
XI.5 Young offenders

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Delinquency is a common and major problem among the youth of our crowded and often deprived inner cities. Delinquents are more likely to attend less-favoured state schools and have a high rate of delinquency amongst their friends and relatives (West 1985). However, delinquents are not a homogeneous group and therefore conclusions about delinquency must be drawn with caution. It is not possible in one chapter to do justice to the mass of information available and so we confine ourselves to four themes. The first is concerned with some problems of research method; the second deals with statistics and lifetime trends; the third appraises evidence concerning causes and correlates; the fourth discusses risk, protective factors and prediction.

PITFALLS OF LONGITUDINAL RESEARCH

As an investigative method, longitudinal research is in many ways superior to cross-sectional research in the study of the natural history of delinquency in individuals and in communities over generations. Not only may it escape many of the matching difficulties inherent in the cross-sectional method, but it is easier to explore causal chains, because potentially significant events are recorded and measured as they occur (Farrington 1979). Yet the longitudinal method is not without its own difficulties and hazards: for instance, it may be impossible to separate maturation effects (the effects of growing up) and period effects (the effects of changes in society) in one longitudinal study. This is exemplified by the Cambridge study, which is to date one of the best longitudinal surveys of juvenile criminality (West & Farrington 1973, 1977). It is a cohort of 411 predominantly white males first contacted in 1961-62 aged 8-9 years and drawn primarily from six state primary schools in a working-class area of London. The sample included all boys of that age from those schools and was thus thought representative of an urban working-class population in that period. Data were obtained from psychological tests at the age of 8, 10 and 14 years, interviews with boys at 16, 18, 21 and 24 years, behaviour questionnaire filled in by teachers at 8, 10, 12 and 14 years and interviews with parents annually from 8 to 14

years. One suspects period effects were responsible for the enormous increase in boys admitting drug use over the period 1967 to 1971. However, more than one cohort, or even overlapping cohorts, would have to be studied in order for valid results to have been obtained (Farrington 1979).

On the other hand, the longer the period covered by research, the greater the likelihood that results will reflect temporal changes in society, which complicate interpretation of such results. Rutter (1979) points to some of the difficulties: alterations in law may mean that certain acts or behaviours move in or out of the compass of criminal law; criminal statistics are affected by the level of police activity; all offenders may not be treated equally by police; changes in opportunity, for example the increase in self-service shops and in numbers of motor vehicles, affect the extent of criminal activity. Thus in some respects, and for certain objectives, cross-sectional methods may be appropriate.

Over the last 20 years the percentage of persons found guilty of indictable offences by the courts has doubled. However, with regard to juveniles, criminality figures may be misleading. For instance, the greater use of cautioning by the police may have had the effect of bringing into the criminal statistics a number of juvenile whose offences would otherwise have remained unrecorded: between 1957 and 1968, less than one-quarter of male juvenile offenders were over-cautioned but by 1971 the proportion had increased to 40% and since then has not changed substantially (Rutter & Giller 1983). Also, recidivism has increased at a far faster rate than first offences. In other words, criminal acts have increased much faster than the number of criminal persons.

In studying delinquency, it is axiomatic that a truer measure of all degrees of delinquency will be obtained by confidential interviews than by a study of official records. Official records under-represent the true extent of antisocial behaviour, while confidential self-admissions from youngsters tend to confirm the widespread nature of juvenile offending across all social classes. Furthermore, it is estimated that less than 15% of criminal acts result in police contact (West & Farrington 1977). Even when police contact is made, the processing of the individual concerned may well vary according to the perception of delinquent stereotypes, which relate to the offender's age, sex, colour, previous record, area in which he lives and family circumstances (Landau 1981). Thus, differences in surveillance of stereotyped groups give rise to a greater possibility of detection of offences.

