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> The life span perspective in understanding deprivation Traditional theories have tended to view human development as becoming, in a sense, finalized in early life (Freud, 1949; Kohlberg, 1969; Piaget, 1972). In contrast, life span research has emphasized the pervasiveness of change throughout life (Baltes et al., 1970; Baltes et al., 1977; Lerner and Ryff, 1978). Of fundamental importance is the question whether behaviour can be viewed as quantitative increase or extension of what was present at an earlier stage (representing continuity); or whether behaviour in later stages of development is qualitatively different (representing discontinuity). Theories supporting the former hypothesis have been challenged by empirical research indicating that changes occur across the life span, and that these are multidirectional, showing both increase and decrease (Baltes et al., 1970). Furthermore, changes have been linked to socio-cultural factors rather than being determined merely by chronological age (Baltes, 1979; Baltes et al., 1977).

> Our work emphasizes the importance of adopting a life span perspective in attempting to identify processes and mechanisms which explain behaviour. We have examined the contribution of early family deprivation in the preschool period, and have been able to demonstrate differences in development in relation to early environmental change as well as recent life events. Like others, we have found that behaviour change phenomena are interdependent (Lerner and Ryff, 1978), are linked to a multiplicity of explanatory variables, and can be evaluated only by employing a wide range of theories in relation to the individual and his environment (Lerner and Lyff, 1978). While our empirical findings must be viewed and evaluated in the historical and local circumstances of Newcastle, this does not prevent generalization to other settings; rather they provide a refinement

Continuities

We have noted that deprivation experiences in childhood gave rise to generally poor functioning in intelligence, school performance and behaviour and, in adult life, to neurotic problems in women and antisocial behaviour in men. Subsequently, we found evidence of poor parenting among these adults. Such associations proved especially powerful in the case of the multiply deprived. About half the multiply deprived in the family of formation had experienced multiple deprivation in their childhood. Nevertheless, such associations were not inevitable.

Continuities: parenting

We have identified some of the factors in childhood which played an important role in predisposing to deprivation in the next generation. We assume behavioural disturbance in childhood plays an important mediating role. Quinton and Rutter (1985), studying parenting in two generations, support this assumption for children admitted to residential care and show that, while adversities in childhood predispose to poor adult functioning, adaptive adult functioning is not formed by the end of childhood. Circumstances in adult life also determine functioning - for example, women happily married to a stable partner were likely to show good parenting. This suggests the chance of discontinuity for women in adversity who make good marriages, and our data suggest the same tendency. Advantageous marriage may mean gaining a partner who experienced better parenting, which introduces an important ameliorative element, as may other chance factors. On the other hand, there are many possible bases for continuity in deprivation as exemplified by women beginning their families very early or men having a criminal history. These processes are not inevitable precursors of deprivation in the next generation, but they may increase the risk.

We tried to quantify intergeneration continuities of deprivation and identify mechanisms and protective and stress factors involved. Many of these themes have been addressed in the section on multivariate analysis (Part V).

Continuities: occupational status

One approach is to study the similarity of earnings between

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fathers and sons on the one hand and sons-in-law on the other. Atkinson et al. (1980) report a significant correlation (regression coefficient of 0.4 to 0.45) between fathers and sons and, surprisingly, a similar coefficient between fathers and sons-in-law. They suggest that this concordance is based

on greater continuity among the affluent.

Townsend (1979) marshalls powerful arguments to support his view that the concept of social class is crucial to any explanation of the existence and scale of poverty. In a sense, social class reflects not only the individual's rewards but the privileges, responsibility and status conferred by society. It determines how he or she will be viewed by representatives of institutions both governmental and private, legal, medical or financial, and how a person is expected to act in society. He also suggests that social class has a tendency to institutionalize inequalities in society. However, there is a danger that, by concentrating on inequalities of social class, there will be a failure to emphasize the wider and more fundamental psychological and social qualities necessary for a satisfactory life.

