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## PART 1.—ORIGINAL ARTICLES.

*On the Causes of Insanity, and the Means of checking its Growth; being the Presidential Address by Sir JAMES COXE, M.D., Commissioner in Lunacy, Scotland, President of the Medico-Psychological Association.*

GENTLEMEN,—In the following remarks I shall endeavour, as briefly as possible, to direct your attention to some important questions in connection with lunacy. For the purpose which I have in view it will be necessary to begin with some reference to statistics, but you will understand that such reference is of the baldest kind, and is not to be regarded as exhausting the light which it might throw upon the subjects discussed. Indeed, my statistics serve but as the rough pedestal on which to rest my arguments. It is highly probable that many whom I have the honour of addressing will differ from me in the views which I shall state, but I thought it well to take advantage of the opportunity which I owe to your kindness, to show you in what light matters with which most of you are familiar—so familiar, perhaps, that they may cease to excite your attention or stimulate you to reflection—appear from the stand-point of a Commissioner. But should you differ from me, I trust you will give me credit for having equally at heart with yourselves the welfare of the insane and the honour of the medical profession.

At 1st January, 1859, the population of England and Wales was 19,686,701, and the number of the insane, 36,762.\* These figures give a proportion of 1·86 for every 1000 of the population. At 1st January, 1871, the population of England and Wales was 22,704,108, and the number of the insane, 56,755.†

\* In asylums, 22,879; in workhouses, 7,963; in private dwellings, 5,920.  
† In asylums, 36,871; in workhouses, 12,161; in private dwellings, 7,723.

These figures give a proportion of 2·49 for every 1000 of the population. Thus, in twelve years the insane, in relation to the population, had increased considerably more than a third. Now, to what is this increase in the proportion of lunatics to be ascribed? Is it apparent only, and the result of the system inaugurated by the Lunacy Acts; is it due to an actual increase of lunacy; or is it partly apparent and partly real? That it is to a considerable extent the result of the operation of the statutes cannot, I think, be doubted. When the present lunacy system was inaugurated, many parts of the country were totally unprovided with asylum accommodation. The erection of asylums, accordingly, at once increased the list of the insane brought under official cognisance, without, however, adding to their actual number. There was merely a transfer of patients from private dwellings, where their existence was not officially known, to public establishments where they were registered and reported. But the statistics of every asylum show that the tendency of such establishments is to foster a continuous increase in the number of their inmates. The admissions exceed the discharges and deaths, and from this cause alone there results a steady and persistent increase in the number of patients. That herein lies the main cause of the increase, is shown by the fact that it goes on as steadily and persistently now that asylum accommodation has for some years been provided in every county, as it did at the time when the asylums were being opened. The increase of asylum patients in England and Wales in the twenty years, from 1st January, 1851, to 1st January, 1871, was 20,415, or at the rate of 1,020 a-year.\* In the four years, from 1st January, 1851, to 1st January, 1855, the increase was 4,037,† or at the rate of 1,009 a-year; whereas in the four years, from 1st January, 1867, to 1st January, 1871, it was 4,957,‡ or at the rate of 1,239 a-year. These figures indicate that between the two periods there was somewhat of a lull in the apparent growth of lunacy, but that in the second period there was a higher rate of increase than in the first, after making due allowance for the increase of the population.

Still, that the sole cause of the growth in lunacy lies in the mere tendency of patients to accumulate in asylums, is a theory which cannot be accepted; for it is shown by the Reports of the Commissioners, that the number of admissions

\* From 16,436 to 36,871. † From 16,456 to 20,493. ‡ From 31,914 to 36,871.

into asylums in 1859 amounted to 9278, equivalent to 47 for every 100,000 of the population ; while in 1870 they amounted to 11,462, equivalent to 50 for every 100,000 of the population. From these facts it is evident that the wide establishment of asylums has not diminished the occurrence of lunacy ; or, at any rate, that it has not diminished the proportion of the population sent to them, or the numbers of the insane collected in them. There can be no doubt of this fact ; it is palpable and undeniable. But the increase of the numbers of the insane in asylums can never in itself be accepted as proof of the increase of lunacy. There must be taken into consideration all the different influences which in modern society lead to persons being reckoned as lunatics, and removed as such from home. Chief among these are the facilities afforded by the poor-law for the gratuitous disposal of indigent patients in asylums ; and next to these the opportunities which asylums afford of getting quit of persons who from temper, disease, vice, intemperance, or old age, have become troublesome or expensive inmates at home. Under such influences the definition of lunacy has expanded, and many a one is accordingly now treated as a lunatic who formerly would not have been regarded as coming within the meaning of the term. Proof of this statement is, I think, afforded by the following figures :—Of the 16,456 patients in asylums at 1st January, 1851, 4397 were private, and 12,059 pauper. Of the 36,871 in asylums on 1st January, 1871, 6062 were private, and 30,809 pauper.

If we inquire what effect the wide establishment of asylums has had upon the number of the insane by promoting their recovery, we find that on an average of the three years, 1859-1861, the proportion of recoveries on admissions was 33·57 per cent., and on average of the three years, 1868-70, 34·08 per cent. These results may be regarded as practically identical, and they show that in recent years no modification has been produced in the rate of recovery by any real or supposed advance in the art of medicine. But here, too, there is room for fallacy. If it be true that many persons are now regarded as lunatics from mere decay of nature, and are sent as such to asylums, the ratio of recoveries must necessarily be depressed by the reception of these incurables ; and as the proportion of recoveries is on the whole a stationary one, it follows that there must be a higher ratio of recoveries among the other patients to neutralise the effect of this incurable

element. Thus, it may be that medical science really now does more for the restoration of sanity than it formerly did, although our statistics do not enable us to speak positively on this point.

