ever come to grips with the wastage occurring in our Army due to nervous and mental disease.

(1) These cases were all studied at the Lord Derby War Hospital, Warrington, Lancs.

Evolutional Progress in Psychiatry: A Plea for Optimism. By HUBERT J. NORMAN, M.B., D.P.H., Capt. (Temporary) R.A.M.C., County of Middlesex War Hospital.

I.

HUMAN perfectibility, or even entire social amelioration, appear with the passage of time to recede into a yet further distance; and, whilst forming subject-matter for academic discussion and for visionary imagination, they hardly come within the range of practical politics. With them, as with disquisitions about the hereafter, there has been a tendency to allow "other worldliness" to obscure the necessity for doing our duty here and now, and letting the distant future take care of itself. To those who object that this view is a sordid, or at least a selfish one, it may be answered that if we observe the Golden Rule—if even we practise but a negative virtue by refraining from doing evil—we shall yet make for the desired goal, possibly as rapidly as those who, their eyes fixed on that distant point, fail to observe the obstacles which lie immediately in their path, and who have, again and again, to arise bruised and disheartened by their stumbles and disappointments. It may indeed be that their aims are but illusions, mere figments of the fancy, impossible of realisation. "Uniform and universal knowledge, social salvation and sovereign goodness, a golden age to come excelling a past golden age, a Paradise regained in lieu of a Paradise lost, in fact, a kingdom of heaven on earth or elsewhere, are not yet matters with which the sober-minded scientist can grapple[1];" and nescience can only formulate them in phraseology which lacks verisimilitude even to those who utter it. It is doubtful whether the projectors of ideal commonwealths would have desired to have been themselves inhabitants thereof; even if they had had the will it is certain that they would not have had the ability to carry it into effect. Much of their work is perchance energy misdirected, and the words of Milton may be applicable to others as well as to him of whom he uttered them. "Plato, a man of high authority indeed, but least of all for his Commonwealth, in the book of his laws, which no City ever yet received, fed his fancie with making many edicts to his ayrie Burgomasters, which they who otherwise admire him wish had been rather buried and excused in

[1] *Organic to Human*, by Henry Maudsley, p. 129, London, 1916.

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the genial cups of an Academick night-sitting." It is no use, as he further remarks, "to sequester out of the world into Atlantick and Eutopian politics, which never can be drawn into use, and will not mend our condition; but to ordain wisely as in this world of evil."[1]

It may be said that this is an inauspicious opening to any essay which is entitled "A Plea for Optimism," and that, moreover, the time is inopportune when the majority of the human race are concentrating their attention on the best methods whereby they may destroy one another. Yet optimism in respect to any matter may be permitted if it can be proved to be reasonable; and the bitterest strife has an ending—even if the cessation be but the product of exhaustion, and, therefore, only sufficient to allow of recuperation for another outburst. Is there, then, foundation for hope of still further advancement in our knowledge respecting mental disorders? And may we believe that we shall yet improve our therapeutic methods?

A consideration of the progress made in science generally, and of psychiatry in particular, appears to warrant us in adopting an attitude of reasoned optimism. A brief historical survey may, therefore, be permitted, and an endeavour made to substantiate the claim herein advanced.

II.

It is only within very recent times that an attempt has been made to investigate mental disorders along those lines which have led to such successful results in other directions. For centuries it has been held either that they were due to some Divine infliction whereby demons were allowed to enter into and to afflict the body of the unfortunate sufferer, or they were produced by some disorder in a hypothetical "mind," which acted upon the brain and body, but which could not conversely be influenced by them. In both cases there was obviously no likelihood of research into physical substructure; and, indeed, it is only slowly that, even at the present time, the belief is beginning to prevail that it is necessary patiently to investigate the brain if any satisfactory conclusions are to be reached in psychology and in psychiatry. Even though relatively immense strides have been made in other branches of medicine by these methods, mental disorders have been left for the most part severely alone—so potent has been the influence of theological and metaphysical ideas. And now, when the relatively few workers have done so much already to illuminate the dark recesses of our knowledge of the brain and its functions, the reproach is often uttered that in psychiatry—the Cinderella of the sciences—research has lagged behind. "Only ignorance of the solid accomplishments in

[1] *Areopagitica*, Arber's reprints, pp. 49 and 51.

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this field which recent years have brought forth, or inability to estimate their worth, can be responsible for the repetition of this complaint." Thus wrote Feuchtersleben, in 1844, of the often-repeated objection that the study of psychiatry had been "all too sadly neglected" and that alienists were, therefore, "still groping in the dark." The retort may surely be made that it is only beginning, and that in due course—without inferring any disparagement of the aspect of the sister-sciences—we may hope to see as sure, if not as speedy, a transformation as Cinderella experienced. But the fairy god-mother will have to make sure that she does not omit to touch the researchers with her golden wand! In other words, it is necessary to provide adequate funds for the purpose in order that it may not continue to be said that the person who devotes himself to research is worse off than if he had directed his energies along more commercial, more remunerative, channels.

The progress of ideas regarding insanity has not been an uninterrupted one. It may, indeed, be stated that movement has been rather in cycles. A period characterised by quite primitive conceptions is followed by one of considerable enlightenment, and this, again, gives place to darkness and ignorance. There is, however—or there appears to be—with each succeeding phase a wider diffusion of knowledge, and, at the same time, an increasing accuracy in regard to details. It is this more minute research, made possible by the invention of instruments of precision and by refinements in chemical methods, which is tending to differentiate the present period from all preceding ones. It is becoming increasingly more possible to investigate the fundamental structure of the Universe than ever before. Opinions and hypotheses may be disputed, controverted, perchance; facts are ultimately—except to the Berkeleyan!—convincing. It is in this respect that we may be said to have made our chief advance since Hippocratic times—in this, and in the substitution of other conceptions to replace the humoral pathology.