Whilst, self-report surveys give weight to minor and often widespread items of misbehaviour, criminal records may fail to recognise conviction as merely one facet of a delinquent lifestyle. For example, the Cambridge study showed official delinquents at 18 to be almost uniformly at the socially deviant end of the spectrum with an excess of alcohol problems, driving offences, sexual experience, unemploy-

ment, poor family relationships and anti-establishment attitudes, (West 1982), which suggests that the authorities were broadly successful in selecting the severest cases for prosecution (Farrington 1973). Moreover, as it is necessary to bring a wide spectrum of behavioural deviance into the rubric of established offence classification, criminal records may reflect inaccurately or imprecisely the nature of any specific behaviour disturbance under scrutiny. Furthermore, Shea (1974) showed that the sentences passed for similar acts could vary according to the legal label attached to them, as could the family's social grouping.

On the other hand, as self-report surveys tend to show that those arrested or convicted have committed criminal acts most frequently, it may be that criminal records could serve the useful function of identifying the most delinquent minority (Farrington 1973, 1979). Finally, self-report surveys seeking confidential admission from youngsters are not without their pitfalls — they tend to underemphasise working class origins and overemphasise minor delinquent activities compared with the information available on official delinquents. There is also a high non-response rate in those known to be delinquent. However, the higher the scores on self-report-schedules, the greater the probability that the youth will have an official record (Belson 1975) or will acquire a record in the course of time (West 1982).

DELINQUENCY BY NUMBERS

Prevalence

Research reviews suggest that between one-third and one-half of all males have a criminal record. The differences in rates between studies can be accounted for by differences in the method of assessment employed (Douglas et al 1966, Wadsworth 1979). Rates also differ over time: on the basis of Home Office data, Rutter & Giller (1983) have confirmed that indictable offences increased almost fivefold in the 20 years 1957-77, most of this increase occurring before 1964.

Statistics regarding delinquency at different ages, whether obtained from official records or studies based on self-reports, all agree that the young are the most frequently deviant. For example, the *Criminal Statistics: for England and Wales 1978* (HMSO 1979) show that over one-half of those found guilty or cautioned for indictable offences were under 21 years of age. At 10 years of age, 1% were delinquent, and at 15 years, 5%; by 21 years the rate had fallen to 3% and the fall continued, to reach 1% in the fourth decade and 0.1% in the seventh decade. West & Farrington (1973-1977) found that the peak age for first conviction was 14 years but that 17 was the peak age for the number of convictions and for number of individuals convicted. The Newcastle study (Kolvin et al 1988) reveals a peak for mean number of convictions at 16/17 years; after the age of 30 years the mean number of offences committed proved very low. Farrington (1981) estimated the life-time

prevalence of convictions for males by using official statistics based on random samples and estimated numbers of first convictions in each age group. He simply added the first-time conviction rate of males at each age group to obtain a total lifetime prevalence to one-third to one-half. However, he pointed out that this fails as a prevalence estimate for a particular age group since the crime rate is not constant. To date, one of the best measures of juvenile criminality derives from the Cambridge study. One in five of the group had been convicted as juveniles and nearly one in three by 24 years of age (West & Farrington 1977).

In the Newcastle '1000' Family Study in its follow-up to the age of 32-33 years, Kolvin et al (1989) reported that at all ages offences were overwhelmingly committed by males and that by the age of 33 years 31% of men had offended but only 6% of women. The former is a surprisingly robust figure as it closely approximates to that deriving from national research (*Statistical Bulletin*, Home Office 1985). The male preponderance of delinquency applies irrespective of the source of the information. Explanations offered for such sex differences include the greater vulnerability of males to either psychosocial or biological stress (Rutter & Giller 1983) and the greater aggressiveness of boys (Mac-coby & Jacklin 1980).

