the object would then be to prepare slides with a density similar to that of the reference slide. Experience has shown that a slide which seemed to have a similar density to that of the reference slide would be unlikely to have a true density outside the limits 3,000-7,000/mm². Thus with a low-power field of area 0.8 mm² there would be 2,400-5,600 adult cells per low-power field.

If it is assumed that the dose of anti-Rh required for the suppression of Rh immunization is 25 µg/ml red cells⁷ then, when the routine dose of anti-Rh given to recently delivered women is 100 µg (as is the case at the present time in England and Wales), some screening test is needed to detect those women who have more than 4 ml of fetal red cells in their circulation. With the formula described above, a transplacental haemorrhage of 4 ml corresponds to a proportion of unstained: darkly-stained cells of 600:1.

With the use of appropriate tables giving the confidence limits for a Poisson variable,⁸ the maximum number of cells which could be seen without arousing the suspicion that the actual number present exceeded the above figures could be determined. For example, in three low-power fields the finding of as many as 4 cells would carry a 1 in 100 chance, and the finding of as many as 6 cells a 1 in 20 chance, that the average number present was in fact 12 in three low-power fields. If five fields were scanned, then the maximum number of cells which could be seen without arousing the suspicion that the average number present was 20 would be 9 at the P = 0.01 level and 12 at the 0.05 level.

In summary, with a low-power field of area 0.8 mm² and scanning films on which the density of adult red cells approximately matches a reference slide with a density of 5,000 cells/mm², five fields should be counted and the screening test regarded as negative when not more than 9 darkly-stained cells are seen in the five fields.

RELATIVELY LARGE TPH

When the total number of darkly-stained cells in five low-

power fields is 10 or more, a quantitative estimate of the number present should be made by counting the total number of darkly-staining cells in 50 low-power fields and the total number of unstained cells in five high-power fields. From these figures, and knowing the areas of the low-power and high-power fields, the number-ratio of adult: fetal cells in the slide can be deduced and the size of transplacental haemorrhage estimated by applying the formula already described. It is suggested that to allow for the possibility of underestimating by a factor of 2 the number of fetal cells actually present, the total dose of anti-Rh given should be 50 µg for every 1 ml of red cells estimated to be present. If, as a further check, the patient's circulation was examined for the presence of fetal red cells three to four days after the dose had been given and additional anti-Rh given if any fetal red cells were still present, very few cases indeed should be undertreated.

Examination of the test samples was carried out under the supervision of Dr. C. C. Bowley, Professor J. C. McC. Browne, Professor C. A. Clarke, Dr. R. A. Cumming, Dr. C. A. Holman, Dr. W. J. Jenkins, Dr. S. Murray, Dr. G. H. Tovey, Dr. W. Walker, Dr. J. Wallace, and Dr. M. L. N. Willoughby, to all of whom I am grateful for permission to quote results. I should like to thank Mrs. Margaret Ross, who prepared and distributed all the blood samples, and Mrs. Doreen Irving for statistical advice.

References

- ¹ Kleihauer, E., and Betke, K., *Internist*, 1960, 1, 272.
- ² Kleihauer, E., *Beihfte zum Archiv für Kinderheilkunde*, 1966, 53.
- ³ Caton, R. C. C., et al., *American Journal of Obstetrics and Gynecology*, 1951, 61, 1207.
- ⁴ Berlin, N. I., Goetsch, C., Hyde, Grace M., and Parsons, R. J., *Surgery, Gynecology and Obstetrics*, 1953, 97, 173.
- ⁵ Grobbelaar, B. G., and Dunning, E. K., *British Journal of Haematology*, 1969, 17, 231.
- ⁶ Woodrow, J. C., et al., *British Medical Journal*, 1965, 1, 279.
- ⁷ Report of W.H.O. Scientific Group, *World Health Organization. Technical Report Series*, 1971, No. 468.
- ⁸ Pearson, E. S., and Hartley, H. O. (editors), *Biometrika Tables for Statisticians*, vol. 1, p. 203. London, Cambridge University Press, 1954.