Prior to the Hippocratic period, there was one in which the hypothesis of supernatural influence held chief sway. A consideration of the evidence contained in the Old Testament makes this clear. Ideas of this kind, however, arose in much more primitive times. It appears likely that, even in the savage mind, as a result of the evil-doings of his aggressive neighbours, conjoined with the influence which dreams would almost inevitably exert, the idea of some supernatural force might easily arise. There is no evidence that a belief in actual beneficent or maleficent deities arose suddenly. Only by slow degrees and by gradual accretions of knowledge could such well-defined beliefs, as, for example, that of the personification of Good and of Evil in the form of Ormuzd and of Ahriman, come into being. Indeed, such a differentiation implies a precedent development lasting

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for unnumbered centuries; and it is probable that the dawning belief in extraneous, supernatural powers was one which looked upon the inscrutable power as a maleficent one. No matter, however, in what manner the belief was acquired, once established it was natural to ascribe to the influence of this power anything which passed the more or less limited comprehension of man. Thus strange and awesome happenings in the human body, such, for example, as epileptic fits or outbursts of maniacal fury, were set to the account of some mischievous demon or of some provoked deity. In some form or other this has been one of the most persistent and widespread of beliefs. From the time of Saul's mental derangement even down to the present it has been accepted as a satisfactory cause of mental disorder. We are told that because of Saul's sad dereliction of duty—he had failed to carry out the Divine command to slay utterly certain of his neighbours —"the spirit of the Lord departed from Saul and an evil spirit of the Lord troubled him"![1] David, who was of an ingenious turn of mind and full of expedients—as his method of dealing with that obstacle of his, Uriah the Hittite, goes to prove—narrowly escaped the fate of many innovators when he endeavoured to allay the king's fury by means of music!

As among the Jews so in ancient Greece the belief in irritated deities as the prime movers in the production of mental disorders was the one which held sway. Hercules, for example, was pursued by the anger of Juno; and she it was who afflicted him with epileptic fury. Euripides has described dramatically the outbursts to which he was subject, and how, in one of his homicidal attacks, he slew his wife and children.[2] Orestes, Ajax, and Meleager were smitten in a similar manner; while the daughters of Proetus, King of Argos, were also rendered mad, but in their case the administration of hellebore counteracted the Divine wrath!

A remarkable period of enlightenment began, however, to dawn in the sixth century B.C. Pythagoras, physician as well as philosopher, initiated the movement which produced in the following century that illustrious thinker, Hippocrates. The Pythagorean school directed its attention chiefly to what may be described as prophylactic methods. By means of careful *regimen* they sought to bring about health of the body and soundness of the mind. Music was used by them also as a therapeutic method in dealing with cases of insanity. With the advent of Hippocrates (460–377 B.C.), medicine was for the first time set upon a rational basis. Instead of devoting his time to web-spinning and

[1] 1 Samuel xvi, 14.

[2] In the *Bacchæ* Euripides gives a further illustration of the same Divine anger. Bacchus produces madness in Agave, the mother of Pentheus, because of her opposition to worship of him.

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phrase-mongering he set himself to the task of observing accurately the symptoms of disease and of constructing from the facts thus collected a practical science of medicine in contradistinction to the airy imaginings which proved so satisfactory to the majority of his predecessors—to say nothing of many of those who have come after him. This was sufficiently remarkable in regard to disease in general; but that he should have attained to the conception that mental affections could be included among bodily disorders is, indeed, amazing. That he should have been able to postulate such beliefs and live is an exemplification, too, of the tolerance which existed at that time in Greece. "I am of opinion," wrote Hippocrates, "that the brain exercises the greatest power in man. This is the interpreter to us of those things which emanate from the air, when it happens to be in a sound state. . . . And by the same organ we become mad and delirious, and fears and terrors assail us, some by night and some by day, and dreams and untimely wanderings, and cares that are not suitable, and ignorance of present circumstances, desuetude and unskilfulness. All these things we endure from the brain when it is not healthy."[1] In the same way Hippocrates dismissed as fanciful the idea that epilepsy was a manifestation of Divine interference. It had been called the sacred disease; but it was, he said, no more Divine than any other form of disorder.

In such early times, when knowledge was confined to the few and when even civilisation was narrowly circumscribed, views similar to those held by the Hippocratic school were unlikely to obtain any wide acceptation. Even those who were capable of understanding his teachings were for the most part too prejudiced to be influenced by them. The links between function and structure had not been discovered. Nor was it possible with the methods then available to demonstrate the nexus between the two. Recourse had to be had to theory in order to explain what took place. The humoral pathology was the result. It might have been true; but, even if it were so, its truth could not be demonstrated. Yet there were adherents of the new learning who strove to carry on the lamp of knowledge. Asclepiades (*circa* 80 B.C.), Themison, Soranus (*circa* 95 A.D.), and Caelius Aurelianus not only maintained the Hippocratic tradition, they substituted the hypothesis of a *vital force*—the excess or defect of which brought about the symptoms described—for the humoral theory. They simplified and made more precise the descriptions of various morbid mental states; and this was also a characteristic feature of the writings of Aretaeus.[2] In regard to treatment there was an equal advancement.

[1] *Hippocrates*, Sydenham Society's edition.

[2] "Son plus grand titre de gloire est d'avoir laissé des diverses formes d'aliénation mentale, et notamment de la manie et de la mélancolie, des descriptions

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When one reads the teachings of Soranus—as embodied in the writings of Caelius—it seems almost incredible that for about another seventeen hundred years the darkness of ignorance could have prevailed in this respect. Not only does he set forth rules which are to be followed in dealing with the insane as to diet, the necessity of procuring sleep, proper accommodation, and so forth, he deprecates the harsh methods advocated by others, notably by Celsus, who even suggested castigation, chains, and deprivation of food in order to subdue lunatics.[1]