While a social class index based on occupation, despite its relative crudity, has been found to be useful in a wide range of studies, the identified differences of behaviour, illness or mortality among the social strata are likely to be attributable to different standards of hygiene, behaviour and social and educational circumstances. Hence Osborne and Morris (1979) claim occupational class is singularly lacking in explanatory power in that it is not always clear what aspect of social class is the most significant predictor of a given measure of performance. Nevertheless, father's occupation has proved a powerful predictor in many studies of child health and development. Even after controlling for other socioeconomic factors postulated as contributing to the 'social' class effect (for example, housing, parental education), father's occu-

pation still retains additional explanatory power.

Yet occupation itself cannot always be satisfactorily classified (Osborn and Morris, 1979). There are, for instance, problems of how to cope with occupational mobility and how to classify households with no economically active male head. Husbands and wives may be rated as belonging to different occupational classes, although their life styles are similar. The question also arises whether the occupational classes of single- and double-parent households are really comparable.

Osborn and Morris concluded there was need for indices of social stratification which relate directly to specific issues under investigation and embody a greater degree of explanatory power than does parental occupation alone. Thus, they compiled a wider social index which they hoped would have greater discriminative power. In practical terms, this index tended to contrast the most disadvantaged with

the most privileged.

A number of important questions emerge from the literature on occupational status, the first of which is the extent to which the professional and managerial class is open to recruitment. The Oxford Mobility Study suggested that, in the recent past, there has been considerably more upward mobility into the professional-managerial class than previously supposed (Goldthorpe, 1980). Nevertheless, there remained differential recruitment, with movement into this class by offspring of the same class in the previous generation being three times as common as expected by chance, and that from the lowest stratum just half as common. Yet, while there was more entry into this occupational level by those with formal qualifications, this did not preclude entry from those without.

Second, there is the question of transmission of advantage and disadvantage. Research into unemployment, undertaken in a northern city by Brown and Cousins (1979), concluded that 'transmission of advantage was more likely than transmission of disadvantage, and it was the sons of fathers in the higher occupational groups who had a better chance of doing well themselves' (Brown and Madge, 1982).

Can our study provide any relevant answers to these questions? The key periods for studying occupation in our study were 1952 and 1980. In 1952 the index cohort were five years old and had started school; in 1980 they were 33 years old, and over 70 per cent had children of school age; it is, therefore, possible to compare occupations across the two generations. The social economy of the region changed considerably over these three decades. National censuses show a dramatic decrease in the availability of semi-skilled and unskilled manual jobs in developing new technologies, producing a moderate increase in non-manual jobs.

We combined 1951 classificat period for the deprived groups the semi-skilled in 1952 as in pational mobilit

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We combined strata derived from the Registrar General's 1951 classification to study social class mobility over the period for the total '1,000 Family' population and for the deprived groups. In the case of the former, the percentages in the semi-skilled and unskilled categories were twice as high in 1952 as in 1980, indicating substantial upward occupational mobility from the first generation to the second.

However, the pattern of occupational mobility was an 'average' of the mobility of the subsamples. This can be most deceptive as such averages may mask subsample mobility in different directions. For instance, the non-deprived was a very large group (57 per cent of the original population) and showed good upward occupational mobility in the next generation but little downward mobility. The multiply deprived comprised a small group (some 14 per cent of the original population) and showed moderate upward occupational mobility but also substantial downward mobility. Nevertheless, we were impressed by the upward class mobility across generations of our different deprivation cohorts, suggesting that deprivation is not necessarily deeply ingrained.

The third question was whether our data provided any clues to explain the upward mobility across generations of families in the multiply deprived group. One possibility was that the multiply deprived Red Spot women who moved up in occupational class had married spouses of better intellectual potential than themselves. While the numbers were small there was evidence to support this in that multiply deprived females (n=26) had male spouses with a mean Mill Hill Vocabulary quotient of 99 compared to their own mean of 91 and a mean of 93 in their Red Spot male counterparts (n=32). Further, multiply deprived females married males who were on average about an inch taller than the Red Spot male counterparts. Hence part of the explanation of upward mobility is that some women 'marry up'.