Emotional Problems of Childhood and Adolescence

Antisocial Behaviour

PHILIP BARKER

British Medical Journal, 1972, 3, 34-36

To understand antisocial behaviour in children it is helpful to consider how normal, socially acceptable behaviour develops. Such behaviour is largely a product of the child's family life and relationships. The school environment and the wider social setting also play a part.

The process may be looked at from various theoretical standpoints. It can be regarded as a series of learning experiences. Parents, and others, reinforce certain behaviour, perhaps by a smile or word of praise, and attempt to extinguish other behaviour by a frown, a harsh word, or some other punishment. Such a mechanistic approach, however, does not do full justice to the process, and a psychodynamic view is also helpful. The

effect of a smile or a frown will depend on the relationship that exists between the child and whoever is doing the smiling or frowning. Does the child want to please the person or to annoy him?

At the feeling level, identification is important. A warm, mutually loving relationship between parent and child will promote in the child the adoption of the parents' values and standards of behaviour as his own. The parents' values become internalized, a part of the process of conscience formation. So it is that certain actions or ideas come to awake in the individual feelings of guilt or anxiety. At the same time other things cause feelings of satisfaction or pleasure. The origins of these emotions are unconscious, so that the subject is not intellectually aware of them.

Social training of children thus depends on the presence of suitable figures with whom the child can identify, and also on the reasonably consistent communication of ideas and values from these people to the child. The latter may usefully be looked upon as a learning process.

University of Birmingham and Charles Burns Clinic, Birmingham
PHILIP BARKER, M.R.C.P.ED., M.R.C.PSYCH., Postgraduate Clinical Tutor in Child Psychiatry, Part-time Lecturer, and Consultant in Clinical Charge.

Causes

How can the above processes go wrong? Difficulties may be present in the family, in the child himself, at school, or in the wider social setting. Often several factors operate simultaneously.

FAMILY FACTORS

Some families train their children to standards which society at large regards as wrong. In these cases the family may be stable and there may be no emotional disorder present. More often the family fails to give appropriate training: there is a lack of consistency and stability, and no clear model of behaviour is presented to the child. Roles within the family are confused. Another common feature is parental rejection of the child. Rejected children are less likely to accept parents' standards, and identify with them, than are accepted children. Rejection, especially if severe and long term, may have serious repercussions.

FACTORS IN THE CHILD

Children vary in temperament, capacity to learn, neurological status, and compatibility with parents and siblings. Though these factors are hard to measure, they are important. In practice it is easier to identify factors in the child when they are gross (for example, when there is severe mental retardation or brain damage), but they operate in other children too. Some children have suffered severe early emotional deprivation, which may have made it difficult for them to develop warm and close relationships. For these children the acquisition of adults' standards will be particularly difficult.

SOCIAL FACTORS

The child living in an area in which a lot of antisocial behaviour occurs is especially at risk. This is because of the influence of neighbourhood children with whom he plays. It often happens that poorly functioning, disorganized families whose children are at risk anyway, tend to live in poor areas with a high delinquency rate.

SCHOOL FACTORS

There is a strong correlation between educational failure—in particular, delayed reading—and antisocial behaviour. Satisfying relationships are important to a child at school, as well as at home. Identification with the teacher, and adoption of the teacher's standards, can help the child's development. It is less likely to occur in the context of educational failure or poor adjustment to learning.

Clinical Features

Common forms of antisocial behaviour in children are stealing, lying, disobedience, destructiveness, verbal or physical aggressiveness, truancy from school, staying out late, running away, and fire-setting. Such symptoms may lead on to frank delinquency, as manifested in shop-lifting; breaking into houses, shops, cars, and the like; vandalism; taking and driving away motor cars; and other activities which are against the law. Smoking and, especially in adolescents, drinking and drug-taking, may be associated with other antisocial behaviour.

