PSYCHOPATHY

P. D. SCOTT, M.D., D.P.M.

Consultant Psychiatrist, Maudsley Hospital, London, S.E.5

(*'Nothing is more like an honest man than a rascal'*
Proverb)

Description

MR. P., at the age of 25, has just been released from his third prison sentence. He had a record of eight convictions, which included embezzlement, larceny, hire-purchase offences, and passing worthless cheques. Many more offences would have appeared in the list but for his parents' efforts to pay his debts and make restitution to his victims. As a youth, he could, on many occasions, have been charged in a Juvenile Court as 'beyond control' for he habitually stole from home and absented himself for long periods without informing his parents. He had failed to make use of his expensive education. He truanted persistently, and finally was expelled from his school. After each episode of misbehaviour he would appear convincingly remorseful, would promise to mend his ways, and, for a while would do so, often obtaining excellent jobs and earning high praise from his employers; but always, after a short while and without apparent reason, he would commit some similar offence in a manner which made detection inevitable. Yet he was a presentable, highly intelligent young man, welcome among a wide circle of acquaintances, and regarded as charming and good company. He could discuss his behaviour sensibly and would state that he was ruining his own life and making his parents ill. He knew the penalties which lay ahead, and could forecast the probable length of any subsequent sentence. He was physically healthy and showed no evidence whatever, either at the examination, or in the detailed life-history, of any formal psychiatric symptom or illness. His brother and sister were stated never to have given the slightest trouble, and his well-to-do parents could not give any clues either in the family history or in their son's personal history, as to why he should have developed along these lines.

Without doubt he was an excellent example of a psychopathic personality, and would have confidently been diagnosed as such by the majority of psychiatrists. The fact that, after three months of treatment, entirely new facts came to light (as is very frequently the case, especially in intelligent families with a 'position' to defend), did nothing to change the diagnosis; the brother and sister had been more than usually difficult during

adolescence, and when the patient was five years old his father had made an extended 'business trip' following a serious matrimonial quarrel. His mother's early life had been dominated by an alcoholic father.

These cases, in which gross behavioural disorders are totally unsupported by any other evidence of mental illness have attracted the attention of psychiatrists since Pinel at the end of the eighteenth century found that madness could exist without delirium or delusion.

A good description of these disorders, not bettered in over a hundred years, is that of the Bristol physician, James Cowles Prichard (1835) . . . 'the moral and active principles of the mind are strongly perverted or depraved; the power of self-government is lost or greatly impaired and the individual is found to be incapable not of talking or reasoning upon any subject proposed to him, but of conducting himself with decency and propriety in the business of life'. Later, Merz (1902) filled in the picture 'There are persons who indulge in vice with such persistence, at a cost of punishment so heavy, and so prompt, who incur their punishment for the sake of pleasure so trifling and so transient, that they are by common consent considered insane although they exhibit no other indication of insanity'.

Definition

In the now enormous literature on the subject many attempts at definition have been made. Henderson (1947) holds that psychopaths . . . 'conform to a certain intellectual standard, sometimes high, sometimes approaching the realm of defect but yet not amounting to it, who throughout their lives, or from a comparatively early age, have exhibited disorders of conduct of an anti-social or asocial nature, usually of a recurrent or episodic type, which, in many instances, have proved difficult to influence by methods of social, penal and medical care and treatment and for whom we have no adequate provision of a preventive or curative nature'. In this definition, as in clinical practice, failure to respond to treatment is an important element. Hence the somewhat pessimistic aura which attaches to psychopaths, despite the fact that there is little solid knowledge of the course of these disorders and that some really gross psychopaths have been known to resolve

spontaneously. Perhaps the best known example of such a spontaneous 'cure' is that of the imposter, reported by Abraham (1935), who, after a classically psychopathic career dating from early childhood, married and settled down in a very satisfactory manner.