Himsworth aptly comments:

Human societies exist in a state of flux. Always some individuals are rising in the social scale, some falling, and some remaining in the class in which they were born. Yet despite this continual interchange, class differences in health, as judged by such objective criteria as relative death rates, persist. (1984: p. 162)

Himsworth quotes Illsley's work in Aberdeen (1955) revealing that women who married into higher social classes were more intelligent, spent longer at school, were more highly skilled, had better-paid jobs, better physique, were more healthy and had a better perinatal record than those who married down the social scale. This suggests the importance of genetic and personality factors in social mobility. Himsworth proposes the importance of a factor of maternal competence in that certain qualities of temperament and background experience may enable a woman to benefit from the advantages she possesses. He argues that the social origins of adults are insufficient of themselves to prevent those whose abilities differ from the average from being socially mobile. This implies that, within each occupational stratum there are variations in individual potential and performance. He considers that there is a limit imposed by constitution to the extent to which one can improve individual human performance by environmental influences. On the other hand, Heath (1981, p. 188) points out that 'social origins and educational attainments may influence the kind of job we get'. Yet the known influences that we are able to measure are greatly outweighed by the unknown or unmeasured. Heath appears not to consider individual differences of innate ability, which some regard as an ideological block (Himsworth, 1984).

Discontinuities

We now have a comprehensive picture of the Red Spots over their school years, of their scholastic achievements, their interests and their activities, attitudes and aspirations, and also any difficult or antisocial behaviour. At first glance, we seem to have drawn a bleak picture of the multiply deprived group, yet this may not be as bad as it appears. Whatever feature we focused on, there was a sizeable proportion of the multiply deprived who were rated as showing at least average functioning. Over 60 per cent of these children received satisfactory ratings for response in class, almost 70 per cent for classroom reliability, 40 per cent for classroom initiative, classroom concentration and persistence, and 90 per cent for sociability. This implies that, in the school years, a sizeable proportion of children coming from multiply deprived homes were capable of showing adequate standards

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d Spots over ments, their rations, and t glance, we ply deprived rs. Whatever ortion of the least average ren received 70 per cent om initiative, 90 per cent ool years, a m multiply ate standards of performance and behaviour in the classroom. Allowance also needs to be made for the so-called 'halo' effect, whereby a teacher's rating of children's personal qualities might be influenced by perception of their scholastic abilities and vice versa and also by knowledge of their home environment. In our data this possibility is hinted at by the similarity in the patterns of scholastic ability and behavioural functioning, as shown by about half the multiply deprived group. While we do not have direct evidence that these features occur in the same children, it is not unreasonable to speculate that they are likely to do so.

While comparative statistics may suggest significant differences between groups, they can mask the potential of individuals from deprived homes who may in fact constitute a substantial minority. The task of society is to seek a method of maximizing individual potential by a better use of social and educational resources, for there is clear evidence that intellectual achievement may be modified both by positive and negative mediators in the environment.

How does deprivation exert its effect?

The cardinal question is not whether deprivation is harmful but how it exerts its harmful effects. We simply postulated that deprivation gives rise to increased vulnerability which can be modified by a series of protective factors. This model hypothesizes that some who are exposed to deprivation are adversely affected, while others may be protected from its consequences by their intelligence, strength of character, pre-existing social skills, or by other positive personal and family qualities. Such qualities may not only protect against deprivation but create a 'steeling' effect by causing the individual to strive assiduously to overcome disadvantages experienced in his lifetime.

Mechansims

Family influences

A common belief holds that mothers rear their children according to the model of their own childhood. McGlaughlin and Empson (1983) examined this hypothesis and concluded that continuities in models of child-rearing were the exception rather than the rule, and that the idea of a cycle of

deprivation was hard to sustain. However, the work of Rutter and his colleagues (1983) suggested that mothers who experienced emotional deprivation in childhood will often, but not inevitably, prove less than adequate. They looked back to see how far childhood experience of mothers predicted placement and care of children and forward to the circumstances of parents who had been reared in institutions. They found that one-third of mothers who had been in institutions showed disturbed behaviour at school; 40 per cent had become pregnant by their nineteenth birthday compared to none of the controls; serious parenting factors were present in 20 per cent but in none of the controls; and half had ratings of poor parenting compared to one in 10 of the controls. This poor parenting constituted part of a broader pattern of poor psychosocial functioning.