This period of enlightenment practically ended with the second century A.D. Galen was the last physician of distinction, then, who carried out the teachings of the Hippocratic school. In his writings we find again that modernism of tone which contrasts so strongly with the almost primitive ignorance of the majority of those who came after him. It was not so much a reactionary movement which overwhelmed the rational teachings of the Greek school but rather that the waves of Greek culture fell back impotently from the rocks of tradition and prejudice which resist at all times by their sheer inertia the impact of new ideas. Yet was this teaching not altogether without avail. Vandalism and bigotry did not succeed entirely in eliminating the writings of those early teachers, and in the course of time they found again pupils who, undeterred by the odium which they ran the risk of incurring, absorbed their doctrines and gradually built a superstructure of modern knowledge upon the foundations therein laid down. It has been well said that "the crowning glory of the Grecian epoch was the recognition once for all that whatever the determining or contributing factors or their manner of operation, *madness is not a manifestation of supernatural power but a disease, and not only a disease, but a disease of the brain; and that physical symptoms commonly accompany the mental ones, both being alike traceable to natural human causes.*"[2] When we consider the amount of mediævalism which still characterises much present-day writing on matters psychological we cannot sufficiently wonder at the enlightenment of those far-off times. Almost may we say with Browning that—

> "Those divine men of old time,
> Have reached . . . each at one point
> The outside verge that rounds our faculty."[3]

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d'une exactitude et d'une vérité remarquables," Régis, *Précis de Psychiatrie* (Paris, 1914), p.8.

[1] It is only just, however, to note that these were not the main methods advocated by Celsus. He also formulated wise and excellent rules for the treatment of the insane.

[2] "Some Origins in Psychiatry," by Clarence B. Farrar, *Amer. Journ. of Insanity*, vol. lxiv, No. 3.

[3] Cleon.

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Progressive medical science was not, of course, confined to Greece and to Rome. Among the Egyptians, for example, a considerable advance was also made, and the thirst for knowledge led them to observe and even to experiment. But culture generally was limited to but a small part of the globe. Beyond that part were the vast masses of the uncultured. Among them it was not possible for the culture of the Greeks to spread until a period of intellectual probation had elapsed. In the first place, they would absorb most readily the simpler ideas of a more primitive culture, such as that of the Jews, tinging them at the same time with the emotional colouring produced by difference of race and of climate. So it came about that rational concepts were stifled, or nearly so, by the supernaturalism of the early Christians, who, be it remembered, were carrying on directly the traditions and the beliefs of the Jews. The New Testament emphasises and reiterates the teachings as to demon-possession. And this possession is not restricted to human beings, as witness the episode of the Gadarene swine. But whereas in the olden time the lunatic might roam comparatively unmolested among the tombs—"wander through the soothing cypress-groves in the moonlight or lie under the shading palm in the noontide heat," now gradually he came to be regarded not so much as one in "the guardianship of God,"[1] but as a miserable sinner, who harboured demons and who required exorcism or more drastic measures to rid him of his affliction. For the mad and for the half-mad, such as many of the witches, the Dark Ages were approaching. Not that they were invariably badly treated. Cures were attempted by means which were not inhumane, but certainly for the more troublesome lunatics there was short shrift. Not even from the science of medicine —such as it was—could they look for much comfort. In this country in Anglo-Saxon times disorders of this kind and, indeed, diseases in general were treated—so far as drugs were concerned—by means of potions of appalling nauseousness.[2] For centuries the chief criterion of therapeutic potency seems, indeed, to have been the unpleasantness of the compound and, in addition, the number of components, so that a list of the ingredients in a prescription in the olden times resembles nothing so much as the nomenclature of a modern synthetic drug. Even those who had sufficient independence to break away from the accepted beliefs were not able to make any appreciable advance beyond the limits of the Greek school. Chief among these were Alexander of Tralles (A.D. sixth century) and Paulus Ægineta (A.D. seventh century); and the Arabian physicians, Rhazes (A.D. 850–923) and Avicenna (A.D. 980–1037).

[1] *A History of Penal Methods*, by George Ives, p. 77, London, 1914.

[2] For examples, Oswald Cockayne's interesting volumes in *Leechdoms, Wort-Cunning, and Starcraft* may be referred to, London, 1864.

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III.

Throughout the Middle Ages, and, indeed, even until the end of the seventeenth century, belief being for the vast majority of the people fixed, there was little likelihood of any advance. There were, so to say, simply variations on the same tune. The change of view, if any, was rather in the direction of aggrandising the part played by the Devil and of diminishing the influence of the Deity. Instead of the insane being afflicted and, therefore, objects of pity, they were harbourers of demons, perchance even agents of the Devil himself, and, consequently, deserving of treatment by the most drastic means. As belief became more gloomy and as the laws enacted to suppress the crimes of sorcery increased in their rigour, so did the troubles against which legislation was directed become more widespread. Epidemics, such as the dancing mania, afflicted many; and witchcraft increased to an amazing extent, if we are to believe the accounts of the chroniclers of the time.

The amazing thing is not that such beliefs should have obtained so wide an acceptance, but that, once so firmly established, rational thought should ever have been able to dispossess them. It does not appear to be by any conscious effort that such a change is brought about, but rather that, in the course of time, constantly recurring stimuli tend to modify the nervous system in such a way that in the end it becomes able accurately to comprehend what is influencing it, just as, when the sun rises, objects which had appeared shadowy, indistinct, even ghostlike in the gloom, gradually become clearly outlined. So it was that the ideas which characterised the Greek school could not arise among the Northern nations until what has been called the period of intellectual probation had been traversed. This took a matter of some sixteen hundred years.

Towards the end of the sixteenth century several thinkers had come to realise that many of the beliefs then almost universally held were erroneous and pernicious. It was in regard to the witchcraft delusion in particular that an advance began to be made. Men like Reginald Scot, in his *Discoverie of Witchcraft* (1584), and the German physician, John Wier, in his *De Præstigiis Dæmonum* (1563), were among the first to preach a more reasonable doctrine. But theirs were almost voices in the wilderness. The weight of opinion, theological and lay, was against them. Nevertheless, it was a beginning of the rational movement in thought which has gradually dispossessed the cruder superstitions. Yet there have always been men of acute intellect who have championed the cause of superstition; and even down to the present time there appears to be no belief, however illogical or unbased on fact it may be, which need lack advocates. Harvey was bitterly opposed when he promulgated his doctrine: and in these later days

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Pasteur had a hard fight ere he won credence for his theories. So the "possession-theory" in regard to the insane maintained its ground even when enlightenment had apparently spread very widely; and even in our own day it is not difficult to find those who uphold this view.