East (1949) from the medico-legal point of view, defines the psychopath as 'a person who, although not mentally defective, psychoneurotic or insane, is persistently unable to adapt himself to social requirements on account of abnormal peculiarities of impulse, temperament and character, which may require specialized medical and rehabilitative treatment, instead of, or in addition to, the ordinary methods of punishment, before his social reclamation is effected'.

Lastly of these definitions, in the Mental Health Act 1959, psychopathic disorder means 'a persistent disorder or disability of mind (whether or not including subnormality of intelligence) which results in abnormally aggressive or seriously irresponsible conduct on the part of the patient, and requires or is susceptible to medical treatment'. Medical treatment for the purposes of the Act includes nursing care.

Rather than memorizing these definitions it may be sufficient to note that they all include four elements: an excluding clause—not primarily mentally subnormal or psychotic (though of course more than one diagnosis may co-exist); a clause indicating duration, usually covered by the words persistent, from an early age, or recurrent; a description of behaviour, e.g. abnormally aggressive or seriously irresponsible; a fourth clause indicating that society is impelled to do something about it. The obvious ambivalence and uncertainty as to what this something should be is well exemplified in East's 'specialized and rehabilitative treatment, instead of, or in addition to, the ordinary methods of punishment'. It is this stirring of society to treat the individual which differentiates, at least to a considerable extent, the psychopath on one hand from the eccentric or unconventional and the thinker-ahead-of-his-time on the other.

The simplest definition, therefore, of a psychopath is one whose persistently anti-social or asocial behaviour cannot be primarily attributed to mental subnormality or psychosis and stimulates society to treat him.

Relation to Criminality and Personality Disorder

If the treatment decided upon is medical, in the widest sense of the term, the person may be called a psychopath; if it is not, he is likely to be called a chronic offender or recidivist. It is important to

realise that, over a wide area at the middle of this dichotomy, the differentiation between criminal and psychopath is very arbitrary. Anyone who has experience of both prison and hospital practice will know that, despite numerous statements to the contrary, no sharp line can be drawn between the two; this has very important administrative implications, as will be seen.

Nor can any meaningful line be drawn between, on the one hand, psychopaths, psychopathic states, psychopathic personality, constitutional psychopathic inferiority, and, on the other, abnormal character and personality disorder. In fact the American Psychiatric Association (1952) abandoned the term 'psychopathic personality' in favour of 'personality disorder' and its several subdivisions.

Now this raises very serious difficulties. Curran and Mallinson (1944) make two important points: 'Firstly, not all abnormal characters do in fact develop what can be legitimately regarded as abnormal mental reactions or, in other words, the possession of an abnormal character does not in itself and necessarily constitute a medical problem—unless of course it is most illegitimately so defined. A man can surely be abnormal or unusual or even persistently anti-social without being sick. Secondly, to equate psychopathic personality with abnormal character is not only likely to result in confusion for the reason just given, but approximates perilously to making the study of psychopathic personality co-extensive with the major part of psychiatry'.

All this is entirely agreed. Have we then to go on trying to delimit and restrict the meaning of the term psychopath and with it our legitimate field of medical intervention, and, if not, what justification have we for encroaching upon an alarmingly wide field?

The problem is discussed by Sir Aubrey Lewis (1953). 'The crucial difficulty arises with psychopathic personality. Every textbook of psychiatry discusses this abnormality, but almost always ambiguously because the authors do not make clear why it should be regarded as an illness. . . . It would seem, then, that until the category is further defined and shown to be characterized by specified abnormality of psychological functions, it will not be possible to consider those who fall within it to be unhealthy, however deviant their social behaviour'. He adds, however, 'that the doctor is not necessarily acting outside his proper scope if he attends to people who are not ill'; and he points out the several instances, including pregnancy and childbirth, where such a function is accepted. Furthermore, 'The psychiatrist learns a great deal about normal and abnormal psychology which is relevant to the treatment, or the prevention, of

some non-pathological states that are socially deviant'.