Rutter & Giller (1983) provide a fresh perspective by pointing to the mass of research indicating that while the majority of young people have committed delinquent acts, only a small minority enter the criminal records. For example, in West & Farrington's (1973) study, 90% of the sample admitted avoiding travel fares; Belson (1968) showed that 70% of his sample had stolen from a shop; Gladstone (1978) in his study of 11-15-years-olds in a UK northern city found that 65% had written on walls, 48% had broken glass in street lamps and 28% had damaged car aerials. Incidence thus varies with seriousness of the offence. Clearly, while most youths are guilty of delinquent acts at some time in their lives, most of these are trivial, isolated and undetected. Rutter & Giller (1983) nevertheless are quick to point out that delinquency should not be regarded as normal and high rates of official convictions are associated with other measures of deviance in a way which distinguishes the perpetrators from the general population (see West & Farrington 1973).

Lifetime trends

Brown & Madge (1982) summed up the situation as follows. More crime is committed by offenders before than after 21 years of age and although most delinquents do not offend as adults, the risk that they will do so increases with the level of their previous delinquent activity. For instance, in the Newcastle study (Kolvin et al 1988), of those committing offences before leaving school, three-quarters committed further offences after leaving. These findings support the

concept of a group of boys at high risk for adult criminality who commit their first offences while still at school. Similar findings have been recorded in the USA (McCord 1978).

Juvenile offending has considerable versatility — the reporting of any one type of misconduct increases the likelihood of other types being reported. Such versatility tends to be true both for self-report and for criminal records. This suggests the hypothesis of an underlying psychological or neurophysiological defect (West 1985). Similar hypotheses have emerged from longitudinal research (Robins 1978). Furthermore, the greater the frequency of deviant behaviour in adolescence, the greater the likelihood of recidivism in adulthood (West & Farrington 1977). The versatility of behaviour and associated attitudes of the more chronic offenders has given rise to the concept of the antisocial personality (West & Farrington 1977).

It is perhaps of particular interest to investigate the course of delinquent behaviour both in terms of the likelihood of one offence following another, and offence typology over the years. West & Farrington (1977) noted that the likelihood of later reconviction increased directly with the number of offences committed during adolescence: 397 boys remained in the Cambridge study at the age of 22 years; within the next 5 years 33% of boys with only one conviction were reconvicted; 52% of those with two convictions and 66% of those with three convictions were reconvicted. Similar patterns were described in the USA by Sellin & Wolfgang (1964). Thus, early juvenile delinquent behaviour correlated strongly with later criminality. Similar conclusions had been reached by Robins (1978) and Stott (1966). These figures tend to refute Farrington's (1979) suggestion that something in the official process itself makes a person more likely to commit further offences or to be prosecuted but lends support to his alternative suggestion (although the two are not mutually exclusive) that with the commission of each new offence there emerges an increasingly delinquent group.

The idea of a high-risk group identifiable during childhood is confirmed by the preponderance of research findings, most dealing with identification on the basis of early offences. Farrington & West (1981) found that 61% of official juvenile delinquents were reconvicted as young adults and only 13% of convicted adults had not been convicted as juveniles. They also found that the number of convictions tended to be proportional to the age of the offenders when first convicted.

Particularly interesting is the St Louis controlled study comparing 524 clinic patients referred for antisocial behaviour with 100 non-patients matched for age, sex, intelligence and neighbourhood, as summarised by Cline (1980). Two main patterns emerged. First, early antisocial experience is difficult to shed: for example, 72% of the antisocial group and 26% of the controlled group were convicted between the ages of 18 and 30 years; second, the effect of

early experiences tends to diminish after 30 years of age and recent experiences become more significant. For instance, of the antisocial group who were arrested between the ages of 18 and 30 years, 59% were re-arrested after the age of 30. The corresponding figure for the control groups was 44%. In other words, the commission of offences between 18 and 30 years is a better predictor of offences committed after 30 years of age than childhood records.