The Sheffield research made an important contribution to the understanding of multiple problem families (Wright, 1955; Wright and Lunn, 1971). About a third of married adult children of problem families seemed themselves likely to form problem families. Daughters and their families seemed to do better at follow-up than sons and their families. However, subsequent Sheffield research (Tonge et al., 1983) suggested that deprivation has become less evident over time due perhaps to smaller families and to greater acceptance of divorce by society.

After reviewing the evidence, Brown and Madge (1982) concluded that specific forms of family deprivation are not reproduced from one generation to the next. However, our research suggests some degree of specific transmission especially in the area of marital disruption and, to a lesser extent, poor quality of care of children. Far more impressive is the fact that each type of deprivation in one generation was significantly associated with the sum score of deprivation in the next, prompting the conclusion that transmission of deprivation is more general than specific. However, certain forms of deprivation do appear more potent - particularly poor care of children and the home - but this probably represents a host of characteristics including inadequacy of foresight, organization, planning and supervisory skills. There was some movement out of the 'multiple deprivation' category over the generation, but the extent of continuity in the multiply deprived group was considerable - about 50 per cent.

Genetic versus environ There is a continuing genetic and environ Genetic factors coul temperament, person modified by environn from a deprived backs is likely to be in a le career or initiating a b successfully in the op times of economic rec ment are likely to be l of parenting and of so Similarly, individual sonality could facilitate and encourage or imp never so simple. Whil may depress intellectua (Heber, 1968; Jensen, much of that poor perf how much to the de always the dilemma whe in children from multip (1982) in discussing or height re-emphasize th environmental factors. predictable individual di exposed to similar env vironmental factors w. differences in average he in different environments

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dge (1982) ion are not wever, our ransmission to a lesser impressive generation deprivation smission of ver, certain particularly is probably idequacy of skills. There on' category uity in the 50 per cent. Genetic versus environmental influences There is a continuing debate about the relative importance of genetic and environmental factors and their interaction. Genetic factors could bring about their effects through temperament, personality and intelligence and may be modified by environmental influences. For instance, a child from a deprived background with relatively poor intelligence is likely to be in a less favourable position for planning a career or initiating a business venture, or even for competing successfully in the open employment market, especially in times of economic recession. The effects of genetic endowment are likely to be hampered or facilitated by the quality of parenting and of social stimulation (Waddington, 1966). Similarly, individual differences in temperament or personality could facilitate or reduce interpersonal relationships and encourage or impede job prospects. Yet matters are never so simple. While marked environmental deprivation may depress intellectual performance to a significant extent (Heber, 1968; Jensen, 1977), it is not easy to establish how much of that poor performance is due to genetic factors and how much to the deprived family environment. This is always the dilemma when trying to explain poor performance in children from multiply deprived homes. Brown and Madge (1982) in discussing one discrete physical variable such as height re-emphasize the distinction between genetic and environmental factors. Whereas the former gives rise to predictable individual differences in physical height in boys exposed to similar environmental circumstances, it is environmental factors which are mainly responsible for differences in average height between groups of boys living

in different environments. In our analysis, the question arose whether the poor ability of Red Spots from deprived homes was due to adverse environmental influence or to the poorer intelligence of their parents. Unfortunately it was not possible to check this, since IQ data on parents of the family of origin was not available. However, it was possible to check in relation to parental ability and deprivation in the family of formation. The measured vocabulary ability of both mother and father was averaged then expressed according to the dichotomy: quotient of 100 and above versus 99 and below. Analysis of variance was then undertaken. The findings revealed that

both family deprivation and parental intellectual ability had significant independent effects. The most deprived children in Generation III (whose parents had an average quotient below 100) had a mean score below the non-deprived (in terms of environment and parental ability) of:

19 points in relation to non-verbal ability;

24 points in relation to vocabulary ability;

24 points in relation to reading ability.