A distinction needs to be drawn between accepting medical responsibility for psychopaths as a whole, which in the present state of our knowledge may well be disastrous, for there is some evidence that psychiatrically derived treatment may in a minority of cases do more harm than good (Adams 1961), and cooperating in their management and investigating representative samples of psychopaths of every sort, in order to determine which of them can be effectively dealt with. The probable mode of advance in our knowledge of psychopaths will be in the differentiation of types, ideally by isolating specific pathological factors but also by determining, empirically, different responses to treatment methods. Clearly it is impossible to differentiate the minority without assessing the majority. Thus to confine ourselves, prematurely, to some supposedly 'typical' or 'true' psychopathic type, a concept upon which few would have a similar notion, would be retrograde. Rather than concerning ourselves with the myth of the typical psychopath we should be investigating types and degrees of personality deviation. To equate psychopathic personality with abnormal character is likely to result in confusion, but it must not be forgotten that not to do so may present an even more insoluble problem. Initial confusion is inevitable, and matters not so long as we organize our approach to it in a potentially fruitful manner. Again, to suppose that there is any fundamental difference between abnormality of character or of personality and psychopathy, would retard progress. Whether we like it or not, the study of psychopathy is already not only co-extensive with psychiatry but is heavily involved with other disciplines as well, notably psychology, genetics, sociology and anthropology. The sooner this is accepted, with its implication for a multi-disciplined, team approach, the quicker will results be obtained. Daunting as it may be, any factor which contributes to the formation, deflection or destruction of the personality so long as it falls short of producing frank mental subnormality or psychosis, must have a bearing on psychopathy.

The Variables Involved

The escape from the ever-increasingly complicated division of psychopaths into descriptive types (e.g. Kraepelin's (1904) excitable, unstable, impulsive, eccentrics, liars, swindlers, the anti-social, quarrelsome) as excellently reviewed in Curran and Mallinson's article (1944), was foreshadowed by Kahn (1931), who described psychopaths as 'discordant personalities which, on the causal side, are characterized by *quantitative* peculiarities in the impulse, temperament and

character strata', thus preparing for the concept of psychopathy as a variation from the normal, the latter determined by statistical analysis of a cross-section of the population. This was the standpoint of Schneider (1959) and Sjöbring (1923) and Mayer Gross and his colleagues (1960), who believe 'that men varied in their temperamental traits in many ways, by infinitesimal degrees and by wide extremes, and that we should look for the cause of psychopathy in this normal variation'.

The psychopathies, therefore, are best considered as the resultant of combinations of factors varying in intensity as compared with the norm of that factor in the population. Often the factors are best regarded as a position between two poles—too much or too little; for example over stress-reactive and under stress-reactive (Tong and Murphy, 1960), fast conditioners, slow conditioners (Franks, 1956), advanced or retarded in rate of development, subjected to permissive or restrictive handling, environmentally over- or under-stimulated, etc., etc. The constellation, and timing, as well as the intensity of many factors is, of course, crucial, and we shall, in practice, have to take account of certain qualities or states which are not distributed in a 'normal' manner throughout the population, e.g. minor degrees of brain damage and of mental illness proper, which may colour the picture though not warranting 'primary' psychiatric diagnosis'.

In simplest terms, all these factors may be classified under four major headings: precipitating, inherited, psychiatric (organic brain damage and the psychoses) and, lastly, environmental factors affecting development.

Precipitating Factors

The *behaviour* of the psychopath is our one firm point of reference. Behaviour may be said to have predisposing and precipitating causes. If an animal eats, the predisposing cause is hunger and the precipitating cause the perception of specific piece of food. If a psychopath immediately after promising to mend his ways, goes off and steals something, the predisposing cause, for the sake of illustration, may be his specific weakness of personality, and the precipitating cause his inability to stand the particular stress (perhaps forced upon him by parental moralizing and the extraction of a promise) of contemplating the enormous gap between what he knows himself to be and what he and his parents would like him to be.