Does the nature of the offending behaviour change with age? Research suggests that it does, although not so radically as to indicate specialisation at different ages. Most of the youths in the Cambridge study (West & Farrington 1973, 1977) who were convicted of violence or driving offences were also convicted of dishonesty at an earlier age. Mott (1973) in her survey of drug offenders in London courts found only 2% of their previous offences to be drug related. Furthermore, very few arsonists or sex offenders had previous or subsequent convictions for the same offence. The Cambridge data from both self-reported and official records offer evidence that while 17/18 years is the peak age for offending, specific offences peak at different times: 10-13 years for stealing from machines; younger than 14 years for shoplifting; and assault and damage at 17-20 years of age. But drug use apparently is stable across late adolescence and early adulthood. Forgery was thought not to have reached its peak even by the age of 24 (Farrington 1983) although it is possible that social security fraud has passed its peak by this age. Cline (1980) showed from arrest data derived from crime reports that offences of drunkenness, drunk driving and gambling are especially associated with middle age, for although there was a higher incidence in the 20-29 year age group, the percentage of arrests in higher age categories were much higher than the percentage for offences identified as adolescent offences (e.g. vandalism and property crimes).

THE PRESUMED ORIGINS OF DELINQUENCY

Unemployment and delinquency

What is the basis of the associations between unemployment and delinquency? This is well reviewed elsewhere (Rutter & Giller 1983) but some of the issues are as follows. Delinquents are more likely to be unemployed (Bottoms & McClintock 1973, West & Farrington 1977, West 1982), but the overall link is tenuous. For instance, recidivists are mainly found in jobs with lower status which are in any case liable to involve periods of unemployment (Rutter & Madge 1976, West & Farrington 1977). Furthermore, the greatest post-war rise in delinquency during the mid-1950s to 1960s preceded the major rise in unemployment (Rutter 1979). Nevertheless, there is support from longitudinal research for the view that unemployment is likely marginally to increase the predisposition to delinquency and aggression (Bachman et al 1978).

Occupational class poverty, deprivation and delinquency

A moderate link is often reported between low social status and delinquency. The Newcastle study (Kolvin et al 1988) reveals a close relationship between offences and occupational status, rising from 5% of males from classes I and II, to 26% from class III, and 42% from classes IV and V and those not classifiable. In their review of the evidence, Rutter & Giller (1983) conclude that the relationship applies mainly at the extremes of the social scale. They also question the extent to which the differences can be accounted for in terms of differential treatment accorded to middle-class juveniles by the legal system. It needs to be noted that the Newcastle figures relate to more serious delinquency and the associations are less likely to be explicable in terms of treatment differences. Furthermore, an even stronger association is found in the case of family deprivation, which suggests at least some direct effect of family influences (see below).

Apart from unemployment, the question arises of whether poverty or deprivation have any direct bearing on delinquency (Rutter & Giller 1983). Rutter (1979) notes that the major increase in standard of housing this century does not seem to have been accompanied by a corresponding reduction in crime. Apart from the simple retort that other factors must have been operating as well, Rutter does explain that more people are living in poor conditions than are exhibited on the face of official statistics; that while the general level of prosperity has risen, the relative distribution of affluence has changed little (*Report of the Royal Commission on the Distribution of Income and Wealth*, HMSO 1978); and that expectations have risen with changing patterns of experience (Townsend 1979). These factors, taken together with Braithwaite's (1979) suggestion that it is inequality in income rather than overall level of wealth that predisposes to crime, do suggest that *relative* poverty in the context of a generally increasing standard of living may have some effect.

The relationship between deprivation and offending has been examined in a longitudinal population study in Newcastle (Kolvin et al 1988, 1989). The proportion of males who offended varied according to the degree of deprivation, ranging from one in six males from non-deprived families to six in ten males from multiple-deprived families. Thus offending appears to be related to the degree or severity of family deprivation in the preschool years. Some forms of deprivation appeared less harmful than others: for instance, the rate was relatively lower in the case of parental illness than where there was poor quality of parenting and poor care of the home and children. Moreover, there are significant correlations between the two latter criteria of deprivation, which means that they are not independent of each other. It is therefore not easy to estimate the relative importance of such 'explanatory' factors in the genesis of delinquency. Irrespective, there is evidence that poverty is

one of a number of intercorrelated variables which predict delinquency/criminality. It may be that it is the combined effect of freedom from personal restraints (West & Farrington 1973), as occurs in deprived families, and relative poverty that constitute the critical influence.