Throughout the seventeenth and most of the eighteenth century there was little amelioration in the condition of the insane; and this state of affairs naturally went along with the theoretical opinions which were still maintained. The need for providing for their accommodation did not become very pressing until with the growth of population there was a considerable increase in the number of insane. The drastic measures adopted against the more troublesome lunatics by the civil powers, and against those unfortunates whose symptoms made them incur the odium of theological opinion, tended to restrict their numbers still further. A good many, however, were allowed to peregrinate the country without let or hindrance: and the wandering "Tom o' Bedlam" was a not uncommon figure. When the time arrived for buildings to be provided for housing the insane it was rather with a view to restricting the movements of the troublesome ones than with any idea of curative treatment. "About the middle of the eighteenth century . . . grim and sombre circumvallate buildings began to be erected[1] for this purpose. They were but prisons of the worst description. Small openings in the walls, unglazed, or, whether glazed or not, guarded with strong iron bars, narrow corridors, dark cells, desolate courts, where no tree nor shrub nor flower nor blade of grass grew. Solitariness, or companionship so indiscriminate as to be worse than solitude; terrible attendants armed with whips . . . and free to impose manacles and chains and stripes at their own brutal will; uncleanness, semi-starvation, the garrotte, and unpunished murders—these were the characteristics of such buildings throughout Europe."[2] The lot of the wandering lunatic or even that of the others who were cared for privately was for the most part preferable to being immured in such drear and comfortless holds.

It would be unfair, however, to those who were responsible for this state of affairs not to note in passing that the conditions under which the insane lived were more than equalled in their misery and squalor by the habitations provided by the community for criminals. Howard published his *State of the Prisons* in 1780, and even a glance at that epoch-making volume is sufficient to convince any unprejudiced reader of the dreadful callousness exhibited towards the prisoners, and of the insanitary—not to say filthy—manner in which they were lodged. Such things were characteristic of the times; though, even all these things considered, the condition of these unfortunates was no worse

[1] *History of Penal Methods*, Ives, p. 84.
[2] Conolly, *Treatment of the Insane*, London, 1856.

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than that of similar classes on the Continent. Indeed, in France up to the time of the Revolution the state of the honest peasant was, in some districts, little better. Arthur Young speaks, after his journeyings throughout that country, of the "extent and universality of the oppression under which the people groaned"[1]; and he found still rampant the blighting effect of tyrannical feudalism.

The reaction against these iniquities was, however, beginning. Contemporaneously in France and in England two men were initiating the movement which has led to the betterment of the condition of the insane. It was during the height of the French Revolution that Pinel was advocating and carrying through his reforms in regard to the treatment of the insane: and in 1793 he achieved his purpose of freeing the patients at Bicêtre from their chains. In England William Tuke, appalled by the condition of things in the York Asylum, determined to found a home for the insane where they would be treated with humanity. The result was the "Retreat," the building of which was started in the year 1792.[2] Although amelioration may be said to have been continuous from this time onwards in certain places, it was long before it became generalised. In an official Report published in 1815, it is made evident that even in London itself the condition of the insane was almost incredibly bad.[3] Bethlem Hospital was, according to the evidence published in that report, one of the worst offenders; and if this could be so in London itself, where inspection and supervision might be carried out with some degree of thoroughness, it is easy to imagine the state of affairs in the provinces. On the other hand, it is to be noted that the fresh impetus which was about to be given to the movement for the more humane treatment of the insane came from a provincial town.

By the year 1838 Dr. Gardiner Hill had gradually introduced the system of non-restraint into the Lincoln Asylum; and, only a little later, Conolly brought about a similar improvement at Hanwell. They demonstrated that those measures were practicable which many other men looked upon as Utopian: and experience has tended to justify their wisdom and humanity. Yet there were not a few who continued to oppose these methods; and there are still some people who look upon Hill's suggestions as counsels of perfection. But in the main the

[1] *Travels in France during the Years* 1787, 1788, 1789 ("On the Revolution in France"), by Arthur Young.

[2] "La tentative de Pinel ne fut pas isolée. Au même moment des efforts analogues s'opéraient sur d'autres points. Déjà Daquin, en Savoie, avait prêché la même doctrine humanitaire dans une sphère plus modeste, tandis que Chiaruggi, en Italie, publiait, en 1794, son *Traité de la folie en général et dans l'espèce*, où il consignait les résultats des améliorations obtenues par lui à Florence," Regis, *Précis de Psychiatrie*, p. 17.

[3] *Report and Minutes of Evidence on the Madhouses of England*, London, 1815,

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followers of Hill and Conolly dominate opinion at the present time. The inherent brutality of mankind—so strikingly exemplified in recent times—does not, however, readily give up repressive measures; and for a while after the Hill-Conolly epoch the strictures contained in such books as *Hard Cash* received justification. Such measures have become nowadays the exception instead of being the rule; and instead of being countenanced, they are discouraged not only by law but, what is perhaps more important, they are strongly deprecated by general opinion.

IV.

All this is a substantial advance, and for the immediate well-being of the insane population it is of paramount importance. But there has gone along with this a movement in scientific thought which is of even greater value. In the words of one of the reformers in the treatment of the insane: "Derangement is no longer considered a disease of the understanding, but of the centre of the nervous system, upon the unimpaired condition of which the exercise of the understanding depends. The brain is at fault and not the mind."[1] That is, quite succinctly, the opinion which, in spite of more or less fantastic reactions towards the metaphysical speculations which have so long been predominant, is steadily becoming more and more widely received. Enunciated by Hippocrates it was yet too sane and rational to find acceptation during later ages when nescience and mysticism prevailed, and when the improbability of a doctrine was all the more cogent reason for believing in it. This doctrine is, however, merely a restatement of the Hippocratic dogma; and if it rested on no more experiential basis than it did in his day it would be as difficult to meet the objections of the cavillers at the present time as it was then. Even though the number of those who have studied the minute structure of the brain and the localisation of function in different areas is comparatively small, yet the results obtained have given invaluable support to the theory that *mind* is merely the name applied to the functioning of certain parts of the nervous system. Every year brings fresh evidence to prove that the dictum, "no brain, no mind," is true beyond all dispute.[2] Physiologically and pathologically the results point in the same direction. It is not to be expected, however, that the majority of people will readily become converted to such a belief. It has not, superficially, the picturesqueness of the theory that the mind is a vague something which

[1] W. A. F. Brown, *What Asylums were, are, and ought to be*, p. 4, Edinburgh, 1837.