Psychopaths do not behave psychopathically all the time, and careful enquiry into the exact nature of the precipitating factors is of the utmost importance from at least three points of view: understanding and assessing the nature and

severity of the precipitating factors throws light on the whole problem; it is a good initial approach to a therapeutic relationship, for the patient can understand what you are about, and is not rendered too resistant by this preliminary investigation of the here-and-now; it may be possible in some cases, even if any fundamental alteration of the person is impossible or impracticable, to remove the precipitating factor, or to teach the patient how to avoid it.

These three points could be expanded very extensively. Frequently the precipitating factor is highly specific. A certain 'aggressive psychopath' had frequently been in trouble for attacking people, usually women; he would make some preliminary remarks to a stranger and follow it with some inept and clumsy proposal, which of course would be rejected, and he would then hit the person. Investigation showed that he had never succeeded in making a satisfactory loving relationship, he had hated and feared his mother, yet he was intensely lonely and impelled to try and make human contacts; when rejected, his shame, disappointment and hate were discharged in the assault. Throughout several prison sentences he had never given the slightest trouble, presumably because his specific test-situation never arose; in prison he could be sure of steady, if superficial, acceptance by other prisoners and a relationship with the staff which was governed by easily understandable rules; in this regime he could make a good adjustment, but outside there was always the possibility of a deeper friendship, and there were women and the unknown possibilities of a sexual relationship—all of which heightened his feeling of inadequacy and made him feel isolated and anxious. He was an intelligent man and a good worker, but was so subject to reactive depression—feeling that he had nothing to work for—that he frequently left his work or just lay in bed most of the day. One cannot, in a case such as this, assume that because of the bad relationship with his mother, the whole aetiology was environmental; there may have been genetic factors in both mother and patient preventing or undermining a satisfactory relationship, and of course the frustrations attendant upon such a relationship, acting throughout the critical periods of his development, may have produced irreversible changes in his personality. Nevertheless the indications for treatment were clear enough—to surround him with as many supporting relationships as possible (evening discussion group in a psychiatric clinic, probation officer) and to place him in a controlled and, to some extent, sheltered environment (a hostel). This regime succeeded in keeping him out of trouble for 11 months (a considerable feat considering his previous rapid deterioration of

behaviour) before he departed to another part of the country. He will almost certainly turn up again one day and the process will have to be continued.

In considering precipitating factors we are concerned with factors in the present, the pressures which pull the trigger, but we must not make the mistake of supposing that these factors, most of which will be 'social' factors, *only* act in the here-and-now. The very same factors may have had an effect throughout the individual's life, and moreover, may also have had their effect on his fellows and his parents. Consider for example the life of an adolescent in a new housing estate: Professor Roger Wilson (1961) points out that he is no longer tied to the locality for recreation or courting, he doesn't share common experiences and insecurities with his neighbours many of whom will work far away from the estate; the stimulus of bigger and better equipped schools, the possession of money and the influence of television, glossy magazines and newspapers, and the lack of primary social controls in his immediate community, must all have a very great immediate effect upon him. But very similar factors must have influenced his parents while this individual was young enough to be dependent upon them and while he was receiving his social education from them. To quote Professor Wilson 'The evidence is that there are no clearly defined and acceptable standards, high or low' in the training of children by the parents on these estates. Mothers care a lot, but have no strong neighbourhood pattern to give them support; the '...lack of common practice is a very great contribution to stress and strain'. A minority find 'the stress of taking any consistent line about conduct is more than they can manage' and the resulting ill-discipline of their children heightens the anxieties of all the mothers on the estate. Social factors may therefore constitute not only precipitating factors but also the soil in which delinquent and psychopathic states develop.