Do family fluctuations in deprivation modify the risk of offending? In the Newcastle study (Kolvin et al 1989), information was available about the increase and decrease in family deprivation in the 5-year period after starting school. The findings were that if the families moved into deprivation, there was a 50% increase in the rate of subsequent offending by their male offspring, and if they moved out of deprivation, a 40% decrease.

Family variables

A problem facing all research into the correlation of delinquency is to determine whether a factor which seems related to the risk of delinquency is causal or whether it is a reflection of a third factor which is common to both (Rutter & Giller 1983). The complexity of family interactions means that, in their study, particular care must be taken to avoid *a priori* assumptions regarding the significance of any particular variable. A prime example is family size: West (1982) revealed that whereas 41.7% of persistent delinquents came from families of more than seven children, only 8.9% of other children came from families of that size. However, as Rutter (1979) pointed out, the fall in the fertility rate over the past 15 years does not seem to have provoked a corresponding fall in crime, which indicates that the assumed link between large families and delinquency is indirect. The causal link may not be family size itself, but associated factors such as overcrowding, socio-economic disadvantage, less intensive family interactions and poor discipline and supervision, all of which may imply a lack of parental skills, foresight or planning. High intercorrelation of such presumed causative social factors creates problems in attempting to decide the most direct causal link and also the relative importance of such factors in the pathway to criminality. The family size link is far less strong in middle-class families, implying that the association is dependent on the social disadvantages bedeviling large families in disadvantaged sections of the community (Rutter & Giller 1983).

What are the effects of marriage on delinquency? Early marriage appears to give rise to merely a moderation in social habits linked with delinquency such as heavy alcohol consumption and an association with drug abuse, but there is no evidence of a decrease in self-reported delinquency or convictions (Knight et al 1977); nor a decrease of traits linked directly with criminality, such as aggression, hostility to police and unemployment. On the other hand, Knight et al (1977) found great divergence in criminal behaviour according to whether the spouse had a record too: those who married women with criminal records averaged nearly five times as many convictions on follow-up as those who

married non-criminal women but who had the same personal marriage record. However, there is evidence to suggest that subsequent marriage may be beneficial to those with criminal records.

Environmental and genetic factors

There is a demonstrable statistical link between a child's delinquency and parental criminality or social deviance (Farrington & West 1981, Offord 1982). The Cambridge study indicates that parental criminality before a child's tenth birthday is one of the five most important background factors predicting subsequent delinquency in the child (West 1982). Additionally, 40% of the sons of recidivist fathers also proved to be recidivists. However, twin and adoption studies (Shields 1977, Hutchings & Mednick 1977, Bohman 1978) report only a small genetic influence in the case of juvenile delinquency. Hutchings & Mednick's (1977) adoption studies in Copenhagen found a close relationship between the conviction records of the child and those of both his biological father and his adoptive father. Moreover, it would seem that parental criminality is not the decisive factor, as it has been shown that it is often associated with other social difficulties, for example drink problems and poor work records, that are likely to be more major influences in the modelling of aggressive and violent behaviour.

