

The Concept of Disease and its Implications for Psychiatry*

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It has often been suggested in recent years that there is no such thing as mental illness; that the conditions psychiatrists spend their time trying to treat ought not, properly speaking, to be regarded as illness at all, or even to be the concern of physicians. Szasz is the best-known exponent of this viewpoint, and the core of his argument is essentially this: that as prolonged search has never demonstrated any consistent physical abnormality in those regarded as mentally ill, and as their 'illness' consists simply in behaving in ways that alarm or affront other people, or in believing things which other people do not believe, there is no justification for labelling them as ill, and to do so is to use the word illness in a purely metaphorical sense (Szasz, 1960). Schneider had previously been led by the same reasoning to the conclusion that neurotic illness and personality disorders were 'abnormal varieties of sane mental life' rather than disease, but he took care to exempt schizophrenia and cyclothymia by assuming that both would in time prove to possess an organic basis (Schneider, 1950). The argument Eysenck puts forward in the first edition of his textbook, though written from the quite different standpoint of academic psychology, is a similar one. After observing that 'the term psychiatry does not denote any meaningful grouping of problems or subjects of study' he went on to suggest that the traditional subject-matter of psychiatry should be divided into a small medical part 'dealing with the effects of tumours, lesions, infections and other physical conditions' and a much larger behavioural part 'dealing with disorders of behaviour acquired through the ordinary processes of learning', thereby implying that most of what doctors regarded as mental illness was really

learnt behaviour rather than disease, and therefore much better understood, and dealt with, by psychologists than by physicians (Eysenck, 1960). A third line of attack is provided by R. D. Laing, and a fourth is exemplified by the sociologist Scheff. Laing argues that schizophrenia, far from being a disease or a form of insanity, is really the only sane or rational way adolescents have of coping with the intolerable emotional pressures placed on them by society and their families (Laing, 1967). Scheff has developed the somewhat similar argument that what psychiatrists call mental illness is largely a response to the shock of being labelled and treated as insane and the expectations this produces; in other words that schizophrenia is created by the people and institutions that purport to treat it (Scheff, 1963).

Psychiatrists have generally reacted to these various assaults with indignation or disdain. They have either ignored their critics, or told them, with varying degrees of candour, that they don't know what they are talking about, or suggested, with varying degrees of subtlety, that they are motivated by professional jealousy, a taste for publicity, or emotional difficulties of their own. Perhaps there is some truth in these retaliatory jibes. But what matters is the strength of the critics' arguments, not their motives. They come from a variety of backgrounds—psychology, sociology and psychiatry itself—and although they disagree with one another almost as vehemently as they do with orthodox psychiatry, they have one central argument in common—that what psychiatrists regard as mental illnesses are not illnesses at all. The purpose of this essay is to examine this proposition.

THE NEED FOR A DEFINITION OF ILLNESS

To question the existence of mental illness, or to assert that the word illness in such a context

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is no more than a misleading metaphor, assumes that one already has a clear idea of what illness is. It is equally meaningless to assert either that something is, or that it is not, illness unless one has a clearly defined concept of illness to start with. Unfortunately, although medicine has adequate working definitions for most individual illnesses, it does not possess an agreed definition or an explicit concept of illness in general (Engle and Davis, 1963). So before we can begin to decide whether mental illnesses are legitimately so called we have first to agree on an adequate definition of illness; to decide if you like what is the defining characteristic or the hallmark of disease.

Most doctors never give a moment's thought to the precise meaning of terms like illness and disease, nor do they need to. They simply treat the patients who consult them as best they can, diagnose individual diseases whenever they can, and try to relieve their patients' suffering even if they can't. At times they are well aware that they are dealing with matters other than illness—childbirth and the circumcision of infants are traditional examples, and family planning a more recent innovation—but rarely do they pause to consider what is the essential difference between the two. The practical nature of medicine is not conducive to theorizing. But there are some situations in which this unthinking empiricism is inadequate. Psychiatrists are only too well aware of this, since they are often required to express opinions about the presence or absence of illness in the courts, and to defend these opinions to hard-headed lawyers, but they have not been conspicuously successful in finding a solution.