Inherited Factors

Important studies of the degree of concordance of criminality in pairs of uniovular and binovular twins (Rosanoff, 1941, Stumpf, 1936, Kranz, 1936) show that personality is dependent to some extent upon hereditary factors but that the environment may largely control the expression of the personality. Slater (1948) confirms that heredity is an important factor in the genesis of schizophrenia, the affective and some organic psychoses and some forms of mental deficiency, and that these may depend upon single genes of large effect. In the case of the neuroses and the psychopathic states however 'Wherever we

approach the issue we find normal distributions and differences in degree. Furthermore, there is the factor of non-specificity. When the relatives of neurotics or psychopaths of any particular kind are investigated, we find not only an excess of personalities with abnormal reactions of an exactly similar kind, but also an excess of those showing abnormal reactions of different, although to some degree, related kinds', which leads him to reject the single gene hypothesis in favour of multifactorial inheritance. 'There is no point' he continues, 'in distinguishing too narrowly between, for instance, the genetical make-up and factors of an environmental kind. . . . At any one time we can only usefully consider what is the constitution at that time, and not what its theoretical components might be'. In his later monograph Slater (1953) writes, 'The dividing line between adjustment and maladjustment is not so wide as that between sanity and insanity and more easily overstepped, so that chance, whether favourable or unfavourable, is more important. Once maladjustment has begun, it may contribute to its own continuance'.

Kallmann quotes Hutchinson (1959) as stating that the most probable mode of operation of gene-specific components with a pleiotropic effect may be 'on the rates of development of neuropsychological mechanisms involved in identification processes and other aspects of object-relationships in infancy'. This holds promise of a possible common meeting-ground, or meeting-time, between genetic, psychoanalytic and learning-theory approaches, and directs attention to critical or optimum periods of learning. Wilkins (1960), studying the relationships between rates of juvenile crime and social disturbances, concludes 'There appears to be something particularly significant in social disturbances occurring in the fourth and fifth year of a child's life'.

The study of the correlation of certain qualities, known to be inherited, with crime also sheds some light on this subject. For example, the mesomorphic build (Sheldon, 1949, Glueck and Glueck 1956) has been shown to predominate in certain samples of criminals, and abnormalities of the electroencephalogram have a very definite correlation with aggressiveness (Hill and Watterston, 1942).

From another approach, Birch (1960), studying the organismic variability in a series of 105 infants, found that, despite great differences from child to child, the formal characteristics of each child remained remarkably constant throughout a two-year follow-up and sometimes for as long as five years. Little effect on these characteristics was produced by stresses such as parental death, separation, birth of sibs, 'although the *form* of

activity may have altered, the *style* remains unchanged'. Similarly Renaud and Estess (1960) show that individuals may function at distinctly above-normal levels despite those environmental factors in their early lives which are commonly blamed for adult maladjustments.

Clearly, with this conflicting evidence we are not in a position to make dogmatic statements as to the relative importance of inherited and environmental factors, except to say that it is the interaction of both, rather than either one which is important. Taking an overall picture, environmental factors, especially their effect in the early formative years, have always to be considered and are increasingly acknowledged in the results of modern genetical research.

Psychiatric Factors

J. and W. McCord (1959) in their analysis of the origins of crime found that of all physical disorders only 'distinct neurological disorders and acne correlated significantly. Acne may simply indicate that the subject is male and adolescent—both being states known to correlate highly with crime. Damage to the central nervous system, for instance, the famous 'crowbar case' in which an iron bar was driven through the skull, destroying the prefrontal cortex of a workman, or the cases of epidemic encephalitis following the first World War, has long been known to bring about permanent changes in the personality, sometimes producing explosive violence, moroseness and loss of moral sense. Such damage may produce a psychopathic picture by the 'release' of pre-existing tendencies, just as cerebral depressants such as alcohol may sometimes do; this is the standpoint of Bender (1953)—'Even an organic brain lesion does not produce fundamentally new trends but it merely underscores specific psychological problems'. Sometimes, however, certain drugs, for instance amphetamine (Connell, 1958), and certain brain lesions may produce a specific effect. This may best be illustrated from the field of sexually abnormal behaviour, a frequent component of psychopathic personality. Krafft Ebing (1931) described fetishism in association with frank epilepsy. Erikson (1945) female patient had a tumour involving the medial surface of the right cerebral hemisphere and developed nymphomania and, as an aura to her seizures, had a 'passionate feeling' over the left side of her body. A man developed transvestism in association with cerebral cysticercosis and temporal epilepsy (Davies and Morgenstern, 1960). The well-known case of Mitchell, Falconer and Hill (1954) demonstrated that a safety-pin fetishism, which became associated with psychomotor epilepsy, was cured by temporal lobectomy.