In such circumstances it is not surprising that most recent reviews suggest that both heredity and environment influence delinquency, the genetic factor acting by making the individual more vulnerable to adverse environmental influences. However, the relative influence of these variables and the specific content of the relevant family influences remain uncertain. Some clues are available, for instance, in the case of marital discord, it is less the broken marriage itself but rather the preceding acrimonious discord that triggers delinquency of the children (Rutter & Giller 1983). The Newcastle research emphasises poor parenting, especially poor mothering (Kolvin et al 1989). However, it is not only the quality of care that is likely to be important: parental supervision is also a particularly strong influence (Farrington & West 1981). Farrington (1979) speculates that poor parental supervision and police practice are the major links and this is reinforced by the fact that poor family and social circumstances do play some part, however marginal, in police decisions to prosecute. West & Farrington (1977) also emphasise freedom from restraint resulting from poor supervision. Others speculate about family stress (Rutter & Giller 1983) and parental disapproval resulting in hostile behaviour and physical punishment leading to social aggression (Patterson 1982). Yet others reject the importance of familial discord except in so far as it is associated with deviant ways of rearing children (Wilson 1980).

The plethora of ideas in this area is a reflection of the difficulty of separating out different types of family influence

Nevertheless, the importance of family pathology is emphasised by the fact that prior changes in family circumstances influence delinquent outcome. For instance, improvements in family relationships (Rutter 1971) or family deprivation (Kolvin et al 1989) are associated with a reduced rate of conduct disturbance in the case of the former and delinquency in the case of the latter.

School, neighbourhood and friends

School, or rather quality of school, is often thought to exert a major influence on both academic achievements and delinquency (Rutter et al 1979). Indeed, it was thought that criminal activity was at its height during the last year of compulsory schooling (Wilkins 1960). McKissack (1973) noted the frequent coincidence, in official statistics, of peak age of delinquency and school-leaving age. It is undeniable that before World War II, when the school-leaving age was 14, the peak delinquency age was 13; and just after World War II, when the leaving age was 15, the peak age was 14. Nevertheless, the youths in the Cambridge study (West & Farrington 1973, 1977) tended to disprove the general rule, peaking at 17-18. However, the peak in the Newcastle study is 16/17 years (Kolvin et al 1989).

This is not to say that school factors are non-existent. The observation of relatively large differences in delinquency rates between senior schools serving much the same neighbourhoods suggests that school factors have an important influence in potentiating or protecting youths from delinquent behaviour (Power et al 1972, Gath et al 1977). The possibility that this was, however, more a matter of selective intake has been explored. Farrington (1972) showed that boys at secondary schools that had high rates of delinquency were at 11 more likely to be convicted than those at other schools and the same applied to schools with high truancy rates (Farrington 1979). Farrington (1979) was alive to the possibility of differences of intake and suggested that secondary schools themselves may have little effect on delinquency. Instead, troublesomeness in primary schools went some way to predicting delinquency and the deviant personalities subsequently tended to gravitate towards the high-delinquency secondary schools. Thus it was hypothesised that these major differences between senior schools were to be mostly accounted for by the varied nature of their intake.

However, Rutter et al (1979) when looking at these balancing factors went on to demonstrate that secondary-school variation in disruptive behaviour, delinquency and absenteeism were not solely due to intake. In their detailed study of 12 London secondary schools, which focused on social and organisational characteristics of the schools, they reported some substantial differences which led them to suggest causative influences of schools on children's anti-social behaviour but only a negligible impact on scholastic attainment. Furthermore, they suggested the school was

likely to influence the whole pupil body to become more or less disposed to good behaviour or scholastic achievement, independently of their social, family or intellectual background. They reported that school factors had a greater influence on the behaviour of pupils within the school than on delinquent behaviour outside: the former seemed to be determined by the school's style of education, the latter more related to academic balance present in a particular year group on intake.

It has been suggested that peer group influence may contribute to delinquent behaviour but the evidence for this theoretical (Rutter & Giller 1983). In the future, peer group studies will need to deal with the question of whether a change in peer group results in a change in delinquent behaviour, or whether a decision to modify one's delinquent activities is followed by a decision to alter one's company. However, Rutter & Giller (1983) suggest that peer group change may partially account for Elliot & Voss's (1974) finding that dropping out of school was associated with a greater reduction in associated delinquent activities when the person who dropped out obtained regular employment, and even more so if he married. In support of this notion is the finding in the Newcastle study that positive peer group influence seemed to confer resilience in the face of family deprivation (Kolvin et al 1989a).