[2] "Indeed, it is impossible to conceive how any mental action, however subtle, can occur without a corresponding change in the brain-cells." *The Origin and Nature of the Emotions*, by Geo. W. Crile, p. 121.

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plays like a will-o'-the-wisp[1] somewhere in space and therefrom descends upon the individual to whom it has been allotted; nor does it make any appeal to the mystical and emotional. But to those who have to deal practically with minds in disorder it is an inspiration to further effort and research. When we realise that these morbid conditions are due to disease or disorder of the nervous substratum we can at once direct our attention to finding out where the trouble lies, and, if possible, rectifying the disorder or curing the disease.

It is not infrequently said that the results of all the work done towards ameliorating the condition of the insane and in other lines of treatment has made little difference in the recovery rate. Those who make such statements would do well to remember that psychiatry as a scientific subject is practically in its infancy. It is only in very recent times—as has been pointed out—that even a beginning has been made. When the overwhelming importance of the subject is considered, the number of those who have undertaken research and investigation is very small in comparison with those occupied with medicine in general. Various factors have conduced to this undesirable state of affairs. There can be no doubt that many have been deterred by the belief that insanity is a condition in which any hope of therapeutic success is illusory. They have felt that in diseases of the chest or the eyes, for example, certain structures are affected, and that the morbid condition may, therefore, be attacked. But in regard to insanity, there is simply the intangible "something" which does not respond to any of the ordinary methods of treatment. Even now, when those engaged in the study of psychiatry are beginning to realise that this is not so, there still remains this lingering belief in the public mind; and fresh strength is given to that belief by the various reactionary movements which arise from time to time, and which, aided by newly-coined terminology, obscure the issue. We look back to the time of Harvey and contemplate with amusement the theories of his opponents with their "vital spirits" and similar refuges of ignorance; but how many are there nowadays who hold practically a precisely similar belief in the matter of mental processes? They have retired with their "vital spirits" to the last citadel—the "mind,"—and there defend themselves with all the valour of enthusiasm rather than of reason. But the researches into such a condition as, for example, general paralysis of the insane, have done more to undermine their defences than any amount of theory could possibly do. In it the assumption that a definite causal factor would be found has been justified; and when Noguchi discovered the spirochæte of syphilis in the brains of patients suffering from this disease a shrewd blow was

[1] Even the will-o'-the-wisp is less nebulous than the metaphysical *mind*. It might be better to call it the Nothingness—using, of course, the capit which gives an appearance of reality without necessitating any further explanation.

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given to what may be designated the "vital-spirit" school. Here was a condition in which was seen a wonderful variety of mental symptoms, yet these were brought about by the influence of the syphilitic organism or its virus on the brain-cells! Surely, the inference is justifiable that in other forms of mental disorder there may be some organism at work, or the derangement may be due to some other physical factor which disorganises temporarily or permanently the functions of the nerve-cells. In any case, an impetus has been given to further research along the same lines; for, from the practical point of view, more has been achieved by such a discovery as this than by all the windy verbiage in which the subject has been obscured.

If, as is not unlikely, some of the therapeutic methods which are being directed against the causal factor in general paralysis of the insane prove to be successful, the death-rate in insanity generally will be speedily reduced, for this condition is responsible annually for quite a large proportion of the total deaths among the insane. Glandular treatment —or opotherapy—is likely to be extended; and the results obtained by the administration of thyroid substance already warrant hopefulness in that direction. The introduction of artificial feeding by means of the nasal or of the œsophageal tube has saved many lives that would have otherwise been lost. Further developments in the treatment of epilepsy may be confidently expected; even now the bromides have proved of undoubted efficacy in this disorder. Balneotherapy—an ancient usage —has been employed more extensively. The open-air treatment of insanity has given beneficial results. Electricity in various forms is now made use of. New hypnotic and sedative drugs have proved of utility in many cases. Treatment by suggestion has given rise to good results in certain forms of mental disorder, according to some observers; and the same may be said of the psycho-analytic method associated with the name of Freud—though there is still much discrepancy of opinion in regard to this.[1] The nursing of the insane has been improved. Those who take charge of them have to undergo special training; and the general change which has taken place in the attitude adopted by the public towards the insane is reflected in those who occupy this important position in relation to the mentally disordered.[2]

[1] "From hysteria psycho-analysis was applied to other groups of psycho-neurotic disorders, first to morbid obsessions and impulsions, then to all sorts of psychic disorders, including various forms of insanity, though it may be doubted whether it has worked out as well in any of them as in hysteria, and in the severe forms of mental disease, as Freud himself has pointed out, it is helpless." Havelock Ellis, *Journ. of Mental Science*, October, 1917, p. 542.

[2] The nursing of male patients by women has been successfully adopted in a number of asylums; and there can be little doubt but that an even more extensive use will be made of their services, especially in view of the exigencies of the present time.

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Pathological and physiological research have advanced our knowledge of the structure and function of the nervous system very greatly. This is particularly so in the matter of microscopic investigation, where higher-power lenses have made it possible to see intimate details and changes which were before only inferential. Experimentally it has been "proved conclusively that whether we call a person fatigued or diseased, the brain-cells undergo physical deterioration accompanied by loss of mental power. Even to the minutest detail we can show a direct relationship between the physical state of the brain-cells and the mental power of the individual—that is, the physical power of a person goes *pari passu* with his mental power."[1] Many others have come to the same conclusion, and it may safely be anticipated that further investigation will confirm and amplify the results already arrived at. The finding of micro-organisms in the brain—as, for example, in general paralysis of the insane—has been rendered possible by the use of the modern methods of investigation, and the discovery of other noxious organisms may throw light on the hitherto obscure ætiology of certain mental disorders.