Many of these symptoms occur in normally developing children. They become abnormal when they are severe and persistent, and fail to respond to precept, disapproval, or punishment. The coexistence of several symptoms also makes it more

likely that there is a significant abnormality of the child's development. The significance of the symptoms also depends on their social context. Families, schools, and neighbourhoods differ in what they consider antisocial.

It is not sufficient to note what symptoms are reported. It is important to consider what the child steals, and in whose company he does it, where he goes when he runs away, or what he tries to destroy by fire. These points may be of symbolic significance. A general assessment of his emotional state, physical health, and educational status is also necessary. A broad look at the family and neighbourhood is important. All this will enable the doctor to decide whether antisocial behaviour is peculiar to the child in question, or is characteristic of the family or neighbourhood.

INCIDENCE

A recent epidemiological study in the Isle of Wight¹ looked at the prevalence of psychiatric (and other) disorders in the whole population of 10- and 11-year-old children. "Conduct disorders" (that is, disorders characterized by antisocial behaviour) occurred with about the same frequency as neurotic disorders. If a group of "mixed conduct and neurotic disorders", who also showed antisocial behaviour, are included, the study showed a prevalence of children with antisocial behaviour of 2.5%. If this prevalence applied throughout the age range 5-15, this would mean that in a practice of 3,000 patients there would be about 12 children showing serious antisocial behaviour at any one time. Moreover, there are reasons to believe that antisocial behaviour is commoner in big cities than in more rural areas such as the Isle of Wight.

SEX RATIO

Antisocial behaviour is commoner in boys than in girls. This is reflected in the ratio of approved school places and juvenile court appearances and in clinic statistics. In the Isle of Wight study the boy : girl ratio was about 4 : 1 for conduct disorders and also for mixed conduct and neurotic disorders. By contrast, neurotic disorders were rather commoner in girls than in boys.

Management

In many instances antisocial behaviour is not primarily a "medical" problem, in that it is not susceptible to traditional medical techniques. The problem is often better seen in social, rather than medical terms. The function of the doctor in these cases will then be to formulate the problem and mobilize any available social agencies which are needed by the family.

Nevertheless, the formulation may disclose areas in which the doctor can help directly. One of these is the depressed parent, often the mother. A depressive illness may turn a mother who is normally able to cope, and meet her children's needs, into one who cannot. The children may react in various ways, one of these being antisocial behaviour. Occasionally the child may be found to have some disability which will respond to medication—for example, inadequately controlled epilepsy or the hyperkinetic syndrome.^{2,3} Sometimes successful treatment of one of these conditions turns an unmanageable child into a readily manageable one.

Antisocial disorders do not all require the resources of a social work agency. Some antisocial behaviour can be seen as a normal phase in development, a testing out by the child of the limits of behaviour that are allowed. If family relationships are secure, a little advice to the parents may be all that is needed. Indeed, it may be simply that reassurance, rather than advice, is required. At the same time it is wrong to assume that all children with antisocial behaviour will grow out of it. Parents should only

be told this if a careful appraisal of the whole situation suggests that it is so.

More difficult to deal with is the severe, persistent antisocial behaviour which so often occurs in children from seriously disturbed, chaotic, or depriving homes. The general practitioner or paediatrician may be able to help by providing support or by intervening in the crisis, but he will often do better to get outside help, whether from a social worker or perhaps the school. The most suitable social worker may be a member of the staff of the social services department or of the local child guidance service. Sometimes voluntary child care organizations (such as the National Society for the Prevention of Cruelty to Children), health visitors, or school welfare officers can help. Schools are increasingly employing school counsellors, teachers who specialize in the emotional and social problems of pupils. On occasion, especially when there is a problem in school, liaison with these counsellors (with parents' permission) can be useful.

INDIVIDUAL PROBLEMS

Truancy

Truancy, the wilful avoidance of school, often requires to be tackled directly. Whatever the family problem behind it, the child should be got back to school again as soon as possible. This means altering the forces acting on him so that attendance at school is an easier option than truanting. The first step is to ensure adequate communication between family and school, so that the child cannot get away with being off school without good reason. Any truanting should then be dealt with vigorously and promptly by parent and school acting together. The reality of the legal requirement to attend school, and the possibility of court appearance and action, should also be brought home to the child. Pressures of this sort are usually effective. The help of the school welfare officer may be valuable. At the same time any other problems the family may have are tackled.