The mortality in asylums, however, is frequently regarded as the best test of the successful or unsuccessful management of these institutions. But it is obvious that a high or a low mortality may be dependent upon influences altogether beyond the control of medical treatment. A man must die some time or other, and, accordingly, reference to the rate of mortality, without at the same time taking age, physical condition, and other circumstances into account, affords not the slightest indication whether death was due to preventable causes, or followed in the mere course of nature. The mortality in English asylums has scarcely varied during the period in which the Reports of the Commissioners have been issued. In the three years, 1859-61, it amounted in the County and Borough Asylums to 10·81 per cent. of the average numbers resident, and in the three years, 1868-70, to 10·70 per cent. From these facts it might be inferred that the condition of the patients on admission was equally good during the two periods. This deduction might be correct, but it is also not improbable that it would be wrong; for it might be that a high mortality among one section of the patients would be counteracted by a low mortality in another. Thus, supposing the mortality was high among those recently admitted, a low mortality among those who had been long resident would maintain the general mortality at the same figure. To what extent, then, the population of asylums is increased or diminished by the better or worse condition of the patients on admission, it is impossible from the data at our command to determine; but it is a fact of some importance in the consideration of this question, that the death-rate is a growing one when estimated on the number of admissions. In the three years 1859-61, the admissions into all the asylums of England and Wales amounted to 27,981, and the deaths to 7722, giving a proportion of 27 deaths for every 100 admissions. In the three years, 1868-70, the admissions amounted to 33,547, and the deaths to 10,949, giving a proportion of 32 deaths for every 100 admissions. It is not unlikely, however, that this augmented mortality may arise, wholly or partially, from the natural increase in the number of deaths caused by the increasing age of the asylum communities; or simply, as is more

probable, from the asylum population increasing in a faster ratio than the admissions, and so, in comparison, enlarging the field of mortality. There is some reason to think, from the growing preponderance of the urban population, and the extension of the factory system, that the condition of patients on admission, as regards the prolongation of life, is becoming more unfavourable; but unless we could ascertain that there was really an increased mortality among the recently admitted cases, this conjecture could not be accepted as proved. On the whole, everything considered, I fear we must come to the conclusion that during the last twenty years medical science has not succeeded in effecting any increase in the proportion of recoveries, or any decrease in the rate of mortality, among insane patients in asylums.

What, then, is the object sought to be attained by the establishment and constant enlargement of asylums for the insane? The answer to this question involves the consideration of many important points. We have gradually become so accustomed to the extension of asylums whenever they are full, that few stop to inquire whether this is the proper course to pursue. But a little reflection will suffice to show that the institution of asylums is merely an expedient to counteract an evil which has its origin in remote and complicated causes. When the Lunacy Acts were passed, a belief was extensively prevalent that the establishment of asylums would powerfully contribute to check the growth of lunacy, chiefly by the numerous cures they would effect, and by the difficulties they would place in the way of the propagation of the malady. We have seen that this hope has not been realised, but that, on the contrary, the number of lunatics has been greatly increased—partly through the more frequent occurrence of insanity if we may so interpret the increase in the number of admissions, and partly through the predominance of admissions over discharges and deaths. Even if we adopt the latter cause as sufficient in itself to account for the increase in the number of lunatics, and regard their accumulation as simply the result of life prolonged through improved treatment, it is difficult to see in this explanation any adequate reason for the constant extension of asylums. The question still remains: What have they accomplished towards diminishing insanity, either by repressing its growth or by promoting recovery? Of course, it is impossible to call in question the fact that a large proportion of the patients admitted into asylums are

restored to sanity. But this fact, nevertheless, leaves **totally** unsolved the problem, how far recovery is due to any special influence of asylum treatment, or simply to the recuperative powers which nature displays whenever the circumstances which produced the malady are removed or neutralised, wherever that may occur. It is a common argument in favour of asylum treatment, that recovery follows in a much higher ratio in the cases which are admitted in the earlier stages of the disease, than in those which are received after the malady has been for some time established. It cannot be denied that such is the case, and it is not impossible that the deduction, that recovery was due to removal to the asylum, may also be correct. But, it will be observed, this is an assumption in support of which it is very difficult to bring forward proof. Nobody can tell whether recovery would not equally have taken place had the patient not been sent to an asylum, and had simply those other means of treatment been adopted which are resorted to in many other maladies; such as a judicious administration of purgatives, tonics, or other drugs, with proper regulation of diet, and change of scene and surroundings. Again, when it is pointed out that recovery rarely follows the admission of chronic cases into asylums, it is impossible to doubt the fact. But when it is maintained that recovery would have followed had admission taken place at an earlier stage of the malady, we have here again an assumption which is beyond the power of proof. In admitting this assumption, we should be bound also to admit that all patients received into asylums in the early stages of insanity invariably recovered. But we know from experience that this is not the case. Even where there is no apparent organic lesion, where the malady manifests itself as simple excitement or depression, or where there is merely delusion without either excitement or depression, we find the malady not infrequently resisting treatment at however early a stage the patient may have been brought to the asylum.