An American writer has recently pointed out that when doctors disagree whether a particular condition is a disease or not it is almost invariably the case that those who regard the subject of the condition as ill also regard some medical procedure—either treatment or investigation—as necessary, while those who do not regard the subject as ill do not regard either as warranted. This gives rise to the suspicion that, whether or not they realize it, doctors do not have a clearly formulated concept of illness, and that the answer they give to the question 'Is this a disease?' is really a covert answer to

the quite different question 'Should this person be under medical care?' (Linder, 1965). This rather cynical judgement is not entirely justified, if only because doctors do perceive that some of their activities, such as the delivery of babies and the circumcision of infants, are not the treatment of illness, despite the fact that the technology and expertise involved are the same in both. But it is undoubtedly extremely difficult to pin down the essential element distinguishing illness from non-illness, or, to put it another way, to produce a definition of disease which neatly covers all the individual diseases we currently recognize, and excludes other phenomena.

CHANGING CONCEPTS OF DISEASE

The main reason why this is so is that, for historical reasons, the defining characteristics of individual diseases are very diverse. To most of the schools of medicine of the ancient world symptoms and signs were themselves diseases. Fever, joint pains and skin rashes were all separate diseases to be studied individually. The idea of disease as a syndrome, a constellation of related symptoms with a characteristic prognosis, originated with Sydenham in the seventeenth century, though the Hippocratic school had had the germ of the idea long before. However, the popularization of post-mortem dissection of the body in the latter half of the eighteenth century by Morgagni and Bichat slowly converted disease from a syndrome observed at the bedside to a characteristic morbid anatomy observed in the cadaver, and thereafter new concepts followed one another in rapid succession, mainly in response to the introduction of new types of observational technology. The development of powerful microscopes in the middle of the nineteenth century enabled individual cells to be examined for the first time, and the consequent detection of cellular pathology led Virchow and his contemporaries to assume that cellular derangements were the basis of all disease. This concept was in turn displaced by the discovery of bacteria by Koch and Pasteur, and currently new techniques like electrophoresis, chromosome analysis and electron microscopy are producing further concepts of disease expressed in terms of deranged biochemical structures, genes and molecules.

Each of these waves of technology has added new diseases, and from each stage some have survived. A few, like senile pruritus and proctalgia fugax, are still individual symptoms. Others, like migraine and most psychiatric diseases, are clinical syndromes—Sydenham's constellation of symptoms. Mitral stenosis and hydronephrosis are based on morbid anatomy, and tumours of all kinds on histopathology. Tuberculosis and syphilis are based on bacteriology and the concept of the aetiological agent, porphyria on biochemistry, myasthenia gravis on physiological dysfunction, Down's syndrome on chromosomal architecture, and so on. In fact the diseases we currently recognize are rather like the furniture in an old house, in which each generation has acquired a few new pieces of its own but has never disposed of those it inherited from its predecessors, so that amongst the inflatable plastic settees and glass coffee tables are still scattered a few old Tudor stools, Jacobean dressers and Regency comodes, and a great deal of Victoriana.

A logician would have started by defining what he meant by disease as a whole and then produced individual diseases by sub-dividing the territory whose boundaries he had thus defined. Medicine, being essentially practical and opportunist, proceeded the other way and started with individual diseases. As a result, many of these overlap with one another, and the outer perimeter between disease and health is based on different criteria in different places. Hence the difficulty in producing a satisfactory definition.

Historically it seems likely that the concept of disease originated as an explanation for the onset of suffering and incapacity in the absence of obvious injury, and that the concept of health was a later development, implying the absence of disease. Naturally enough, therefore, attempts have often been made to define illness in terms of suffering and incapacity, or at least in terms of a complaint of some sort. But this immediately leads to difficulties. Many people whom we regard as ill neither complain nor suffer, either because they experience no symptoms, or because they ignore what in others would be cause for complaint, or simply because they drop dead without warning. A man with a

cancer growing silently in his lung, or someone with anginal pain which he dismisses as a touch of wind, would both be regarded by both doctors and laymen as ill and urgently in need of treatment, yet neither complains, or even suffers to any significant extent. The same is true of the typhoid carrier harbouring salmonellae in his gall bladder. Other people, whom we call hypochondriacs or hysterics, complain incessantly, and insist that they suffer, without either their doctors or anyone else being convinced that they are genuinely ill.