There is also convincing evidence from animal experiments that sexually abnormal behaviour may be produced by specific lesions (Klüver and Bucy, 1939, Green, Clemente and de Groot, 1957).

The work of Fraser and Wilks (1959), investigating the residual effects of neo-natal asphyxia, showed that by 7½ years minor disorders of personality, perception and motor coordination were relatively common. Such disabilities could of course significantly affect the child's capacity to learn and to relate to the important figures of its background, and thus suggest a possible field for preventive efforts.

The effect of physical disability of the child upon the parents must be considered. With adaptable and tolerant parents this may be small, but even minor factors in the child may significantly affect neurotic or intolerant parents. Thus a mother may have a dread of some particular disfigurement of the child; a highly narcissistic parent may communicate her disappointment or disgust, or a father, frustrated in his own achievements, and looking for vicarious gratification through his sons, may reject the incompetent one. Certain children may have specific and unpleasant associations, having caused pain or perhaps reminding mother of the father who deserted her; the mother-child relationship may thus be blighted from the start. Furthermore, physical illness, especially at critical periods of development may produce characteristic changes in the child's personality, especially increased aggressiveness or dependency, and 'once a child starts to be over-dependent—or is perceived as being so by his mother—he becomes a stimulus to the mother and influences her behaviour to him' (Sears, Maccoby and Levin, 1957), leading to a circular building-up of tension.

Once again, therefore, we see the possibilities of complex interaction between factors of entirely different natures, any one of which might play a significant role in the genesis of psychopathy.

Environmental Factors Influencing Development

Some points concerning this vast and little-known field have already inevitably been introduced in discussing the other factors. At least we are now fully aware that the timing, as well as the combination and intensity of factors, is of great importance in relation to the variable rates of development of the individual, and that many of the factors, especially those involving the attitudes and personalities of the parents, are subtle and difficult to assess retrospectively.

Of the many approaches, perhaps learning-theory is the most satisfactory. We may reason-

ably assume that the individual has to learn to adjust to society. Maladjustment, in this sense, may arise in four principal ways (Scott, 1960). He may have learnt his code of behaviour well, yet that code may be contrary to generally accepted standards; this is likely to occur in antisocially oriented families, or, later in life, in certain sub-cultures to which the individual may belong. Such a person is in no sense sick, and is likely to be able to respond readily to correction, particularly if the others of his group are simultaneously 'treated'. He may have had no consistent standards of behaviour presented to him and, consequently, may emerge as one form of those persons who lack an adequate conscience, and who therefore tend to be at the mercy of delinquent opportunity and to acquire a long record of mixed offences, but usually excluding the more serious offences against the person. Thirdly he may have learnt a negative lesson too well; if this prevents him from expressing an instinctual drive, he is likely to find a personal, circuitous or indirect way of expressing that drive, which may involve him in conflict with the law. For example, if a child learns that women are dangerous and that close relationships with them are to be avoided, then when he reaches adolescence he may show some form of sexual perversion, perhaps homosexuality. Such a person will require some form of psychotherapy and he may be reluctant to abandon his carefully evolved reparative pattern. Lastly the process of learning may have broken down in some way. He may develop a 'conditioned avoidance reaction' well described by Jones (1958); faced with a recurring traumatic situation the individual cuts short the mounting anxiety by some action which brings immediate relief; this successful avoidance reaction, of course, quickly reinforces itself as a conditioned response and is therefore extremely difficult to eradicate. The work of Maier (1949), Marquhart (1948), and Patrick (1934) suggests that if an animal or human be placed in a situation where he is strongly motivated to solve a problem of discrimination which is in fact insoluble, and if he is prevented from escaping from the situation, then apparently useless, non-adaptive behaviour is likely to ensue and to recur whenever he meets that situation again. Once again, inherited differences may be important in determining the ease with which these maladaptive responses occur, and this is reviewed in an important paper by Tong and Murphy (1960).