Pathological findings and the observation of the symptoms and progress of cases have made it possible to classify more accurately the various forms of mental disorder. In this respect the suggestions put forward by Kraepelin have had much influence. But the more the subject is investigated, the more difficult is it found to adopt at present any one of the classifications already promulgated. The differentiation of mental disorders which has already been achieved warrants, however, the hope that in this direction also a further advance may be made.

V.

The theory of evolution has gradually been found to be of wider and wider application, and in regard to mental processes, and, consequently, of mental disorders, it has immensely assisted in bringing about enlightenment. Darwin, Wallace, Spencer—but, in the matter of mental evolution, Spencer in particular—have initiated a movement which has steadily progressed since their time. It has done very much towards undermining the belief in a mind apart from organisation. Their theories are being carried to a logical conclusion which, it is true, they may not have anticipated; but it appears to be inevitable that all those who look at the matter broadly will, in the end, come to see that mental processes show a progressive complication which goes along with increasing complexity of organisation. The work of Huxley, of Romanes, and of Haeckel—to mention no others—has helped to make this clear in regard to normal mental processes and from the integrative

[1] *The Origin and Nature of the Emotions*, by G. W. Crile, p. 121.

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point of view.[1] But just as confirmation is obtained from such an inductive method, so from the consideration of disintegration of the nervous system support is also obtained. In this case along with deterioration in nerve-cell structure there is diminution of mentality.[2] Although various more or less specious arguments are advanced in opposition to this, it tends to be more and more strongly confirmed by observation; and if more exact methods of testing mental capacity were utilised, the truth of this statement would speedily become more evident. No one has done more to illustrate this and to simplify the evolutionary doctrine in its bearings on nervous processes from the disintegrative as well as from the integrative point of view than Dr. Henry Maudsley. His *Physiology and Pathology of Mind* (1862) may well be looked upon as constituting an epoch in the study of psychology as well as of psychiatry. For the first time he dealt comprehensively with the subject from the devolutionary as well as from the evolutionary aspect. Nor must the splendid contributions to research in nervous disorder made by Hughlings Jackson be forgotten; and, perhaps most noteworthy of all his conclusions, the statement that the most highly evolved parts of the nervous system are the least organised, and, therefore, that in processes of dissolution they most readily break down. Also his researches in regard to epilepsy and convulsions, and his theory that, in nervous disease, it is the uninhibited function of the portions of the nervous system not yet attacked by the disease which give rise to symptoms.

Evolution in regard to the nervous system is shown to be from the simple to the complex, and there is at the same time a tendency towards differentiation and specialisation; that is, although it works as a whole, yet in different parts special functions are carried on. This is obviously so in regard to certain portions, such as the autonomic system; and the researches of, for example, Ferrier, Broca, Horsley, and Schäfer, have demonstrated that this holds good for the brain also—at least, in respect of certain areas. The inference is fair that further investigation will show that this process of specialisation has gone still further, and it will be seen that the "silent" areas of the brain have definite functions to fulfil.

Support for the evolutionary doctrine and for the theory of increasing specialisation has been derived from the study of prehistoric man and of living savage races. Progression from the simple to the complex has taken place phylogenetically as well as ontogenetically—in the race as in the individual. A narrrow outlook has appeared to negative this by

[1] A clear and succinct account of mental evolution is to be found in *The Evolution of Mind* by Joseph McCabe (London, 1910).

[2] "Loss of the higher mental functions invariably accompanies the cell deterioration." *The Origin and Nature of the Emotions*, by Geo. W. Crile, p. 125.

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pointing to the waxing and waning of different races; but when a wider view is taken, these vicissitudes are seen to be but as the advancing and receding waves of an incoming tide.[1] The investigations of Tylor[2] and of many others show that certain simple ideas characterise the thinking of primitive races, and that with increasing sociological complexity there is an ever-widening intellectuality. On the theory that mind is a thing apart from organisation and uninfluenced by it, such progressive intellectual differentiation is difficult to understand.

The intimate connection between criminality and insanity has become more apparent of recent years. Therein also we may see an advance and an improvement. It is now admitted by all who are competent to judge that there are certain individuals whose mental defect precludes them from observing satisfactorily the ordinary code of rules whereby society protects itself from its anti-social members. These defectives are of so poor cerebral organisation that education is ineffective to raise them to such a standard of conduct as will fit them to take their place as useful citizens. The irresponsibility of the definitely insane has been admitted from the legal point of view; but in regard to the mental defectives—especially those with moral defects—the matter is difficult, and opinion is, therefore, variable. It is beginning to be realised that many who are apparently sane and responsible are yet not so; and, accordingly, the inutility and wastefulness of ordinary methods of dealing with them is slowly becoming obvious. The application of scientific tests of mental capability is replacing the haphazard method which has been so common. It is being realised, also, that it is essential that the prison medical officer should have a competent knowledge of mental disorders, so that he may recognise some of the less obvious troubles than "melancholy madness," or "raving madness."

The effects of the changes of opinion are already obvious. More discrimination is being exercised in dealing with individual cases: and in time as the community comes to understand *its* responsibility in regard to the nurture of those whom social conditions have placed in evil surroundings a still greater advance may be looked for. The old illusion of the freedom of the will is not now so readily accepted as one of the eternal verities. It is realised that there is a balancing of motives and that the scale may be turned by adding to the weight of one or other of these. Aggression or punishment of a vindictive nature tend to arouse violent opposition or hatred; consequently they have

[1] Whether there will or will not be an eventual reflux involving the whole of mankind does not appear to affect the statement that generally there *has* been an advance.

[2] *Primitive Culture*, 1871. There has been much useful work done also in regard to social psychology, as, for example, by G. le Bon, *The Crowd*, and *The Psychology of Revolution*, and by McDougall, *Social Psychology*.

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failed to produce reformation or cure in the criminal or in the insane, and they have almost entirely been discarded. The benefit has been more widespread than is usually imagined. It has shown itself not only in the condition of prisoners and of the insane, but also in those who have charge of them: for brutality has an evil and degrading effect on those who practise it as well as on those who suffer by it.