Partly because of such problems, attempts have sometimes been made to define illness in terms of the need for treatment rather than the presence of a complaint; in other words to make the situation to which Linder was drawing attention overt rather than covert. Kräupl Taylor, for instance, recently suggested that disease, or patienthood, should have 'as its sufficient and necessary condition the experience of therapeutic concern by a person for himself and/or the arousal of therapeutic concern for him in his social environment' (Kräupl Taylor, 1971). A criterion of this kind is certainly capable of embracing people whom doctors, or society as a whole, regard as in need of treatment as well as those who complain or suffer personally, but in doing so it creates worse problems than it solves. Equating illness with a complaint allows the individual to be sole arbiter of whether he is ill or not, and is unsatisfactory because some people who should be complaining don't do so, and others who complain so repeatedly don't seem to have adequate reasons for doing so. Equating illness with 'therapeutic concern' implies that no one can be ill until he has been recognized as such, and also gives doctors, and society, free rein to label all deviants as ill, thus opening the door to all the inconsistencies and abuses that Szasz has so vividly conjured up.

The fact is that any definition of disease which boils down to 'what people complain of', or 'what doctors treat', or some combination of the two, is almost worse than no definition at all. It is free to expand or contract with changes in social attitudes and therapeutic optimism and is at the mercy of idiosyncratic decisions by doctors or patients. If one wished to compare the

incidence of disease in two different cultures, or in a single population at two different times, whose criteria of suffering or therapeutic concern would one use? And if the incidence of disease turned out to be different in the two, would this be because one was healthier than the other, or simply because their attitudes to illness were different?

DISEASE AS A LESION

During the last century the development first of morbid anatomy and then of histology produced widespread evidence that illness was accompanied by structural damage to the body, at either a gross or a microscopic level. It was only a short step from this observation to the assumption that these lesions constituted the illness, and that illness always involved structural damage. Subsequently, as knowledge of physiology and biochemistry grew in the first half of this century, this concept was expanded to include biochemical and physiological abnormalities, without relinquishing the basic assumption that illness necessarily involved a demonstrable physical abnormality of some sort.

In this milieu it was almost inevitable that the presence of an identifiable lesion should come to be regarded as the essential attribute of disease, and this concept of illness held sway for over a hundred years. Such a standpoint certainly has many advantages. It provides an objective and usually reliable criterion which is not at the mercy of changing social attitudes and therapeutic fashions, and also embodies at least a partial explanation of the patient's symptoms or disabilities. On close examination, however, it has several shortcomings. In the first place, conditions whose physical basis is still unknown cannot legitimately be regarded as diseases. Trigeminal neuralgia, senile pruritus and dystonia musculorum deformans must all be discarded. Twenty years ago the same would have been true of migraine and narcolepsy, and sixty years ago most forms of epilepsy, Parkinson's disease, chorea, Bornholm disease and pellagra would all have failed to qualify. Indeed, to insist on the presence of a demonstrable lesion implies that most of the great scourges of

mankind have only become diseases during the last hundred and fifty years. A further difficulty is that no distinction is drawn between what is trivial and what is crippling. A child with spina bifida and an oligophrenic imbecile both suffer from congenital diseases—the first by virtue of an anatomical defect acquired early in embryonic development, the second because of the absence of the enzyme needed to convert phenylalanine to tyrosine. But children with fused second and third toes have a similar congenital defect to those with spina bifida, and those with albinism also lack an enzyme involved in tyrosine metabolism, yet despite the presence of these lesions we do not normally wish to regard them as ill.

There is a third problem as well. The concept of an abnormality or a lesion is quite straightforward so long as one is concerned with deviation from a standard pattern. But as soon as we begin to recognize that there is no single set pattern of either structure or function, that even in health human beings and their constituent tissues and organs vary considerably in size, shape, chemical composition and functional efficiency, it becomes much less obvious what constitutes a lesion; where normal variation ends and abnormality begins. Is, for instance, hypertension a disease, and if so what is the level beyond which the blood pressure is abnormal? And at what point does a raised blood sugar level, or a prolonged response to a carbohydrate load, become the disease diabetes?