Running Away

Running away from home, especially if persistent, is a serious symptom. It often indicates grave problems of adjustment within the family, and its failure to meet the child's emotional needs. Sometimes it is associated with depression. As may truancy, running away can lead to stealing, shop-breaking, and other offences which may be committed by the child to obtain food or shelter.

Aggression

Aggressive behaviour in their child is a problem for which parents commonly seek help. The failure to sublimate aggressive drives into socially acceptable channels may result from the existence of weak emotional bonds within the family; having no adequately satisfying relationships with adults, the individual fails to forego the free expression of his aggressive feelings in exchange for his parents' love.

Excessive aggressiveness may also occur in indulged children, who may grow up with the expectation of always getting their way. When eventually they come up against situations in which their will cannot prevail they react aggressively. In such cases a psychotherapeutic approach, involving child and parents, may be fruitful. Finally, some children appear to be inherently more aggressive than others; thus it seems to be more difficult for some brain-damaged and certain epileptic children to learn to internalize and sublimate their aggression. They are therefore likely to require a specially high standard of parental care and schooling, and will be more at risk than other children.

Delinquency

Delinquency, the commission of offences which are against the law, is often a development of pre-existing antisocial behaviour. In adolescence, however, the child whose behaviour presents no problems at home, or even at school, may get into trouble in the community outside. This is often a result of group identification; in some neighbourhoods the chances of getting involved with the activities of a delinquent gang are high. This may happen in the absence of emotional disorder in the individual child.

School Failure

School failure and retardation in reading are commonly found in children with antisocial behaviour. The Isle of Wight survey showed how important the association is. One-third of the children who were more than 28 months retarded in reading showed antisocial behaviour; and one-third of the antisocial children were at least 28 months retarded in reading. It is easy to understand that the illiterate child may fail to get satisfaction at school, rebel against adults who value school, and then truant or even run away. He may get involved in antisocial activities in a search for substitute satisfactions. Thus whatever the origins of the reading problem, or the antisocial behaviour, if both are present both should be tackled.

RESIDENTIAL TREATMENT

In a minority of cases residential treatment may be needed for the child. This may be in a children's home, community home, residential school, or psychiatric unit. The decision to remove a child from home is a serious one. It is usually taken only after full investigation by the staff of a child psychiatry or child guidance clinic or of the local social services department. The practitioner will often find it useful to refer the more difficult and intractable cases to one of these agencies.

Prognosis

Much antisocial behaviour, especially if it is mild, clears up with little or no help. In more severe cases there is a significantly increased risk of both psychiatric illness and criminal behaviour in adult life, as compared with neurotic children and also with normal controls.⁴ Behaviour of this sort can apparently be handed down through the generations, if effective treatment is not provided.⁵

Conclusion

Antisocial behaviour is one of the commonest forms of deviant behaviour in children. It is often of multifactorial origin, and to understand it a study of the child, his family, and his school and wider social setting is necessary. The doctor may be able to intervene directly, but if there is a serious social problem, as there may well be, social work help may be needed. The doctor can contribute by formulating the problem and mobilizing the help the family needs. In some cases he will seek the help of a child psychiatry or child guidance clinic in doing this.

References

- ¹ Rutter, M., Tizard, J., and Whitmore, K., *Education, Health and Behaviour*. London, Longmans, 1970.
- ² Barker, P., *Basic Child Psychiatry*. London, Staples, 1971.
- ³ Barker, P., *Update*, 1971, 3, 1161.
- ⁴ Robins, L. N., *Deviant Children Grown Up*. Baltimore, Williams and Wilkins, 1966.
- ⁵ Wardle, C. J., *British Medical Journal*, 1961, 2, 349.