Every one must admit that asylums, under the exigencies of modern social existence, are indispensable institutions. They meet a great want, and moreover, they meet it, as a rule, in an admirable manner. Therefore, I beg it may not be supposed that I am arguing in any way against either asylums or their management. My purpose is to point out what I consider to be the proper sphere of these establishments, and to warn against their unreasonable use. I have often in visiting them been inclined to question the propriety of detaining

certain patients. There was no question as to the existence of insanity, but there was, nevertheless, the doubt whether it was to such an extent as to necessitate continued detention. From the Superintendent being of opinion that such was the case, or from other difficulties in the way of discharge, the patient was left. At a future visit I have found him much more confirmed in his delusions, or more liable to excitement, or perhaps incoherent. This result, looked at from one point of view, would seem to confirm the propriety of detention, but from another it may be regarded as bearing out the doubt that was felt. One thing at all events was clear: asylum treatment had failed; whether treatment elsewhere would have been more successful must, of course, remain unknown; but it has always appeared to me very questionable reasoning to maintain the propriety of detention from its unsuccessful results. However, it is not uncommon to hear it asserted that even where asylums do not cure, they at all events improve and humanise. It cannot be denied that this is frequently the case; but, on the other hand, there is not wanting evidence to show that association with the insane has occasionally a degrading and deteriorating effect. Even in the best conducted asylum a patient cannot meet with the same distractions as in ordinary life. There is much in its routine which must tend to confirm the mental malady; and, on the other hand, there is much in ordinary life, in its changes of society, amusement, scenes, and circumstances, which help to lift the mind out of its diseased rut and to restore it to healthy action. I feel confident, so far as one can feel confidence in any such matter, that I have seen recovery take place from home treatment, when incurability would have followed removal to an asylum. The great advantages of asylum treatment are its convenience and its economy. Beyond the power of control which it confers, and the isolation which it facilitates, an asylum in itself possesses no special virtue; nor am I inclined to ascribe any particular influence to anything special in the treatment pursued in it. Beyond all question, experience must and does confer an aptitude in the mode of dealing with insane patients; but it has often occurred to me that medical men who devote themselves specially to the treatment of insanity injure themselves and the profession generally in the estimation of the public, when they maintain that some special or extraordinary genius, or some special or extraordinary attainments are necessary for the purpose. There cannot be a doubt that

the inspiration of genius, and the knowledge acquired from experience, will often point the way to successful treatment in specially difficult or obscure cases, but, as a rule, recovery from insanity is due far more to an adherence to the broad rules of hygiene than to any peculiarity in the treatment. In supplying abundance of food and clothing, in providing a comfortable lodging and bed, in giving proper attention to cleanliness, and in affording ample means of varied occupation and exercise in the open air, lies the great secret of the successful treatment of insanity. Purgatives, hypnotics, narcotics, and tonics are useful as auxiliaries; but a comfortable meal is the best of sedatives, and abundance of exercise the best of hypnotics.

If these views be correct, it follows that insanity is mainly the result of a deteriorated condition of the body generally, and not in any exclusive manner of the nervous system. I say *mainly*, for I do not call in question the fact, that certain forms of insanity are the direct result of the condition of the nervous system. Where insanity follows apoplexy, injuries of the head, tumours in the brain, sunstroke, &c., the mischief lies immediately in the nervous system; but such cases are exceptional, and are generally incurable from the organic alterations which have taken place in the brain. In insanity which is curable, on the other hand, the nervous system, as a rule, is only secondarily affected.

The chief progress which modern study and investigation have accomplished in medicine, lies in determining the nature of the structural changes which produce or accompany disease. Our knowledge of pathology has been greatly extended, but little or no success has, in consequence, been achieved in diminishing the ravages of disease. It may possibly be gratifying to the pride of the pathologist to feel that he can tell what morbid changes are proceeding in the body, and at what time they are likely to attain such an extent as to be incompatible with the continuance of life. But as yet this knowledge, although, I trust, preparing the way for great benefits hereafter, has not been productive of any important effect in diminishing the ravages of disease. This doctrine is, I am ready to grant, not quite in unison with the views of the profession generally, but I rest my opinion upon the evidence furnished by official returns. The rate of mortality has undergone no diminution in England and Wales since the Registrar-General commenced issuing his reports. In the three years, 1838-40, 23·30 deaths occurred



in every 1,000 males living, and 21·49 deaths in every 1,000 females. In the five years, 1861-65, these proportions were 23·86 for males, and 21·55 for females.\* In the single year 1838, there occurred 22·38 deaths for every 1,000 persons living of both sexes, and in the single year 1869, 22·63 deaths for every similar number. It may be objected to this comparison, that the two things compared are not alike; that the condition of the population of England and Wales in 1838 differed in many essential respects from the condition of the population of England and Wales in 1869, and that, but for these differences, the mortality would have undergone a material diminution. It has been ascertained that the population of the towns has increased in a much greater ratio than the population of the country; and as we know from experience, that towns are less favourable to health and longevity than the country, it may be argued that in the greater increase of the urban population we have an adequate explanation of the undiminished rate of mortality, without the humiliating admission, that medical science has made no perceptible progress in this direction during the last forty years. It is well known that the wealth of the country has enormously increased during the period in which the returns of the Registrar-General have been issued; and the effects of this increase are felt through every grade of society. The higher profits of trade, the higher rents of property, the higher dividends upon investments, have been accompanied by higher wages to the working classes; and the increased prosperity of the country has thus been shared in by all ranks of the community, with the exception perhaps of the very lowest class, which, from original defective organisation, or from utterly neglected training, has been unable to emerge from pauperism and its concomitant wretchedness. As a rule, wealth prolongs life, by giving the means of leisure, and the power of attaining comforts which otherwise must have been dispensed with. Statisticians tell us that annuitants, clergymen, and in short, all the well-to-do classes of society, live longer than petty shopkeepers and the working classes; and it is easy to understand why this should be the case. Therefore, we might naturally look for an increase of the wealth of the community being accompanied by a general prolongation of life. That this is not the case proves that wealth alone is not all that is wanted to secure health.