It was in fact the example of hypertension which finally discredited the nineteenth-century assumption that there was always a qualitative distinction between sickness and health (Oldham, Pickering, Fraser Roberts and Sowry, 1960). The demonstration by Pickering and his colleagues twenty years ago that such a major cause of death and disability as this was a graded characteristic, dependent, like height and intelligence, on polygenic inheritance and shading insensibly into normality, was greeted with shock and disbelief by most of their contemporaries, and the prolonged resistance to their findings showed how deeply rooted the assumptions of Koch and Virchow had become.

The resistance finally crumbled not only because Pickering's evidence was strong but because at the same time advances in other fields were also discrediting another of the major assumptions of the old concept—the assumption that every illness had a single cause, both necessary and sufficient. As the focus of medical research widened from an exclusive concern with individual patients to embrace the study of disease in populations, it slowly became apparent that a host of interacting factors, both internal and environmental, all contributed to the development of disease; and as knowledge increased the decision to regard one of these as 'the cause' and the rest merely as 'precipitating or exacerbating factors' appeared increasingly arbitrary. This was true not only of degenerative diseases like arteriosclerosis but even of classical illnesses like tuberculosis. Although tuberculosis cannot develop in the absence of the *Mycobacterium tuberculosis*, the presence of the organism is insufficient to produce the illness. It is ubiquitous in many populations, yet only a minority develop the disease. Genetic studies reveal differences in concordance between MZ and DZ twins, and epidemiological studies show that these constitutional differences are matched by a host of environmental factors—dietary, climatic, occupational and social—all exerting a powerful influence on the liability of individuals exposed to the tubercle bacillus to develop the disease.

A STATISTICAL CONCEPT OF DISEASE

By 1960 the 'lesion' concept of disease, and its associated assumptions of a single cause and a qualitative difference between sickness and health had been discredited beyond redemption, but nothing had yet been put in its place. It was clear, though, that its successor would have to be based on a statistical model of the relationship between normality and abnormality. Lord Cohen (1943) had anticipated this in an essay in which he defined illness simply as 'deviation from the normal . . . by way of excess or defect', and indeed Broussais and Magendie had had the germ of a quantitative concept of disease a hundred years before. But Cohen never developed his suggestion any

further, and as it stands his definition is inadequate because it fails to distinguish between deviations from the norm which are harmful, like hypertension, those which are neutral, like great height, and those which are positively beneficial, like superior intelligence. Scadding was the first to recognize the need for a criterion distinguishing between disease and other deviations from the norm that were not matters for medical concern, and suggested that the crucial issue was whether or not the abnormality placed the individual at a 'biological disadvantage' (Scadding, 1967). Although he was primarily concerned with defining individual diseases, his definition of a disease has clear implications for the corresponding global concept. He defines illness not by its antecedents—the aetiological agent or the lesion producing the overt manifestations—but by its consequences. In itself this is not new; previous attempts to define illness as a condition producing suffering or as meriting medical intervention had done the same but, as we have seen, had proved inadequate. The concept of 'biological disadvantage' differs from these, however, in being more fundamental and less obviously an epiphenomenon, and in being immune to the idiosyncratic personal judgements of patients or doctors which had proved the undoing of its predecessors.

I should like to examine Scadding's definition in detail. He defines a disease as 'the sum of the abnormal phenomena displayed by a group of living organisms in association with a specified common characteristic or set of characteristics by which they differ from the norm for their species in such a way as to place them at a biological disadvantage'. Differing from the norm for the species is Cohen's 'excess or defect' set out in more explicitly statistical terms and carrying with it several fundamental implications—that deviation in either direction, too (1) much or too little, is equally capable of producing disease; that the boundary between (2) health and disease may need to be an arbitrary one, like the boundary between mental sub-normality and normal intelligence; and that the (3) majority are debarred from being regarded as ill. The 'specified common characteristic or set of characteristics' is the defining characteristic