In this connection the work of Lombroso, in particular, has been of value. However much his theories may be criticised—and there seems to be no doubt that he allowed his hypotheses too great a scope—he has done much to arouse scientific interest in the criminal and the defective. His investigations and those of other criminologists tend to confirm the dictum enunciated by Sir Matthew Hale in the seventeenth century that "most persons that are felons . . . are under a degree of partial insanity when they commit these offences." It is early yet to speak dogmatically on a subject to which attention has been directed only in recent times and that, too, by comparatively few who have had adequate knowledge both of criminals and of the insane. We may hope, however, that the time will soon come "when those morbid mental processes which eventuate in anti-social acts will be made an object of psychiatric attention." [1]

Another problem which has come under consideration and in which it has been difficult to say definitely how much is due to moral defect is that of sexual perversion. Where, however, formerly it was sufficient to place such offenders under the ban of the *odium theologicum* it is now realised that the matter cannot be so easily disposed of. It is seen, too, that this subject exhibits many aspects each of which requires careful study. It remains for the future to discuss these questions fully and frankly. Up to the present it has not been realised that—scientifically considered—nothing is unclean and that everything in regard to which we are in doubt has to be looked upon as a subject for investigation. The difficulty has been—and probably for a long time will be—to separate the scientific from the pornographic. It is something, however, that a beginning has been made; and the writings of von Krafft-Ebing,[2] Havelock Ellis,[3] Bloch,[4] and others have already thrown much light upon an abstruse and difficult problem.

The application of the knowledge of morbid mental states to historical and to literary subjects has helped towards a more complete understanding of much that was obscure. It has been shown how the conduct of, for example, certain of the Roman Emperors was the result of their mental unsoundness; how certain religious movements have been

[1] *The Causes and Cure of Crime*, by T. S. Mosby, p. 68, London, 1914.
[2] *Psychopathia Sexualis.*
[3] *The Psychology of Sex.*
[4] *The Sexual Life of Our Times.*

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initiated by men and women who were influenced by hallucinations and delusions; and how, in literature and in art, much has been the product of morbid mental states. The effects of certain bodily disorders in producing irritability, cruelty, and even violence in ordinary domestic life are understood by most people; but it has not been realised to anything like the same extent that similar disorders occurring in men of eminence have in certain instances altered the course of history. From this point of view there remains very much still to be done; and the studies made, *e.g.*, by Ireland, Maudsley, Cabanès,[1] show that much may be anticipated from further investigations along these lines.

There is another aspect of the matter which may, however, be again adverted to, namely, the financial one. In these days when economic conditions have become less favourable to living the studious life, it is necessary to take more earnest thought as to the means of subsistence. Nor is it merely the question of a bare livelihood. Even the man who is drawn towards scientific research is not necessarily inhuman, and he may be deflected from the path which he had set out to tread by the need of providing adequate means for the support of his family. He knows very well that he cannot expect even moderate success from the financial point of view if he devotes his time to research, so, unless he is an enthusiast who is willing to sacrifice everything to his work, he turns his attention to a more lucrative branch of the profession.[2] Nowhere is this more to be noted than in regard to cerebral research. In the ordinary way when it is desired to obtain the services of competent workers it is realised that adequate remuneration must be offered. It is sound business; and from the financial point of view it pays. It is admitted that there has been no stint in the matter of expenditure in erecting asylums. How much has been set aside, however, to provide for research? And in how many cases have arrangements been made to have an adequately paid pathologist attached to even the large asylums? It is practically left to individual effort; and even then there is little encouragement given. Nor do asylum appointments attract the best men. It is true that conditions have somewhat improved of late years, yet much remains to be done. Until this is rectified it is somewhat unreasonable to complain that, though there is an immense field for research, so little of practical value emanates from the medical officers whose lives are given up to the care and treatment of the insane.

[1] W. W. Ireland, *The Blot on the Brain, Through the Ivory Gate;* Henry Maudsley, *Natural Causes and Supernatural Seemings, Body and Mind;* Cabanès, *Cabinet Secret de l'Histoire, La Névrose Révolutionnaire*, etc.

[2] There are, it is true, certain positions which would satisfy all but the most exacting. The fewness of these only serves, however, to justify the present contention.

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There are those who will say that the association of scientific research with financial considerations is a sordid one. It is a comfortable doctrine for those whose means of support are ample and also for the taxpayer[1]; but, as economic conditions become more stringent and as the task of gaining the daily bread is, therefore, almost sufficient to absorb the ordinary man's energies, it is being more and more clearly realised that the labourer is worthy of his hire, and, what is more important, that he is not going to be deprived of it. Charity at the expense of others is too simple a matter to have failed to be exploited in science as elsewhere.

Prophylaxis.

As much insanity is due to congenital defect or to the breaking down of inherently unstable nervous organisations, curative measures in certain cases are likely to prove inefficacious. Obviously, cure can be looked for only in those cases where there is temporary interference with nerve-cell structure, and where, prior to the attack, the brain has been sufficient for the ordinary demands. Just as in the ascending scale the brain of the imbecile cannot be brought by any form of education to such a stage of efficiency as will enable the individual to become an average member of society, so, when definite deterioration has taken place, it is impossible to rehabilitate the brain-cells. It becomes necessary, therefore, to prevent, if possible, an undue strain being thrown upon the unstable brain. For example, the child with inherited instability may be apparently above the average intelligence during school life. This being so, the intensive methods still too prevalent in educational systems are brought to bear upon the child with the result that the brain breaks down, and, it may be, primary dementia is initiated. It may be said that a person so unstable is likely to be of little use in life, but this is by no means proved. Certain cases which have come early under care and which appear to exhibit undoubtedly the symptoms of primary dementia, yet recover apparently completely. In the same way with other forms of insanity, attention to the early symptoms and the application of therapeutic measures may preclude a more acute attack with its possible issue in permanent enfeeblement. It is the prolongation of the period during which the morbid stimuli act which brings about such deterioration that the brain-cells are unable to recover; and the length of time required to bring about disintegration will naturally vary in different individuals, depending on their

[1] "Stretched in his marble palace, at his ease,
Lucan may write, and only ask to please;
But what is this, if this be all you give,
To Bassus and Serranus? They must live."
Juvenal, Satire VI (Gifford's Translation).