\* Thirty-second Annual Report of the Registrar-General, p. xxiii. *et seq.*

It has frequently been maintained, that insanity is, *par excellence*, a disease of civilised life; and the great increase of the insane during the present century has been cited in support of this opinion. The mental tear and wear necessary to fight the battle of life, and to maintain a position in society, is assumed as one main cause of this increase, and the alleged comparative freedom of savage races from mental aberration is quoted in confirmation of this view. But this question will not stand inquiry. The great increase in the numbers of the insane has not taken place among the upper and educated classes, but mainly among the lower orders: It is for pauper lunatics that the constant demand for increased accommodation is raised. *A priori*, then, it may be assumed, that it is not the over-straining of the powers of the mind that mainly tends to produce insanity, but those causes of physical disease to which the lower orders are chiefly exposed. Such are dissipation in its various forms, over-work of body, insufficient food, the respiration of a corrupted air, and the neglect of intellectual and moral culture. Instead of civilisation then being the cause of insanity, it is the want of civilisation which is at fault. No doubt, over-tension of the emotional faculties, the result of wounded pride, grief, remorse, or fear, is not infrequently the precursor and the apparent cause of mental disease: but even in such cases, the abnormal emotional excitement may frequently be traced back to physical maladies or hygienic neglect. It is true, that many of the upper classes also suffer from insanity; but here, again, it will be found on investigation, that the cause of the malady is very rarely the overstraining of the intellectual faculties. It may be, that emotional excitement is with them a more frequent cause of insanity than with the lower orders, but it will generally be manifest, that debasing practices, dissipation, bodily disease, hereditary predisposition, sunstroke, accidents, or thorough neglect of the most common rules of health are here also at the root of the evil. In fact, there is no disease less likely to supervene in a healthy constitution than insanity. The nervous tissue is less exposed to undergo change from ordinary influences than any of the other tissues of the body, and in this fact lies at once the cause of the stable nature of the mental manifestations, and the reason why a brain once materially affected in its organic structure generally remains impaired for life. In his experiments on Inanition, Chossat found that when a warm-blooded animal is starved to death, the brain and spinal cord lose only 0.019 of their original

substance; while the corresponding loss of the fat is 0.933; of the blood, 0.750; of the muscular system, 0.423; of the organs of respiration, 0.222; and of the bones, 0.167. Hence, when the normal nutrition of a body that has been simply weakened by disease or by starvation, is again restored, the nervous system speedily regains its natural powers. If the nervous tissues were as liable to be affected by those influences which tell upon the condition of the muscular and adipose tissues, no man could reckon upon his sanity from one day to another. It is the fixity of the nervous tissue which gives fixity of intellectual power and moral character. But the constitution of the nervous tissue is nevertheless not beyond the reach of change. As life advances, its nutrition is affected, and its action occasionally becomes weakened or disturbed to such an extent as to produce senile insanity. In earlier life, the prolonged supply of blood, contaminated with alcohol, opium, or the poison of typhus, may so affect its nutrition, or injure its texture, as to render it incapable to resume its healthy functions, and incurable insanity is thus established. The same result may ensue from alterations in the blood consequent on disease of the kidneys; or on the phthisical diathesis. Disease of the heart, and the condition of pregnancy, are other well-known causes of insanity, from the changes which they effect in the force of the circulation, or in the qualities of the blood. It is no doubt difficult to tell why such a cause as pregnancy should produce insanity in one woman and not in another. Something may depend upon the original constitution of the nervous system; or something upon the manner in which the gravid uterus presses upon the blood-vessels, or otherwise interferes with the nutrition of the brain. In the insanity of lactation, it is the impoverished quality of the blood that is the immediate instigator of the mental aberration. In other cases, insanity appears to be due to the reflex action on the brain of the irritation of some distant organ, such as the uterus; but the *modus operandi* in which this is effected is beyond our present knowledge to explain. Nor is this to be wondered at, for our acquaintance with the normal functions of the brain is still of the most meagre kind. Phrenology has, it is true, attempted to solve the question upon what conditions of cerebral structure and development the operation of the various mental faculties is dependent, but the doctrines of the phrenologist still await the co-operation of the anatomist and physiologist to give them confirmation. Nevertheless,

the absence of this confirmation is far from proving the doctrines to be erroneous. No anatomist or physiologist is now of opinion that the brain constitutes one homogeneous organ, the general function of which is the manifestation of mind. On the contrary, the belief is universal, that different portions of the encephalic mass subserve different functions. This belief is capable of being supported by direct proof, when the functions subserved are those of the senses. We can judge when an animal ceases to see, to hear, to smell, or to feel pain, but there is no outward test by which we can form an opinion, whether interference with certain structures has impaired the feeling of benevolence, veneration, or self esteem, or destroyed the power of noting the qualities of objects. Apart from the procedure adopted by phrenologists, it is difficult to see how it is possible to obtain a knowledge of the normal functions of the brain. A little may be learned from pathology, as when disease in the frontal lobe is accompanied by aphasia; but in what manner shall we ascertain whether the natural quantity of the self-esteem or benevolence possessed by a man has been increased or diminished by disease? Besides, it has to be kept in view, that the manifestations of the mind are greatly influenced by the quality of the blood which flows through the brain. When contaminated with alcohol it produces in some a feeling of gaiety and pleasure, and excites in others violent and destructive propensities.