species flourish and expand and which die out, and which genotypes within a species become dominant and which remain rare. The fertility of the mentally ill has been the subject of over a dozen studies in the last fifty years, and these indicate that psychotics as a whole marry less often than other people, remain childless more often even when they do marry, and have fewer children than other people in or out of wedlock. To some extent these findings are an artificial consequence of confining the mentally ill in asylums, but this is only a partial explanation. Dahlberg (1933) found that the fertility of psychotic women was less than that of other women of the same age even before admission to hospital, and the studies of Macsorley (1964) and Stevens (1969), carried out since the introduction of 'open door' policies, confirm that despite their increased opportunities for marrying and reproducing those with psychotic illnesses still have fewer children than other people. As Sir Aubrey Lewis concluded in his Galton Lecture seventeen years ago, the evidence 'points towards the personal characteristics of the patients rather than their enforced residence in a mental hospital as the main reason for their low marriage rate and low fertility' (Lewis, 1958). This reduction in the fertility of psychotics as a whole is largely due to the low fertility of schizophrenics; it is open to doubt whether the fertility of manic-depressives is significantly below that of the general population. Although six studies in the last forty years have all suggested that it is reduced, Essen-Möller's classical study in Munich did not (Essen-Möller, 1935), nor did the more recent investigations by Hopkinson (1963) and Stevens (1969).

The condition which stands out above all others in its implications for fertility is homosexuality. Although there have been few formal studies of the fertility of male or female homosexuals, it can hardly be doubted that it is drastically reduced in both. In simple biological terms their lack of interest in forms of sexual activity capable of resulting in conception puts homosexuals, and other sexual deviants like transsexuals, at a quite daunting negative selection advantage. Whether neurotic illnesses and personality disorders are associated with any

significant reduction in fertility is still uncertain, mainly because the question has rarely been considered. There are suggestions that the fertility of criminal psychopaths is below that of the general population (Rosenthal, 1970). There is also some evidence that the sexual activity of neurotics is reduced (Slater, 1945; Eysenck, 1971), and one might expect this to result in a reduction in fertility.

Rosenthal was recently driven to the unwelcome* conclusion that fertility is reduced 'in at least four major types of disorders—schizophrenia, manic-depressive psychosis, psychopathy and homosexuality'. Some might wish to dispute the evidence relating to manic-depressive illness and psychopathy, but it would be hard to do so in the case of schizophrenia or homosexuality.

THE MORTALITY OF THE MENTALLY ILL

Although fertility may be all-important biologically, death is a more obvious, and to the individual a more important consequence of disease. It also has a greater biological significance in social animals like man, whose offspring are dependent on their parents for a high proportion of their life span, than in species whose young can fend for themselves from birth. The studies of Alström (1942), Ødegaard (1951) and Malzberg (1953) indicate that the risk of death for patients newly admitted to public mental hospitals is, or was until recently, between four and ten times that of the general population, but this high mortality might well be due in part to physical ill-health contributing to the decision to seek hospital admission, or even to infections or other harmful influences encountered in hospital. Larsson and Sjögren (1954), in a meticulous study of the population of two Swedish islands, showed that over a forty-five year period schizophrenics, and to a lesser extent manic-depressives also, had a mortality considerably higher than that of the general Swedish population, but they were unable to match the two for the many variables liable to influence mortality.

* Unwelcome because it forces geneticists to postulate either a very high spontaneous mutation rate or else some compensatory advantage in gene-carrying relatives in order to explain the high incidence of these conditions.

More recently, studies have been done of the mortality of patients reported to psychiatric case registers. These provide data on out-patient populations with neurotic illnesses and personality disorders, and also allow accurate matching of observed mortality rates with those of the catchment area population. Innes and Millar (1970) studied the mortality over a five-year period of a cohort of 2,000 patients reported to the N.E. Scotland Psychiatric Case Register. Even though they assumed that all untraced patients were still alive, they found that the overall mortality of their cohort was twice the expected rate. Organic psychoses accounted for much of this increase, but all age groups and all diagnostic groups except male character disorders had a mortality above expectation. Even in neurotic illness the mortality was twice the expected rate. A similar study based on the Monroe County register in the United States produced almost identical findings (Babigian and Oodoroff, 1969). Even after careful matching for age, sex and marital and socio-economic status, the mortality of the patient group was three times that of the general population, and all diagnostic groups, including neurotic illnesses and character disorders, shared this increased risk. Although the suicide rate was increased tenfold in the register population, suicide was not an important cause of this increased mortality. Indeed, there was no single cause; instead there was a fairly uniform increase in mortality from all major causes of death, including neoplasms, cerebrovascular disease and coronary artery disease. It is possible that this increased mortality is due to intercurrent physical illness increasing the likelihood of psychiatric referral, or even to psychiatric symptoms developing secondarily in the presence of physical illness, but these findings do suggest that a wide range of mental illness may be associated with a significantly increased risk of death.