Our data, therefore, indicate the importance both of genetic endowment and environment during the life cycle. They suggest that non-deprived environments allow genetically determined potential to develop, since children coming from parental backgrounds of similar intellectual potential show considerable discrepancies on mean scores according

to the degree of family deprivation.

Our method of selection of groups allowed us to draw conclusions about genetic and environmental factors in relation to growth. As there were no differences in birthweight between our groups we could only conclude that the demonstrated differences in the pre-school and school years had a postnatal environmental basis. While differences in physical development within groups are likely to be due to genetic factors, the differences between groups are mainly determined by environmental factors. We have also to allow for the possibility of interaction between genetic factors and environmental deprivation.

There is suggestive evidence of the importance of genetic factors in personality and temperament (Rutter and Madge, 1976; Torgersen and Kringlen, 1978). It is generally held that what is transmitted is a genetic predisposition to behaviour (genotype), and, for the behaviour to become overt (phenotype), that predisposition needs to interact with

environmental influences.

What contribution does our research make to this issue? Antisocial behaviour constitutes the only behavioural characteristic on which there were substantial differences between the non-deprived and deprived groups, both in the case of the Red Spots and their children - especially among boys. Among the Red Spots, measures of temperament obtained from their teachers proved to be helpful predictors of later

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his issue? al characbetween e case of ong boys. obtained criminality. Among the children of the Red Spots moderate differences were seen between the groups on the temperamental qualities of 'activity' and 'mood'. In the prediction of criminality we noted that only when measures representing intelligence and temperament were added to the set of family and social variables used was a substantial proportion of the variance accounted for. This suggested a small, but important, genetic component in the causation of criminality. We also found a modest relationship between clinical ratings of the personality of parents and criminality in their male Red Spot offspring, both as juveniles and adults. Yet the evidence in support of a genetic basis to criminality is modest (Bohman, 1978).

On the other hand, psychological theory and research provides evidence about the fundamental importance of environmental influences. These are of many kinds: childrearing practices; influence of other adults in the environment (such as relatives, teachers, neighbours); socioeconomic factors, such as poor housing, poverty, unemployment and their repercussions. Coffield et al. (1981), after turning their microscope on problem families, offered the notion of a dense network of interconnecting socio-cultural factors. Our findings provide confirmation of the impact of this complex network on multiply deprived families.

Economic deprivation and its effects

Some authorities consider the quality of family life to be of greater importance than material welfare. Dependence on social services implies that a family will be on a limited budget with poor quality of consumer goods and clothing, which may give rise to crises of despair in parents (Brown and Madge, 1982). These problems have as much to do with the quality of material circumstances as with the quantity of material provision, although both may differ vastly from those of the rest of society (Coates and Silburn 1970; Coffield, 1981). Such depriving circumstances may lead to anxiety about money, a sense of entrapment with little hope of improvement and a family atmosphere of despair. This is particularly likely in multiple deprivation involving social dependence. It can be appreciated how, when she is incapable of making ends meet, it is difficult for the mother to give her undivided attention to planning the care of home

and children. Quarrels over debts may give rise to strained marital relationships. The children are likely to be living in a shabby home, often wearing outgrown clothes and con-

sequently may develop a deep sense of humiliation.

Elder (1973) examined the ways in which catastrophic economic deprivation affects the family and advanced theories to explain the links. These concern the processes and mechanisms by which social changes influence behaviour. They suggest that economic deprivation gives rise to marital strains and, in due course, to an emotional estrangement of the family from the father. The mother may seek work but, in any case, the practical utility of her domestic role may affect the balance of power in the marriage. She may assume a central role in the family, and this is reflected in an emphasis on domestic socialization of daughters and lack of parental support for their further education. As a consequence the father's role and position may become reduced as the mother's is increased. In this paradigm, the father loses much of his attractiveness as a social and parental model, and his authority over his children is diminished. Thus we can advance the hypotheses that girls from economically deprived homes:

(a) will identify more strongly with their mothers than their

will have less in the way of academic aspirations or achievement than those non-deprived;

will seek a solution in early cohabitation or marriage.