It is, I think, from not sufficiently keeping in view the reciprocal action of the blood and of the brain in the production of the mental manifestations, that physicians, and more especially the physicians of asylums, have looked with distrust upon the claims of phrenology to be reckoned as the handmaid of psychology. If the air which we breathe is unduly mixed with carbonic acid or loaded with impurities, the lungs cannot fulfil the function of maintaining the blood in a state fit for the manifestation of normal physical action. We do not, however, on this account call in question the functions of the lungs. Neither, therefore, should we be led from diseased mental manifestations, to reject the phrenological doctrine which ascribes certain functions to certain portions of the cerebral hemispheres. It is only by a faithful and prolonged study of the development of the cerebral convolutions in healthy constitutions, and a comparison of their volume with the mental characteristics which were manifested in life, that the doctrines of phrenology can be fairly tested. At the same time, it is not impossible that chemistry or the microscope

may hereafter reveal such differences in the composition or structure of the cerebral mass, or of its different portions, as would sufficiently account for different degrees and different kinds of mental power being manifested by brains of like form and size.

From the reasons which have been stated, it will be apparent that insanity, unless in exceptional cases, cannot be regarded as a mere local disease of the brain. The functions of this organ are no doubt disturbed, but it would be as irrational to be guided by this symptom alone in the treatment, as it would be to regard the delirium of drunkenness or fever as the indication by which our efforts should be guided. It, however, occasionally happens that insanity is present where we can detect no symptom of bodily disease. This occurs, for instance, in cases of delusion where a man fancies himself a king or a prophet. All the bodily functions are normally performed, and the existence of the delusion does not seem greatly, if at all, to interfere with the duration of life. But the delusion has, nevertheless, had its origin in some departure from healthy action either in the person of the patient himself or of some of his ancestors. I am aware this is but a loose way of arguing, but it is not an easy matter to trace the growth and confirmation of a delusion. It appears to me, however, that not unfrequently it may be established precisely in the same manner as belief in witchcraft was established in former ages, or as belief in spirit rapping or in certain religious dogmas, is established at the present time. A man who has been educated in the Mahometan faith clings to the belief that Mahomet was a prophet, and no arguments are capable of changing his views. His ideas are as it were stereotyped. The brain has received an impression which it is impossible to efface, and he continues a Mahometan till the day of his death. In the same way, when a delusion has once got possession of a man's mind, extreme difficulty is frequently experienced in displacing it, and this difficulty becomes all the greater the longer it is left undisturbed. But here success in treatment does not arise from arguing with the patient against the delusion, but from improving his bodily health. As his physical condition improves his mind gathers strength, and the delusion disappears as the power of correctly estimating the relations of things to each other is regained. I must not, however, be understood as maintaining that a mistaken belief and a delusion are identical. My remarks point merely to the process by which each becomes fixed in the mind. But

although we think we are aware of an essential difference between a mistaken belief and an insane delusion, it is not always easy to draw a distinct line between them. For instance, what was originally an insane delusion—as in many so-called prophets, perhaps in Mahomet himself—becomes simply a mistaken belief in their followers. In such cases, where does the delusion end and the mistaken belief begin? Already in the prophet, or only in his disciples?

But if, as I have endeavoured to show, insanity in all its phases is a malady which has its origin in some form or other of bodily disease, the importance of preserving the health of the body as its main preventive becomes at once apparent. And it is in this direction, I am persuaded, that we must look for the means of checking its growth. Under the existing system, superintendents of asylums, it appears to me, only partially fulfil the high duties which come within the sphere of their calling. They receive under their care the blighted beings whom ignorance, neglect, poverty, and mismanagement have allowed to drift into insanity, and they do their best to repair the evil which has thus been engendered. But there is a painful analogy between the position of the superintendent of an asylum and that of the governor of a jail. For although we strive to persuade ourselves that a lunatic asylum is a place of treatment and refuge for those stricken of God, yet, if there be any truth in the doctrines of sanitary reformers, all disease, including insanity, results, in an immense number of cases, from our own culpable neglect. This is the case also with crime. Our criminal population is, to a large extent, the result of the neglect of moral and industrial training; and where this is not the case—where crime is the consequence of an original defective organisation, the line which separates it from insanity is artificial and unreal. In a sense, then, both asylums and jails are the antidotes which the State has provided to neutralise the effects of its neglect. The main difference between them lies in this, that in the former the evil is sought to be cured by treatment directed towards strengthening and improving the instrument through which the deeds done in the flesh are manifested; while in the latter the first object is to punish the instrument, and the second to reform it, but still by punishment. Formerly, asylums were even more places of punishment than jails now are. The patients were whipped, and otherwise brutally treated; but although a more humane and more rational system has been adopted in their management, it would in

many cases be difficult to show good grounds for the practice of extending to asylum inmates benefits and indulgences which are withheld from the inmates of prisons.

It is a matter of extreme difficulty to determine where sanity ends and insanity begins ; and it is remarkable that, although it is generally considered to be the duty of the physician to fix that point, it is, nevertheless, the lawyer who decides the question whenever anything more than the mere liberty of the patient is involved. In fact, the lawyer then sits in judgment on the physician, and determines, or directs the jury to determine, whether the acts of the patient, as observed and reported by the physician, afford proof of sanity or insanity.

