to the winds. Again, how were they to deal with the head of a household, who held the purse and created physical fear? Flogging could not be the remedy there. No amount of flogging could cure those cases, known to all doctors, who lived like decent Christians for some months, and then without apparent cause, though with absolute regularity, wallowed in drink like pigs, until, having satisfied their impulse, they again became decent. The difficulty of dealing with a subject of this kind lay in the definition.

Dr. YELLOWLEES said that Dr. Wilson had mixed up two totally different classes. The ordinary drunkard was often a mere scoundrel, and ought to be punished accordingly. He did not come within their province as physicians, but a great deal of what Dr. Wilson had said applied solely to him. The man who deliberately made a nuisance of himself, and caused his friends and neighbours to suffer, ought to be punished; and corporal punishment ought to be awarded to a great many others besides drunken scoundrels. Why were there such cases in Mavisbank at all? That was not a place of punishment. If they were not cases of disease, it seemed extraordinary that they should be sent to Dr. Wilson's care. He had laid down the extraordinary principle that the more a man's nature was blunted and perverted the more severely they must deal with him. None of them could accept such a principle. Dr. Wilson would not act upon it himself, and he was very sorry that Dr. Wilson had thus mixed up vice and disease. Then he told them that he never could recognise the crave for drinking. He did not understand that statement—unless, of course, there was no brain disturbance at all. The habitual drunkards, who had weakened their nervous system so far as to come under medical care, had periodical attacks, when they became restless, sleepless, irritable, troublesome, unable to settle to employment, quarrelsome with their neighbours, and in such a state that one knew that they were longing for liquor, and that if they were within the reach of their special temptation they would at once succumb—these cases were familiar to all of them. And yet Dr. Wilson said that he had not seen the crave for drinking. He was quite sure they must treat what he had described as phenomena of disease, and not as mere vice which could be cured by flogging. They all knew that drunkenness was terribly hereditary; but it was entirely a new doctrine, and one that he must deprecate, that they encouraged the evil when they pointed out its bitter and disastrous results. It was quite true that the friends of patients were foolish in that respect. They encouraged him, and comforted themselves by saying, "Poor fellow, he can't help it." A great deal of Dr. Wilson's paper was addressed to such foolish friends, and would do them infinite good if they would act on the wise principles he laid down. But when told they were not to say to the son of a drunkard, as he (Dr. Yellowlees) had said many a time, "You must never touch intoxicants; see what they have done to your father," because it would be an encouragement to drinking, he could not agree. There were cases of moral deterioration which were the gradual result of drunkenness, or the result of brain disease irrespective of drunkenness, or complicated with it. For such moral degeneration this treatment by punishment—why called Calvinistic he did not know—could not result in any good; rather the reverse. Coercion and intimidation, he thought, were often quite useless. They might threaten whatsoever they pleased to a degenerate drunkard, and he would not care. Moral reformation could only be attained through moral regeneration, and self-respect and self-control were not produced by punishment. Dr. Wilson had expressed vigorously and earnestly what many of them felt, especially in regard to the friends of drunkards, but he did not make the necessary distinction between the scoundrels and those whose moral deterioration must be attributed to disease. It was a distinction which certainly existed, though often exaggerated and abused, and he should be sorry if that paper went forth with the imprimatur of the Association.

Dr. CARLYLE JOHNSTONE could not say, and he did not suppose that any of them could say, that they were prepared to agree with Dr. Wilson's principal conclusions; but with his general maxims he expressed his sincere sympathy, and to a great extent his concurrence. In the end of this nineteenth century there was a great deal too much of spurious humanitarianism, which received directly or indirectly a considerable amount of support from the medical profession. While as physicians they had to minister to disease, their first duty was to minister to the community, to protect the commonweal; there was too much of pampering and cherishing a man's weakness and sin, and too little exhortation, admonishment, and chastising of the sinner. Dr. Wilson would admit sin required treatment, and punishment was the proper treatment of sin. Dr. Wilson had given them a good word in calling it

Calvinistic treatment. The President had quoted a saying to the effect that murder might be a disease, but hanging was the cure. He thought that drunkenness was a disease, and that occasionally flogging was the cure.

Dr. CLAPHAM said that although the will was not free, action was free. They could not help willing to do a thing; it was the action that had to be dealt with. As regards the treatment of vicious drunkards, a Yorkshire magistrate had effected considerable improvement in his neighbourhood by saying to the prisoner before him, "You will be fined so much this time, and you will be sent to prison for so many days if you do not abstain for such and such a term." Although they did not define a drunkard, they all knew a drunkard when they saw him. He approved of measures of a drastic character.