Individual characteristics and delinquency

This subject is well reviewed by Rutter & Giller (1983). For the most part the results of studies of individual characteristics which predispose to delinquent behaviour are inconclusive. There has been much research into such individual characteristics and a number of correlations have emerged but there is insufficient evidence of their importance as causes. Nonetheless, they contribute to a 'profile' of delinquency. Some of the associations merit brief comment.

West & Farrington (1973, 1977) have demonstrated that a low IQ was associated with persistent delinquency but that the educational retardation of delinquents is more impressive than their IQ deficits. These associations remain even after family factors and social status have been accounted for (Offord et al 1978). In this respect Kolvin et al (1989) observed that an IQ above 100 'protects' youths from deprived backgrounds from becoming delinquent. The association does not simply reflect the avoidance of detection by intellectually more competent individuals (West & Farrington 1973); a favoured explanation is the 'educational failure' hypothesis which suggests that delinquency has a basis in lowered self-esteem and emotional disturbance (Rutter et al 1970; Rutter & Giller 1983). However, there is some contradictory evidence which suggests that conduct disorders may precede educational failure (McMichael 1979, Richman et al 1982). Yet other workers suggest common or coexisting adverse family factors as aetiologically important to both antisocial behaviour and educational

failure (Offord 1982). Such common factors are not necessarily psychosocial — they could well be temperamental (Rutter & Giller 1983). For instance, poor temperamental qualities in the classroom seem to render youths from ordinary homes vulnerable to delinquent activities whereas positive temperamental qualities in deprived boys is associated with a reduced risk of delinquency (Kolvin et al 1989b).

There is some evidence that deficits of attention found in delinquents are similar to those reported in hyperactivity (Douglas & Peters 1979); there is much evidence linking attention deficits, hyperactivity and antisocial behaviour (Cantwell 1980) and even more evidence linking hyperactivity with conduct disorder (Sandberg et al 1978, 1980); furthermore, hyperactive boys on probation tend to be more antisocial (Offord et al 1979). Follow-up of hyperactive boys shows an increased rate of delinquency (Weiss 1983), and features representative of attention deficit disorder recorded at the age of 11 years were strongly predictive of later delinquency.

These findings tie in to a certain extent with those reported by Farrington (1986) where 'troublesomeness' at the age of 8 proved to be predictive of subsequent delinquency. There remains the problem of whether troublesomeness is a behavioural precursor of delinquency rather than part and parcel of an enduring pattern of temperament or personality.

The personality dimensions of persistent delinquents have been studied extensively. Unfortunately many of the themes included in personality questionnaires refer explicitly to delinquent behaviour and therefore do not constitute measures of personality independent of delinquent behaviour or of disorders of conduct. Eysenck & Eysenck's (1973) measures of personality are the most independent but they do not appear to be associated strongly with juvenile delinquency.

The reported relationship between body size and delinquency (Glueck & Glueck 1956, Gibbens 1963) has not been generally corroborated by local studies in London (West & Farrington 1973) or national studies (Wadsworth 1979).

RISK OF DELINQUENCY

Protective factors

In so far as we must accept that criminality has causal origins we must accept that certain factors which we term 'protective' serve to counter motivation to crime despite a high-risk background. These factors have been examined by Kolvin et al (1989) in their Newcastle study.

Resilience in the junior school years was characterised by six different kinds of protective factor: a care-giving environment permitting good supervision of children; the absence of developmental delays; relatively good intellectual ability and scholastic achievements; positive temperamental

qualities; a positive response from peers; and social activities such as membership of a youth club. In adolescence there were two important parent and family factors: family contact with the school and, in girls, the continuous presence of the natural father.