In deciding the question of soundness or unsoundness of mind, it is necessary to take into account the previous history and education of the patient. For instance, under certain circumstances, as we have seen, a belief is a delusion ; under certain other circumstances it is a religious dogma. A Christian does not believe in Mahometan or Hindoo miracles, but neither does a Mahometan or Hindoo believe in Christian miracles. Still, neither is the Christian, the Mahometan, nor the Hindoo to be accounted insane for believing what the others hold to be error. If, however, a Christian woman were to consider it her duty to be burnt alive on the funeral pile of her husband, we should at once come to the conclusion that she was insane. Facts of this kind show how susceptible the human mind is of receiving impressions of a persistent and indelible kind either for good or evil during the period of growth. It is a well-known axiom that the reformation of criminals is almost hopeless after adult age has been attained ; and for this obvious reason, that the mind has been allowed to acquire certain fixed habits of thought which cannot afterwards be overcome. As a rule, a man becomes a Christian, or the member of some particular Christian sect, not from conviction founded on inquiry, but simply because he was brought up in the society of members of the faith to which he adheres. Hence the great importance which every Church and every sect attach to the religious training of the young. The doctrines taught are without question accepted as truth, and a crop of fresh adherents is thus produced to propagate in their turn the peculiar views in which they were trained.

It seems to me that in the principle to which I have been alluding lies the main chance of our being able to do anything to diminish lunacy. Whether the doctrines of the phrenologists be true or false in respect of the localisation of the

different mental faculties, there can be no question as to the existence of different mental powers, and in different degrees of strength. Some men possess certain talents developed in a much higher degree than others, and are, accordingly, remarkable for a special proficiency in music, painting, engineering, &c.; while others, again, are distinguished above their fellows for deeper moral feelings, or are sunk beneath them by irresistible animal propensities. There can be no doubt, then, of the compound nature of the human mind; nor can it be doubted, from what occurs in religious training, how very much the mind is capable of being moulded or deflected by the circumstances in which the individual is placed. Hitherto we, as medico-psychologists, have, in my opinion, occupied a position too nearly approaching to what may be termed that of the justifiers of the law. We allow evil to grow up; and when it has reached the point which necessitates the withdrawal of the offender from society, we assume the functions of jailers; or, if this term is offensive, of reformers or curers. In speaking of offenders I do not mean to imply that an insane patient has committed an offence against any statutory law; but I believe that, as a very general rule, an offence has been committed against the *natural* laws, either by himself or by his progenitors. This offence, however, is frequently committed in ignorance, and, so far as ignorance is an excuse, in innocence. But I hold that such ignorance, if pardonable in the individual sufferer, is most culpable in the nation which provides for its children an education in which the cultivation of many of the most important faculties with which we have been endowed is almost entirely neglected. Formerly, a man who had failed in every other calling too often still thought himself good enough to undertake the duties of teacher; and even now it is seldom that our schoolmasters have any acquaintance with the physical, intellectual, or moral organisation of the being intrusted to their care. Education, even in our best schools, is as a rule limited to intellectual training of a very partial kind, while moral and physical training receive scarcely any attention. No pains are taken to show how pure enjoyment may be found in the innumerable sources of pleasure and recreation which surround us; and the consequence is, that when the age of puberty is attained, it is too frequently found that no adequate moral barrier has been raised against the fierce onset of the passions. It has been often remarked that of the sons of the Scotch clergy, a proportion considerably above what is found in other classes of society, become



noted for dissipated lives; and this fact, which I fear cannot be disputed, leads to the inference that strict religious training—such training as is comprehended in a mere knowledge of the doctrines of the Shorter Catechism—is not sufficient to ensure satisfactory results. Nor is this to be wondered at. The teaching of religious dogmas is something altogether apart from the cultivation of the moral faculties. Dogmas may point out the way to salvation, but they do little or nothing to incline our hearts to keep the moral laws. If then, even among the so-called educated classes of society, the evil effects of an education which neglects moral and physical training, show themselves in broken bodily health, in dissipation, and in insanity, how much more prevalent must such evils be among the lower orders, whose education hitherto has been in almost all respects exceedingly neglected? It is not too much to say, that to large numbers of the working-classes of this country the main, if not the sole, source of enjoyment and recreation is comprehended in the pleasures of the public-house; and to what manifold evils this inability to derive pleasure from higher sources leads, the medical profession best can tell.

I have stated in the earlier portion of this address that the vast increase of insanity has taken place principally among the lower orders of society, and have shown that the provision of asylums has done nothing whatever to stem the evil. The drift of my observations has been to draw attention to the desirability of entering upon another course, and, instead of waiting till insanity has been produced and then expending our energies in attempts to cure it, to show the importance of stepping in before the mischief has been accomplished. We cannot fail to recognise the evils of the present system. We have an ever-growing number of lunatics, and an ever-growing tax upon the resources of the nation for their support. How much better would it be to spend the money which is required for the maintenance of thousands of useless beings, in preserving their health and enabling them to take their share in the labours, duties, and pleasures of life! This is a reform which is not to be wrought in a day, for the sources of the evil lie in the ignorance which pervades every portion of society. The medical profession alone are trained in a knowledge of the structure and functions of the human frame; but even their education is frequently very imperfect, especially as regards the preservation of health. It is in mental hygiene, however, that this deficiency is most apparent.