Dr. HISLOP (Pietermaritzburg) said they had experimentally tried homes for the treatment of drunkards in South Africa. So far detention in these institutions had not been compulsory, and the institutions had been failures. They had been considering whether they should have a portion of his asylum set apart for inebriates, and he thought that would not be a bad plan. The South African Medical Society, however, unanimously resolved that the various Governments should be advised that separate institutions should be established for the compulsory detention and treatment of inebriates.

The PRESIDENT said that when a member brought a strongly opinionative paper to a meeting of the Association he was apt perhaps to occupy a somewhat extreme position, but there was nothing which elicited a better discussion than bold, crisp views, which caused them to consider if after all they were right, and to give reason for the faith that was in them, although, on the other side, in reply, they too might say more than they intended. He did not think that the last word had yet been said on the preponderance of vice or disease in habitual drunkenness. It had been begun, as Dr. Stewart reminded them, by Sir John Bucknill, who made a strong speech as to the vicious nature of drunkenness at a temperance meeting at Rugby. Dr. Clouston went over a number of cases in Morningside, and showed that a great proportion of them were hereditarily insane or hereditarily alcoholic, although he admitted that there was a number who were primarily if not entirely vicious. Sir John Bucknill took a somewhat extreme view, recognising very few cases of true dipsomania; and they must all feel that in his strong common sense he was largely right. It fell to them in the actual practice of their profession to advise in regard to affairs not entirely medical, and so they might have to aid in the treatment of vicious drunkards; but in his experience they had also to deal with a large residuum of insane drunkards—persons who were first of all insane, and afterwards drunken. It was often most difficult to discriminate between these classes in regard to individual cases. He himself was very strongly of Sir John Bucknill's and Dr. Wilson's opinion, that there had been too much nonsense promulgated in reference to vicious drunkards, as he had stated in his address from that chair. He did not wish to detain them with theological arguments, but he wanted to say a word on the great Calvin, who constructed a logical system of theology which hung together from the first to the last statement, and which was based upon the conception of the inevitableness of human destiny and the innate moral corruption of the race. Now Dr. Wilson asked them to adopt "Calvinistic" treatment, and yet he denied that the doctrine of predestination applied to drunkenness. They could not break with Calvinism in one particular only, nor could they shut their eyes to the inevitable doom of so many habitual drunkards, whether they were considered from the point of view of Calvinists or Psychiatrists. If they were going to use Calvinism as the hangman's whip to keep the wretches in order, they must also use it in the full knowledge that it predicates a state of matters in the individual which has been preordained from all eternity. Calvinism was not responsible for what had been suggested to-day. It was a vulgar error to speak of it as the doctrine of eternal damnation. There was far more in John Calvin than that. [Dr. McDOWALL: Far more than that.] He could not subscribe to Dr. Wilson's theology; still less could he subscribe to his psychology. What they had got to deal with was the person.

Those unfortunate persons who were to be treated with such summary vengeance were so often the darlings of somebody—of somebody who would shield them from fresh disgrace, whatever philosophic advice might be tendered. The President went on to describe the discipline of the prisoners in Elmira Reformatory, and showed that even these incorrigible offenders were protected from flogging by public opinion, except in the extremest cases. He did not believe for a moment that this country would authorise the flogging of drunkards, habitual or occasional. It was plain that unless a man had done something of the nature of robbery with violence, unless he was guilty of the gravest forms of crime, he would escape the degradation of the cat. He felt assured that the Association would not subscribe to that proposition of Dr. Wilson's—(Hear, hear)—nor would they, he thought, approve of his system of "intimidation," partly, no doubt, because of its inherent weakness in threatening what the drunkard already lived in fear of—the results of his vicious conduct; but still more because they could not be assured that the suggested threats would be put in force or prove in effect successful. They in asylums found difficulty in replying to patients who made a wrong use of the Bible. "Here," say the melancholiacs, "in this chapter and in this verse is my condemnation." Were they, therefore, to argue that the Book of books was to be abandoned in asylum life because some of their patients made a bad use of it? What they had got to reply in these circumstances was that they were mistaken in regard to their opinions, and that they must refer to passages of larger hope. And similarly, if medical doctrines of heredity and of insane irresistible impulses are misapplied, it is their duty to point out opposing opinions founded sure on experience. In treatment of the early stages of habitual drunkenness they had been too lax as a nation. When they considered the vast and increasing influence of "the trade," by reason of that influence greatly, and by their own inability as a profession to exercise that amount of political influence which they ought to have, medical men had not done what they ought to have done and what they might have done to deter the inebriate from entering on his vicious career.