Bearing in mind that all these and other peculiarities of learning, and the previously cited precipitating factors, inherited factors and psychiatric factors, in clinical practice and observed to occur in different degrees and in complex combinations,

it is not surprising that a tidy appraisal of psychopathic personality is not possible. But at least we may appreciate the difficulties realistically and

be aware that the treatment-requirements of psychopaths are likely to be as varied as the ætiological factors.

REFERENCES

- ABRAHAM, K. (1935): The History of an Impostor, *Psychoanal. Quart.*, **4**, 570.
- ADAMS, S. (1961): Interaction between Individual Interview Therapy and Treatment Amenability in Older Youth Authority Wards. Inquiries concerning Kinds of Treatment and Kinds of Delinquents. Monograph 2. Board of Corrections, State of California.
- AMERICAN PSYCHIATRIC ASSOCIATION (1952): Diagnostic and Statistical Manual, Mental Disorders. Mental Hospital Service, Washington, D.C.
- BENDER, L. (1953): Aggression, Hostility and Anxiety in Children. Springfield, Illinois: Charles C. Thomas.
- BIRCH, H. G. (1960): *Lancet*, **2**, 967. See also CHESSE, S., THOMAS, A., BIRCH, H. G., HERTZIG, M. (1960): Implications of a Longitudinal Study of Child Development for Child Psychiatry, *Amer. J. Psychiat.*, **117**, 434-441.
- CONNELL, P. H. (1958): Amphetamine Psychosis. Maudsley Monographs 5. London: Chapman and Hall.
- CURRAN, D., MALLINSON, P. (1944): Psychopathic Personality. Recent Progress in Psychiatry, *J. Ment. Sci.*, **90**, 279.
- DAVIES, B. M., MORGENSTERN, F. S. (1960): A case of Cystercosis, Temporal Lobe Epilepsy and Transvestism, *J. Neurol. Neurosurg. Psychiat.*, **23**, 247.
- EAST, N. (1949): Society and the Criminal, p. 132. London: H.M.S.O.
- ERIKSON, T. C. (1945): Erotomania as an Expression of Cortical Epileptiform Discharge, *Arch. Neurol. Psychiat.* (Chicago), **53**, 226.
- FRANKS, C. M. (1956): Recidivism, Psychopathy and Personality, *Brit. J. Delinqu.*, **6**, 192.
- FRASER, M. S., WILKS, J. (1959): The Residual Effects of Neonatal Asphyxia, *J. Obstet. Gynaec. Brit. Emp.*, **66**, 748.
- GLUECK, S. and E. T. (1956): Physique and Delinquency. New York: Harper.
- GREEN, J. D., CLEMENTE, C. D., DE GROOT, J. (1957): Rhinencephalic Lesions and Behaviour in Cats, *J. comp. Neurol.*, **108**, 505.
- HENDERSON, D. K. (1947): Psychopathic States. New York: Norton.
- HILL, D., WATTERSON, D. (1942): Electroencephalographic Studies of Psychopathic Personalities, *J. Neurol. Psychiat.*, **5**, 47.
- HUTCHINSON, G. E. (1959): A Speculative Consideration of Certain Possible Forms of Sexual Selection in Man, *Amer. Nat.*, **93**, 81.
- JONES, GWYNNE (1958): Neurosis and Experimental Psychology, *J. ment. Sci.*, **104**, 55.
- KAHN, E. (1931): Psychopathic Personalities. New Haven: Yale University Press.