Students are taught the functions of the spinal cord and of the sensory ganglia, but I know of no school of medicine in which any serious attempt is made to impart a knowledge of the functions of the different portions of the cerebral hemispheres. Yet it is undoubtedly upon the cerebral hemispheres that man's super-eminent position depends. I have already admitted the difficulties that lie in the way of localising the different mental powers, and associating them with different portions of the brain; but this knowledge, although of great importance, is fortunately not essential for the practical application of mental hygiene. We know that the mental powers are there, we know that they are linked with, and dependent on, certain cerebral structures, we know from experience that they follow certain laws, and although doubts may remain as to the particular structures with which particular powers are associated, our ignorance on this point leaves unaffected the general doctrine that cerebral structure and cerebral nutrition determine mental action. This is a lesson which should be taught not only in our universities, but in every school of the kingdom. The small success which has hitherto attended the efforts of sanitary science has its origin in the ignorance of the people. To preach of the necessity of exercise and of ventilation to a man who has no knowledge of the laws of respiration, who is ignorant of the constitution of the atmosphere, who does not know what is meant by breathing impure air, is to waste time and argument to no purpose. He has not the capacity to profit by what he is told, although the telling may be reiterated a thousand times. Therefore, it is not sufficient that there should be a class of men educated in a knowledge of sanitary science to act as guides to the common herd, but every member of the common herd should be taught in what manner and on what grounds his conduct should be regulated in order to preserve his health, and to enable him to do his duty towards himself and his neighbours in his day and generation. What does it signify to a man who is suffering from consumption, from insanity, or fever, or who, in good health himself, has seen his children carried off one after another in childhood or in youth, to know that Romulus founded Rome, that Troy fell after a ten years' siege, that Jupiter was the king of the gods, and Minerva the goddess of wisdom? Such knowledge is not to be contemned, but why should the far more important knowledge, which would qualify every man to be the guardian of his own bodily and mental health, be despised and

neglected? The only reason that can account for this result is the ignorance of the teachers themselves of the vastly superior importance of hygienic training.

It is too much the fashion of the day to seek to regulate the conduct of the people by legislative enactments. In a great variety of ways the liberty of the subject is curtailed by statute, in the hope of counteracting evil habits and promoting virtuous conduct. Thus, with the view of checking drunkenness, it is forbidden to keep public-houses open after certain hours; and in Scotland, no one who is not what is called a *bona fide* traveller, can obtain refreshment of any kind in any house of public entertainment on Sundays. But in spite of all such enactments we find lunacy, drunkenness, pauperism, and crime undergoing no diminution. On the contrary, drunkenness has now attained such development that a Committee of the House of Commons has recently recommended the establishment of sanatoria or reformatories, for the forcible detention and treatment of those habitually addicted to this vice. But why should those, for whose benefit such institutions are proposed, not be made as capable of taking care of themselves as the Members of the Committee of the House of Commons, from whom this proposal emanates? Within the last fifty years an immense improvement has taken place in the habits of the upper classes of society; not, however, in consequence of penal legislation, but simply from their higher mental culture and the wider field of enjoyment which has thus been opened up to them. Then why should we not try a similar remedy with the lower classes? We have no statistical information as to the number of habitual drunkards among the upper classes; but, judging from analogy, it must be small in comparison with what is found among the lower. In all England, at 1st January, 1871, there were only 6110 insane persons supported from private sources in a population of 22,704,108; against 50,185 supported by parochial rates. No fact can speak more strongly in favour of the efficacy of mental culture in warding off insanity. After making full allowance for the pauperising influence of the malady, by reckoning at a quarter of the population the classes from which pauper lunatics are drawn, the number of private patients which I have quoted gives in the remaining three-fourths a proportion of 1,000 lunatics in every 2,785,000 inhabitants; or but one in 2,785, instead of one in 113, which would be the result if the calculation were extended to paupers on the basis indicated. There is little doubt that at least as great a

difference would be found in the proportion of drunkards among the upper and lower classes; and the inference would accordingly be that we should strive to overcome the evil not by the establishment of reformatories, but by measures of prevention. It cannot be denied that the vice of drunkenness is met with occasionally in persons of high intellectual cultivation, but I believe that in such cases the origin of the mischief may generally be traced to disease originating in hygienic neglect.

It is readily admitted, as a general truth, that health is the greatest blessing man can enjoy on this earth, and that without health all else is "stale, flat, and unprofitable." But it seems to be imagined that the wonderfully complex organism of the human body is capable of adapting itself to whatever circumstances it may happen to be placed in, without any intelligent guidance from its owner. We have, it is true, a special class, that of medical men, whose duty it is to watch over the health of the community and to cure their diseases; but, as a rule, their functions are limited to the restoration of health after it has been lost, and not to its preservation. A small portion of this class, I admit, undertakes the special work of the prevention of disease, and for this end has laid down rules for securing proper drainage and ventilation, for guarding against overcrowding, for limiting the hours of labour, for regulating public-houses, &c.; but our statistics tell us without, as yet, having achieved any perceptible beneficial results. Neither do the Reports of the Registrar-General show any diminution in the rate of mortality, nor do those of the Commissioners in Lunacy show any decrease in the occurrence of insanity. And why should this be so? Simply, I believe, because the community has not been trained in a knowledge of the human organism, and of the laws which determine its welfare. Ignorance of such knowledge has an all-pervading influence. It affects the proceedings of the Legislature, of the clergy, and of teachers, and, through their instrumentality, the conduct and behaviour of the whole community. In the first place, the complex nature of the human mind is overlooked; education is too much restricted to the cultivation of the intellectual faculties, and even their training is, as a rule, only partial and imperfect. In the second place, moral training may be said to be almost entirely neglected; and the same remark is applicable to physical training. We all know from experience that pleasure is found in the exercise of our faculties. A knowledge