Dr. WILSON, replying to the discussion, said he had spoken in no spirit of levity, but had really expressed views which were uppermost in his mind as he went about among the drunkards under his care. He was particularly sorry that Dr. Yellowlees had misunderstood him, and could not remain until that stage of the discussion. There were two or three points which Dr. Yellowlees quite failed to appreciate, no doubt because he (Dr. Wilson) had felt constrained to speak hurriedly to save time, and had been compelled to present his paper in the form of a brief synopsis. He should never think of desisting from saying to certain persons, "For God's sake don't you touch liquor." But to say to the son of a drunkard, "There is a great chance of your becoming a drunkard," or to say to him that drunkenness was hereditary, was, in his mind, quite wrong, although this was promulgated in their writings and sometimes uttered in the consulting room. Regarding the "crave," all he meant to say was that the "crave," as they understood the word, was exceedingly rare. That he adhered to. When he spoke about drunkards he was referring to patients who came to them as so-called habitual inebriates not on account of insanity, but because, as he believed, they had got into the class of "blackguards." They had wrecked their homes and shattered their health. He did not for a moment refer to the insane in Mavisbank. In reply to Dr. Stewart, who said that he (Dr. Wilson) was going back from the position that drunkenness, or inebriety, or alcoholism was a disease, he, on the contrary, was one of those referred to by Dr. Clouston and Dr. Norman who had contributed to the mawkish literature of the disease in question. They had been writing and talking about the disease of drunkenness. Now let them have the therapeutic side. It seemed to him that the lesion was largely connected with the mechanism of the initiative. The drunkard had not vigour or will in new and right directions. Dr. Stewart would agree with him that that was due to some sort of degeneration of the centres of the higher will, whatever that might mean. There was no part of the brain which was isolated, and there was a reflex action between these higher cerebral centres and the skin which

might be excited by flogging. If a drunkard could not of his own free will go out and do his morning work, that was, he held, the true therapeutic for criminal drunkards. It was said in the debate that harsh measures could not apply to the head of a family, but he had seen them effective even in the case of him who held the purse and dominated the household. With reference to what the President had said, some of his observations had expressed exactly what he (Dr. Wilson) desired to combat. The President said he had no doubt whatever that there were cases of marked hereditary alcoholism when the patient was foredoomed to drunkenness and failure in life. It might be so, but he (Dr. Wilson) held that that was not the attitude for them to adopt. To set forth a conception of the hereditary factor in disease which some authorities believed to be false, and to say here is a disorder which is due to devolution, and here is an unfortunate victim of abnormal degeneration, was wrong. He did not think they had any right to say to any man that he is born to be a drunkard.

*The Normal Histology and Pathology of the Cortical Nerve-cells (specially in relation to Insanity).** By W. FORD ROBERTSON, M.D., Pathologist to the Scottish Asylums; and DAVID ORR, M.B., C.M., Assistant.

It was originally our intention to cover the whole ground of the pathology of the cortical nerve-cells in relation to insanity. But in the course of our more recent investigations we have been strongly impressed with the fact that there are certain as yet little known, but very grave fallacies, into which investigators in this field are in danger of running; and it seemed to us in the first place imperative to clear these up before formulating conclusions regarding the relation of cortical nerve-cell changes to insanity.

We shall therefore now deal only with these fallacies, with the occurrence of chromatolysis, varicose atrophy of the protoplasmic processes, and varicose hypertrophy of the axis-cylinder process in acute insanities.

We must first, however, briefly refer to present opinions regarding the normal structure of nerve-cells, and to the experimental production of the above-named lesions in these cells.

Normal Structure of the Nerve-cell.—The theory according to which each neuron or nerve-cell is a separate unit, communicating with other neurons only by contiguity of processes, and never by continuity of them, though it continues to be opposed by Golgi and others, is still maintained by the great majority of authorities. The question as to whether the

* Read at the Annual Meeting of the Medico-Psychological Association, Edinburgh, 1898, and illustrated by a microscopical demonstration.