Equally, boys from deprived homes:

may accept a family leadership role and be motivated to become a competing provider;

(b) will identify more strongly with the peer culture than

with any positive family ideals;

(c) are more likely to be attracted to antisocial behaviour through the diminution of parental authority and restraints.

In many ways, our work supports hypotheses (b) and (c) for both boys and girls. Deprived girls have little in the way of academic achievements and they cohabit or marry

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significantly early. Deprived boys are powerfully attracted to antisocial activities, particularly those from multiply deprived families. Our family data do not provide evidence in support of hypothesis (a), whether for boys or girls.

Different origins and mechanisms for different deficits

So far we have demonstrated that environmental deprivation may give rise to disturbance, but as Rutter (1981b) points out we need to go beyond the general conclusion that bad experiences may have bad effects. We need to search for the mechanisms by which deprived children are predisposed to develop specific types of deficit or disorder. There are some clues from specific events, such as hospital admission. A single hospital admission may give rise to short-term distress and disturbance in younger children, but lasting reactions are unusual (Rutter, 1981b). On the other hand, parental divorce usually follows a prolonged period of marital discord and the adverse psychological consequences appear to have a basis in this rather than in the actual separation (Rutter, 1981b). Nonetheless, there is evidence that the circumstances associated with divorce in themselves constitute additional stress which may precipitate or aggravate emotional difficulties (Hetherington et al., 1978; Wallerstein and Kelly, 1980).

One of the key questions in deprivation research is whether the development of intellectual, scholastic, emotional and behaviour problems in deprived children are the result of the same influences and processes. One other group of workers has addressed this problem (Stevenson and Graham, 1983). They too assert that, among problem families, various types of deprivation tend to be found together and interact significantly but despite a degree of overlap tend to have different effects. They report three major findings: that social and material deprivations are linked to language and developmental delay; that the quality of family relationships also contributes to language delay; and that the quality of family relationships and the presence of external stress account for the development of behaviour and emotional disorders.

For our part, we have identified poor care of child and home as the most powerful predictor of lower intelligence and antisocial behaviour. Two other important predictors proved to be educational handicap and the relative youthfulness of the mother when first marrying or cohabiting. This is doubtless related to the fact that upwardly mobile women tend to postpone childbearing for a number of years. Occupational class also proved a powerful predictor and we believe that, in this circumstance, it reflects a combination of material advantage and stimulation. Two other significant predictors were family size and home ownership. We assume that the effects of marital breakdown and parental illness have mostly been absorbed by the other more sensitive measures of social and family dysfunction.

Life cycle changes and mechanisms

We have demonstrated that life cycle changes of deprivation status in the direction of improvement in one generation were associated with evidence of improved functioning in the next, provided that the deprivation was not severe. This proved true for physical development, intelligence and behaviour.

There was evidence that reduction in severe deprivation when the children were five was associated with better intellectual functioning when the children were 10. However, this improved functioning disappeared by the time they were 15 years old. Changes in deprivation status did not appear to affect physical development, but such changes did have some effects on behaviour and attitude to school.

It is important to try to understand the mechanisms that determine these differences. One plausible explanation would attribute the differences between the groups of children to the changes in family circumstances over their second five years of life. This would give rise to the suggestion that the adverse effects of milder deprivation can be attenuated by reduction in deprivation. However, the earlier adverse malign influences of serious deprivation seem 'robust' in the sense that they appear frequently to give rise to relatively enduring effects.

Another possibility is that the differences between the groups of children are mostly determined by an underlying parental cognitive factor, affecting both the reduction in family deprivation and the performance of their children. For instance, the lessening of deprivation may in part have reflected the greater social competence of intellectually more

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This theory would carry with it the implication that, where deprivation is not severe, the range of parental intellectual ability is wide, thus allowing differences between the groups of children to emerge. However, where deprivation is severe, not only is the range of parental intellectual ability narrow, but the mean level is low, and this hampers the emergence of differences.