of geology, botany, chemistry, astronomy, music, literature, or the fine arts, opens up in each of these departments a vast source of mental occupation and enjoyment. Without such knowledge every man would be so much the less capable of occupying and enjoying himself, and would be driven to fall back on such other means of gratifying his inclinations as were in his capacity of enjoyment. Now, we are so framed that our animal propensities require no special training to prepare them for this purpose. The habit of indulgence in intemperance or in vice may acquire strength with what it feeds on, but we are so formed that the most ignorant man is fitted to embark at once in a vicious career, and he is all the more ready to do so on account of his very ignorance, and his consequent inability to find enjoyment in the exercise of his higher faculties. Moral training, even when there has been a neglect of intellectual cultivation, may bar the way to vicious indulgence, but, unfortunately, moral training is too often limited to the mere repetition by rote of the Shorter Catechism or of the Ten Commandments. Such training, it appears to me, should comprehend an exposition of the duty of man towards God, towards his neighbour, and towards the lower animals. The duty of man towards God cannot easily, in the present day, be learned from the clergy, for the clergy have, unfortunately, adopted a conventional language which conveys no meaning to the great mass of the people. The consequence is that few of the lower orders, especially of those which inhabit the wynds and closes of our large towns, ever attend church. Those of the upper and middle ranks, and of the better class of artisans, operatives, and labourers who do so, are actuated more by a feeling of duty—in many cases, I fear, more by a feeling of superstition—than by any expectation of benefit or improvement; for, as a rule, they have to listen to a wearisome, never-ending exposition of obscure doctrinal points which have no influence on their everyday conduct. What fills the churches of popular preachers, such as Spurgeon, but the use of language which the people can understand? If the clergy would condescend to follow this example and appeal to the intellectual and moral faculties of their congregations in common language, and to deal with such topics as the duties and rights of each man in his respective social position, an interest might be awakened by their preaching that would attract hearers from all classes, and exercise an extensive beneficial influence on the culture of the people. Their discourses would thus

include an exposition of the wonders of creation ; of the duty of parents towards children, and of children towards parents ; of masters towards servants, and of servants towards masters ; of employers towards their work-people, and of the workpeople towards their employers. The object and operation of the statutory enactments for the relief of poverty, the prevention of disease, and the restoration of bodily and mental health,—the rights which they confer, and the duties which they involve,—would likewise form appropriate subjects for exposition, as would also the moral obligation of treating the lower animals with that kindness and consideration which is their due as part of God's creation, and as rightful sharers in the blessings which He has showered upon this earth.

The neglect of physical training is almost universal, and even where it is attempted, it is calculated to do perhaps more harm than good. If, instead of the fanciful exercises which, under the name of gymnastics, receive a small share of attention in some schools, a system of modified army drill were introduced, not only would the development of the body be beneficially directed and improved, but useful knowledge in the manipulation of arms would be imparted, and a liking instilled for martial and manly exercises which, in after years, would tend to bring the different classes of society together upon common ground, and would go far to add to our security as a nation.

My doctrine then is, gentlemen, that insanity, so far from being a disease of civilisation, is a disease of ignorance, and that the only way in which its extension can be checked is by imparting to every man a knowledge of the structure of his own body, and of the relations in which he stands to the moral and physical world around him. I have already stated my opinion that our special branch of the medical profession has hitherto not fulfilled the utmost good that it is capable of accomplishing. We possess the best means of fully estimating the immense amount of evil that results from neglected bodily and mental training, but our efforts have hitherto been too much restricted to providing a remedy for it by asylum treatment. Of the manner in which this remedy has been applied I can speak only in terms of the highest admiration. In no country in the world does the condition of lunatic asylums surpass—I might, I think, fairly say equal—that of the asylums of the United Kingdom ; and the very greatest credit is accordingly due to their superintendents for the intelligence, zeal, and perseverance which they have brought

to the fulfilment of their important duties. But I am ambitious to see them exercising their great and legitimate influence in their respective districts, by pointing out how mind depends on matter, and how insanity is but the expression of a faulty physical constitution, having its origin in causes which we may readily trace, and which are in a great measure under our control. There is much that is hopeful for the progress of the people in the present movement among the working classes for increased wages and shorter hours of labour, but until their sources of enjoyment have been extended by the wider cultivation of their intellectual and moral faculties, there is only too much reason to fear that increase of wages and increase of leisure, instead of promoting their higher civilization, will merely afford the means of increased indulgence to their animal propensities.

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*On the Classification and Prognosis of Idiocy.* By W. W. IRELAND, M.D., Medical Superintendent of the Scottish National Institution for the Education of Imbecile Children, Larbert by Falkirk.

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*The Classification and Prognosis of Idiocy.*

There always must be some awkwardness about the classification of insanity. It is regarded as aberration of function of the nervous centres, the result of a number of nervous diseases. The physician who wishes to have a proper knowledge of insanity from a medical point of view must study the pathological conditions of which it is the symptom or the result, and when he has done so it is impossible for him to disconnect one series of observations from the other—the mental aberration from the accompanying disease of tissue or pathological symptoms. Insanity is, therefore, an irregular segment of a circle, of the totality of which it forms a part. It can neither be viewed alone nor can it, from its great importance, be regarded as merely a symptom of various nervous diseases, especially when most of these diseases may run their course without its manifestation. Thus we have