There have been surprisingly few studies of the mortality associated with individual conditions. Rosenthal quotes three studies of manic-depressive illness all indicating that after the onset of the illness mortality is increased about $1\frac{1}{2}$ fold and life expectancy decreased by about 15 per cent. There is also evidence from

numerous sources that at least 15 per cent of manic-depressives die prematurely by suicide (Sainsbury, 1968), and without treatment the mortality would be considerably higher—from exhaustion and accidents of diverse kinds in mania, and from inanition and suicide in depression. The picture is less clear where schizophrenia is concerned, mainly because of the distorting effects of prolonged institutional care. The schizophrenic inmates of the great asylums certainly died prematurely, mainly from tuberculosis and other infections, but the institutions themselves may have been partly responsible for this rather than the disease. However, if schizophrenics were simply to be ignored and provided neither with sanctuaries where they could be fed and clothed nor with modern chemotherapy there is little doubt that comparatively few would survive to old age. Many would die of exposure, the indirect effects of malnutrition, or plain starvation, and others would die in accidents of various kinds, or by suicide. The asylums of the nineteenth century were, after all, built primarily for the protection of the insane and only secondarily for the protection of society. Finally, there is the evidence that several types of drug dependence, including alcohol and heroin—and also nicotine dependence in its common form, cigarette smoking—are all associated with a well-documented increase in mortality.

There is evidence, therefore, that schizophrenia and manic-depressive illness, together with some sexual disorders and various kinds of drug dependence, are associated with either a reduction in fertility or a reduction in life expectancy, or both, and for that reason are justifiably regarded as illnesses. The same may eventually prove to be true of some neurotic states and some types of personality disorder, but at present the evidence is not strong enough to justify firm conclusions in these areas.

At this point it will be worth while to recall the arguments of our critics. The various assertions that what psychiatrists regard as mental illnesses are nothing of the kind have all been based on the argument that no physical lesion has ever been demonstrated in these conditions, and that some kind of lesion is essential to

establish the presence of disease. This argument is quite explicit in Szasz's case, and implicit in the reasoning of Eysenck, Laing and Scheff also. The arguments of these writers are therefore all based, wittingly or unwittingly, on a concept of disease which has been abandoned not just by psychiatry but by medicine as a whole. The position they are in is like that of Ishmael in *Moby Dick*, arguing that whales must be fish because they have fins and swim under water, unaware that the defining characteristics of fishes had been revised some time before.

BIOLOGICAL AND SOCIAL DISADVANTAGES

There are other arguments, however, which do require an answer. I have argued that mental illnesses are justifiably so-called because they are associated with reduced fertility and life expectancy, and that these two constitute a biological disadvantage. Scheff and other sociologists would argue that these handicaps may exist but are secondary consequences of the individual having been labelled as ill rather than being innate and inevitable. They might argue, for example, that the main reason people labelled as schizophrenics have relatively few children is because they are regarded, both by others and by themselves, as lunatics and are less likely to marry and have children for this reason; and they die at an early age because we either lock them up in institutions where they catch tuberculosis, or shun them so that they eventually die of neglect or are driven to suicide.

Essentially the problem is to distinguish between a biological and a purely social disadvantage, and this is difficult because man is necessarily a social animal. His long post-natal immaturity and his use of language are both intimately linked to this fact, and our species has only achieved its present ascendancy over others because of the ability of its members to assist one another to overcome both competing species and the physical hazards of the environment. If, therefore, an individual is discriminated against and shunned by his fellows, it could well be argued that that in itself places him at a substantial biological disadvantage, and not merely a social one. The argument could be buttressed by the evidence that other