The Newcastle data demonstrate that irrespective of poverty or other forms of social or family deprivation, good parenting protects against the acquisition of a criminal record. Close personal supervision of boys by parents is similarly protective and beneficial. Another factor meriting mention is accidents: in the presence of deprivation, the absence of accidents appears to be associated with resilience. However, in the presence of multiple deprivation, accidents in the preschool years appear to represent a combination of carelessness and ineffective care and are ominous as far as future offending is concerned. The Newcastle data also demonstrate an association between rather dull intelligence and delinquency; this emphasises the protective nature of better intelligence and achievements in those children coming from deprived homes. Among girls, as indicated above, the continual presence of a natural father proved an important protective factor; presumably the quality of fathering is also important (McCord 1982). Other protective factors include good maternal health, good parental supervision, good temperamental qualities and the family's interest in the girl's school progress.

As already described, the Newcastle study (Kolvin et al 1989a, b) has demonstrated that reduction or increase in family deprivational circumstances leads to a respective reduction or increase in subsequent delinquency. These important findings are limited by not being able to offer evidence of change in specific deprivations being followed by relevant changes in delinquency rates.

Prediction

Between 1950 and 1959, Glueck & Glueck (1950, 1964) made several attempts to develop formulae which would give reasonably accurate predictions of delinquency but the promise inherent in these early efforts has not been fulfilled. Much of their data were gathered retrospectively and therefore predictive utility must be viewed with caution. Subsequent attempts to use their index have shown a poor predictive performance (Dootjes 1972). More recent work suggests that the more sophisticated multiple-regression techniques give, if anything, worse prediction than the simple Glueck methods (Farrington 1983). However, this relatively poor prediction may have more to do with the insensitivity of the predictor measures than the statistical techniques employed. The limitations of prediction studies have been summarised by Rutter & Giller (1983) with two telling conclusions: (1) many youths theoretically at high risk do not become delinquent; (2) a substantial minority not at high risk do. Nevertheless over recent years a number of workers in the UK have demonstrated the potential of this

theme. One important finding is its potency as a predictive tool of delinquency from early-life psychosocial data: for instance, in Kolvin et al's (1988) Newcastle study, some two-thirds of boys coming from multiply deprived homes subsequently become delinquent.

In the Cambridge study (West & Farrington 1973, 1977) only two behavioural measures and five background measures were found to be independently predictive of delinquency: delinquents tended to be among those boys who were rated troublesome and daring at school; boys were at risk when coming from the poorest or largest families, who had criminal parents or parents who supervised them poorly, or who had low IQs. The factors were cumulative. Even so, after combining the factors, the 'vulnerable group' which was derived comprised only 50% of potential delinquents despite the use of more sophisticated methods of selecting and combining variables. However, it was possible to identify a vulnerable group of persistent recidivists (e.g. those who had convictions before and after the age of 19 years) with the same degree of accuracy from early-life data. Using only factors of extreme troublesomeness and convictions of other family members assessed when the subject was 10 years old, a vulnerable group of 35 was identified of whom 18 became persistent recidivists.

Kolvin et al (1989a, b) (using multiple regression or logistic regression) report that the only measure representing family atmosphere which made a significant contribution to prediction of criminality was poor child care and mothering. Factors which failed to make a significant contribution were marital disruption, parental illness, factors representing adverse social circumstances, parental personality, mother's age at marriage, occupational status and neighbourhood influences. The summed score of deprivation criteria proved a good predictor; so, too, was family size, which probably directly reflects poor home circumstances. Individual differences of intelligence and temperament also made important contributions. In a variety of analyses, prior juvenile delinquency proved to be a most powerful prediction of later criminality. Finally, while marital disruption and parental illness were predictive of offences committed during the school years, poor mothering was a significant predictor of criminality after the age of 15 years. In the USA McCord (1979) reports that while home atmosphere was reliably related to criminal behaviour, parental absence failed to distinguish the criminal from the non-criminal.