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powers of resistance. In the mental defective this resistance is so slight that he is unable to withstand even the ordinary stress entailed by social life, and he is therefore unable to conform to the rules which the community has laid down.

These matters are being taken into consideration and some advance has already been made. The Mental Deficiency Act has for its object the segregation of those defectives who are anti-social in their conduct, and who are likely to become—if no let or hindrance is interposed—the parents of criminals and of lunatics. Punitive measures are simply energy misspent. Sterilisation is a method by no means beyond criticism; and, indeed, any form of treatment which tends to link the medical man with the executioner starts with an initial disadvantage.

Attempts are being made to bring the patient in the incipient stages of an attack of mental disorder earlier under treatment. The out-patient system adopted at certain hospitals is a step in this direction, but can only be of value to a limited extent unless arrangements are also made for in-patient treatment where this is necessary. The question of certification will probably have to be discussed anew and a somewhat wider latitude granted, especially where it is certain that proper care and supervision will be provided. The exigencies of the present time have done much to show that a less rigid system than the present one in regard to early certification is within the bounds of possibility. It was realised that some injustice would be done to soldiers who had broken down mentally on account of the stress of war conditions if they were straightway certified; and special hospital accommodation was provided for these men with the result that many who would have been certified under ordinary conditions have not required certification. If this holds good for them, then, surely, those who have broken down under the stresses of ordinary social life—often far from inconsiderable—may justly claim some such exemption.[1] The objection to certification may be entirely sentimental and it may in time be overcome. In the meantime, Draconian edicts arouse irritation; and in such a case as this, unless it can be shown that dangers to the community or to the individual are likely to arise, compromise is indicated.

It is also necessary to induce the public to realise that the function of the alienist is not chiefly in bringing about the segregation of the patient—an idea unfortunately too prevalent—but in advising or directing treatment as is done in other branches of the medical profession.

[1] The munificent gift made by Dr. Henry Maudsley, which has resulted in the building of the hospital which bears his name, may be noted as a very practical attempt to satisfy this need.

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Generally, a more comprehensive outlook in regard to the possibilities in psychiatry is needful—even among alienists themselves. In the words of a recent writer, "This wider field of activity for the greater psychiatry includes not only the recognised problems of insanity, feeble-mindedness, and psychiatric states in general, but a large group of phenomena, mostly social in their bearings, such as delinquency, inebriety, prostitution, and various phases of delinquency and social failure."[1]

Summary.

Even this brief survey may have sufficed to make it evident that in regard to mental disease there has in recent times been a definite advance in regard to the general attitude adopted towards the insane; and this has resulted in a steady amelioration of their lot. Although a retrogression took place after the classical period of Hippocrates and Pythagoras this in turn was succeeded by the more enlightened epoch initiated by Pinel and Tuke towards the latter part of the eighteenth century. The progress of rationalism has tended to displace the metaphysical conceptions which, assuming an extraneous mind, made it easy to postulate the influence of other extra-natural influences. From the sixteenth century onwards belief in demon-possession has steadily waned; and along with this there has been a diminution in credulity in regard to witchcraft and magic. The evolutionary doctrine has been applied to nervous processes; and it has been seen that there is uninterrupted progression from simple nervous reactions up to the more complete reflexes which result in mind. The tendency towards differentiation and the allocation of specific function to separate areas —already noted in regard to the body in general—is seen to hold good of the nervous system. Increasing complexity of social organisation has been demonstrated by anthropological research. The study of the relationship between insanity and criminality has made considerable progress. Sexual anomalies and perversions are being scientifically investigated. Results obtained from the study of morbid psychology are being made use of to explain difficult problems in history. The secretions of the ductless glands have received much attention, and already the therapeutic results are such as to warrant the belief that even more may be expected from that direction. Physiological and pathological research have already yielded valuable results; and the knowledge thus gained has tended to substantiate the assertion that mental function is utterly dependent upon the condition of the organic substratum. It is becoming possible to some extent to differ-

[1] "The Broader Psychology and the War," by Herman M. Adler, M.D (*Mental Hygiene*, July, 1917, p. 364.)

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entiate between varieties of mental disorder; and this should proceed even further when the methods of pathological investigation are more able to reveal subtle changes. The discovery of the ætiological factor in general paralysis of the insane has stimulated therapeutic effort towards counteracting that dire disease. The prophylaxis of insanity is yet in its early stages, but it is reasonable to expect that still more beneficial results may be looked for.

Occasional Note.

Early Treatment of Mental Disorders.

THE question of how best to secure early treatment for sufferers from mental derangement has long engaged the attention of the medical profession. It will not therefore, we premise, be out of place to scrutinise some of the more recent pronouncements on this subject. And we could not probably find a more appropriate text for discussion in this connection than the little volume on *Shell-Shock* by Profs. Elliot-Smith and Pear, a second edition of which has lately appeared, the first having been rapidly exhausted. We welcome this fact as showing that more or less general interest in this most vital and important subject is being aroused, and we hope the demand will continue, although, as will be seen, we have perused its contents with somewhat mingled feelings, especially when taken in connection with an address delivered, since the publication of the book, by Prof. Elliot-Smith at the Royal Institution for Public Health.

The chief aim of the authors is to show that the early treatment of mental disorders is an urgent public need. There can be little doubt that this account of the treatment of shell-shock under stress of war conditions will go far to convince all who read it that similar provision is required by civilians.

In July, 1914, less than a fortnight before the catastrophe of the war, the Report of the Committee *re* Status of British Psychiatry was adopted at the annual meeting of the Medico-Psychological Association at Norwich. The foremost recommendation in this report was the establishment of psychiatric clinics. Therein it is stated: "The evidence of many authorities, who have practical experience of the value of treatment in the incipient stages of the illness, is conclusive that the exercise of scientific care during the early phases of the mental disorder would save many from such a complete breakdown as would necessitate certification and removal to an asylum . . . and therefore the Committee regard it as essential that, in the large centres of the population, at any rate, means should be provided to obviate the delay which now exists in securing adequate treatment for mental disorders."

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