social species, like the rat and the chimpanzee, have also been observed to discriminate against deformed or diseased individuals, excluding them from the group and sharply reducing their chances of survival by doing so. The situation is further complicated by the fact that over the last two hundred years our dominance over our physical and biological environment has become so complete that cultural rather than purely biological forces are increasingly becoming the main determinants of natural selection. Which human genotypes become dominant, and how severe the negative selection pressures on others, are increasingly determined not so much by their inherent hardiness and adaptability as by cultural attitudes towards them. The increased survival chances of diabetics in the twentieth century and the reduced survival chances of Huguenots in the seventeenth century are both examples of this. There is another issue as well. It could legitimately be argued that because man is a social species what matters is the contribution the individual makes to the survival chances of the group rather than his own personal survival, and that a trait which is, biologically speaking, a disadvantage to him personally may be advantageous to his social group, or *vice versa*. If, for example, homosexuality could be shown to be associated with valuable aptitudes which others lacked, it might be positively advantageous to a community to have a proportion of homosexual members. Indeed, in an era of explosive population growth it might be beneficial to a community to have its fertility reduced. Clearly the complexities of the situation created by man's distortion of his original biological environment are almost endless. Yet somehow we have still to find a way of distinguishing between innate biological disadvantages and others attributable to cultural and social determinants of varying kinds.

The answer, I suggest, is that we must ignore the increasing importance of purely cultural factors in determining who lives and who dies; ignore the existence and fatal effects of social discrimination in other species, and also ignore the argument that it is the survival of the group rather than of the individual that matters. Despite all these complications we must still

insist that for a characteristic to qualify as a biological disadvantage it must be shown to be harmful to the individual possessing it, and also to be innate and not simply one that leads to rejection by others. The criterion must be, would this individual still be at a disadvantage if his fellows did not recognize his distinguishing features but treated him as they treat one another? In the case of schizophrenia the argument hinges on whether the high mortality and low fertility associated with this condition are innate, or whether they would melt away if those whom we call schizophrenics were not merely treated like other people but not even recognized as deviant. Although the proponents of the labelling theory have demonstrated that recognition of deviance may often increase rather than reduce the handicaps associated with it, they are far from establishing that labelling is the primary problem. Indeed, the evidence from both twin and adoption studies for the genetic transmission of schizophrenia establishes beyond doubt that it is not.

CONCLUSIONS

I think, therefore, that my earlier conclusion is still justified: we have adequate evidence that schizophrenia and manic-depressive illness, and also some sexual disorders and some forms of drug dependence, carry with them an intrinsic biological disadvantage, and on these grounds are justifiably regarded as illness; but it is not yet clear whether the same is true of neurotic illness and the ill-defined territory of personality disorder.

What is the significance of this conclusion? First, it is an answer to the argument that there is no such thing as mental illness. At least part of the territory regarded by psychiatrists as mental illness fulfils the same criteria as those required for physical illness. But only part of it does so. Many of the conditions which psychiatrists have come to regard as illness, and hence as requiring treatment, do not qualify, or rather there is little evidence at present that they do. This does not necessarily mean that psychiatrists have no right to meddle in these areas, or that people who are anxious or depressed should be dissuaded from visiting their doctors. For one thing, childbirth and family planning

provide precedents for the involvement of medicine beyond the boundaries of disease.

Even so, psychiatrists might be well advised to reconsider where their sphere of responsibility should end. A century ago they were concerned only with madness. But from that time onwards their concept of their proper role expanded steadily until the stage was reached, particularly in North America, at which some were claiming a mandate—and the ability—to treat anyone who was unhappy for whatever reason, and anyone whose behaviour was annoying or alarming to other people. It is worth reflecting whether the many attempts we have recently witnessed to discredit the concept of mental illness might not be a reaction to the equally absurd claims we have made that all unhappiness and all undesirable behaviour are manifestations of mental illness.

The attempt to relieve suffering is medicine's oldest and noblest tradition, and I am not suggesting that psychiatrists should stop trying to help husbands and wives to live together in harmony, or aimless adolescents to find their feet. But if we are to venture into such areas let it be in full recognition of the fact that in doing so we may be straying outside our proper boundary, and that in the end it may turn out that other people can deal with such problems as well as or better than we can, and that in these areas their training and their concepts are more appropriate than ours. By all means let us insist that schizophrenia is an illness and that we are better equipped to understand and treat it than anyone else. But let us not try to do the same for all the woes of mankind.

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