- KLÜVER, H., BUCY, P. C. (1939): Preliminary Analysis of Functions of Temporal Lobe in Monkeys, *Arch. Neurol. Psychiat.* (Chicago), **42**, 979.
- KRAFFT EBING (1931): Psychopathia Sexualis. New York: Physicians' and Surgeons' Book Co.
- KRANZ, H. (1936): Lives of Criminal Twins. Berlin: Springer.
- LEWIS, AUBREY (1953): Health as a Social Concept, *Brit. J. Sociol.*, **4**, 119.
- MAIER, M. R. F. (1949): Frustration: The Study of Behaviour without a Goal. New York: McGraw-Hill.
- MARQUHART, D. I. (1948): The Pattern of Punishment and its Relation to Abnormal Fixation in Human Subjects, *genet. Psychol.*, **39**, 107.
- MAYER-GROSS, W., ROTH, M., SLATER, E. (1960): Clinical Psychiatry. London: Cassell.
- MCCORD, W. AND J. (1959): The Origins of Crime. New York: Columbia University Press.
- MERCIER, C. (1902): Textbook of Insanity. London: Macmillan.
- MITCHELL, W., FALCONER, M. A., HILL, D. (1954): Epilepsy with Fetishism Relieved by Temporal Lobectomy, *Lancet*, **2**, 626.
- PATRICK, J. B. (1934a): Studies in Rational Behaviour and Emotional Excitement—I: Rational Behaviour in Human Subjects, *J. comp. Psychol.*, **18**, 1.
- (1934b): Studies in Rational Behaviour and Emotional Excitement—II: The Effects of Emotional Excitement on Rational Behaviour in Human Subjects, *J. comp. Psychol.*, **18**, 153.
- PRICHARD, J. C. (1835): Treatise on Insanity. London: Sherwood, Gilbert and Piper.
- RENAUD, H., ESTESS, F. (1961): Life History Interviews with 100 Normal American Males: Pathogenicity of Childhood, *Amer. J. Orthopsychiat.*, **31**, 786.
- ROSANOFF, A. J., HANDY, L. M., PLESSETT, I. R. (1941): The Aetiology of Child Behaviour Difficulties, Juvenile Delinquency and Adult Criminality with Special References to their Occurrences in Twins, *Psychiat. Monogr.*, **1**, Sacramento.
- SCHNEIDER, K. (1959): Psychopathic Personalities. London: Cassell.
- SCOTT, P. D. (1960): The Treatment of Psychopaths, *Brit. med. J.*, **1**, 1641.
- SCOTT, P. D. (1960): Assessing the Offender for the Courts, *Brit. J. Criminol.*, **1**, 11.
- SEARS, R. R., MACCOBY, E. E., LEVIN, H. (1957): Patterns of Child Rearing. New York: Row Paterson.
- SHELDON, W. H. (1949): Varieties of Delinquent Youth. New York: Harper.
- SJÖBRING, H. (1923): Hysterical Insufficiency and its Constitutional Basis, *Acta med. scand.*, **59**, 387.
- SLATER, E. T. O. (1948): Psychopathic Personality as a Genetical Concept, *J. ment. Sci.*, **94**, 277.
- (1953): Psychotic and Neurotic Illnesses in Twins, Spec. Rep. Ser. med. Res. Coun. (Lond.), No. 278.
- STUMPF, F. (1936): The Origin of Crime, Demonstrated in the Life History of Twins. Leipzig: Thieme.
- TONG, J. E., MURPHY, I. C. (1960): Stress Reactivity in Relation to Psychopathology and Psychopathic Behaviour Disorders, *J. ment. Sci.*, **106**, 1273.
- WILSON, PROF. ROGER, Chairman of Bristol Social Project. Address delivered on 20.2.61. See also Relieving Stresses of Living on Council Estates. Bristol Social Projective, the Council House, Bristol.