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Poverty, Social Depreciation, and Child Development

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POVERTY, SOCIAL DEPRECIATION, AND CHILD DEVELOPMENT[1]

Introduction

There is by now a large literature on the association between poverty, social depreciation, and distortions of child development. This is not to suggest that our understanding is complete nor that the available data are altogether consistent. Nothing could be farther from the truth. However, more is needed than simply the generation of additional empirical studies; lack of conceptual clarity precludes the use of "data" for the resolutions of the apparent contradictions that beset the field. Further to the point, political ideology leads to a refusal to accept certain "facts" and to prefer particular "explanations" for the facts that are accepted as valid.

In this chapter we shall attempt to set forth the alternative ways of viewing the findings that are evident wherever the so-called disadvantaged child has been studied. We shall not undertake an exhaustive review of literature and a point by point contrast of the available studies; reference will be made to comprehensive reviews and to particularly incisive studies and critiques. We hope to stimulate thoughtful consideration of the issues central to the effects of poverty and social depreciation. We make no pretense at neutrality. But we are less concerned with persuading the reader to accept

our view than to make him aware of the reasoning that underlies current viewpoints.

We emphasize, at the outset, what we shall recall at the conclusion: it does not take research to prove that children should not be permitted to go hungry, cold, unloved, and unschooled. Even if these misfortunes had no long-term consequences, the immediate suffering they generate is sufficient to indict any society for tolerating them, especially one so wealthy as our own. It is a political, not a scientific, question as to why we permit such conditions to exist in the face of our announced commitment to human welfare. And it becomes an ethical imperative for the psychiatrist as citizen to use his professional position to reduce this suffering, even as he undertakes studies to better understand those conditions which will permit the optimal development of each child's potential. For, what confronts us is not the (unsolved) problem of what is best, but the unambiguous problem of infants and children who lack the minimum for normal growth. To meet the latter challenge, what is missing is not information but moral commitment.

Methods and Data Interpretation

Social class and ethnic differences in test performance on a wide variety of school-related measures have been reported in many countries during the more than seventy years since psychometric measurement was introduced. In

general, there is a strong correlation between test performance and social class; even with class "controlled," white children score better than black children, urban children than rural children, Northern children than Southern children. Similar findings have been reported in other Western countries when factors such as social class and minority status have been examined. Further, these test differences are not a passing phenomenon of childhood, but are registered in similar fashion when adult populations are compared. The issue is not whether such differences exist; they clearly do, as thousands of empirical studies attest. The important debate concerns the inferences that may reasonably be drawn from these data. But before we turn to that debate, the central concern of this chapter, it is necessary to begin by addressing problems of definition and methodology.

Intelligence Tests

A wide variety of measures has been employed in such studies. One broad category purports to measure "intelligence"; another more modestly acknowledges that it measures "achievement." Although intelligence tests had earlier origins, the basic design for them was provided by Alfred Binet and Theodore Simon who undertook, at the request of French educational authorities, to determine the characteristics that differentiated slow from normal learners. They attempted to sample a wide variety of classroom-related behavior that seemed, on the face of it, to be what most people would

consider intelligent behavior. The extraordinary success of their method led to a reification of the intelligence the test was measuring. To both the lay public and most professional psychologists, conventional belief holds that intelligence is something the child is "born with" in contrast to achievement that is taken to represent the accomplishment resulting from the application of that intelligence. It seems rarely to have troubled theorists that there is no way of measuring this intelligence at birth because of the limited behavioral repertoire of the newborn; indeed, there is no obvious behavioral difference between the anencephalic infant and the normal neonate. The lack of correlation between infant developmental tests (which attempt to carry the same principles of testing into infancy) and the standard tests for childhood intelligence creates additional difficulties for the proposition. The first age at which we can measure differences that correlate respectably with later childhood performance is in the third year of life. Surely, by then, the child has been influenced significantly by experience. If developmental tests truly measure infant intelligence, then we must assume that infants differ relatively little from each other; indeed, the very same groups of black and white infants who will differ significantly when they are three show no significant differences when they are forty weeks of age.

Alternatively, we can conclude that we have no way of measuring what may be "real" differences in intelligence before the third year but must assume their existence. Parenthetically, it should be noted that these

statements do not apply to neurologically impaired infants whose markedly delayed development does foreshadow later test deficiency. But these are only a very small fraction of the total population and display observable indices of central nervous system damage. The difficulty in assuming that there are innate differences, even if we are not clever enough to measure them, is that by the time differences become ascertainable, the child has been exposed to some years of differential experience within the family and the community. We are not arguing that there are no biological differences underlying variations in intelligent behavior but rather pointing to the great difficulty of disentangling genetic from experiential factors when the differences we wish to understand occur precisely in the context of differential experience. The problem is quite different when we examine individual differences in test behavior within a population of children of nearly identical social class. But that is another matter.

It is an ironic footnote to history, if not a depressing one, that Binet himself wrote in 1911:

> . . . Some recent philosophers appear to have given their consent to the deplorable verdict that the intelligence of the individual is a fixed quantity . . . we must protest and act against this brutal pessimism ... a child's mind is like a field for which an expert farmer has advised a change in the method of cultivation, with the result that in place of desert land, we now have a harvest. It is in this particular sense, the one which is significant, that we say that the intelligence of children may be increased. One increases that which constitutes the intelligence of the school child; namely, the capacity to learn, to improve with instruction . . . *[Les idées*

moderne sur les enfants]

A second try at teasing out experiential effects has been the attempt to design "culture-free" or "culture-fair" tests. Here, the test constructor endeavors to exclude items that cannot be answered by the child simply because he has had no exposure to them just as one would draw no conclusions from the failure of a child who speaks English to answer questions in French. As an example, one subtest of intelligence is the ability to reason by analogy. The child is asked to answer a question such as: a book is to an author as a symphony is to a ____? He is then offered five choices, one of which is the word composer. The same question can be rephrased: a hammer is to a carpenter as a wrench is to a ____? This time the set of alternatives includes the word plumber. When the results from these two questions are compared in children of two social classes, the gap between lower-and middle-class children is less on the second question than it is on the first because of the limited likelihood that a lower-class child will have heard such words as symphony and composer. The first form of the question requires a larger vocabulary as well as reasoning. The difficulty in this test design lies in our incomplete knowledge of the differences in life experience and of the extent to which such factors as vocabulary, examination "set," and motivation rather than intelligence are influencing performance. Lower-class children are less familiar with academic "games" and less concerned with doing well on them. All too often, the child responds so as to terminate the testing

experience rather than to do well. Let us cite one clinical experience. In the course of carrying out comparative testing in two schools of different social class, we were struck by the frequency of calls from anguished middle-class parents whose children came home to report that they had tested poorly in school; we had not a single call of complaint from the parents of lower-class children. Whether this was because the lower-class child did not trouble to tell his parents about testing or whether his parents were less concerned with what he did report, we cannot say. What remains important is the difference in how salient this behavior was in the context of the family. In general, culture-free or culture-fair tests show fewer differences between social classes, but they do not obliterate them. One can either conclude that the tests are not as culture fair as they profess to be or that class differences remain even when culture is "factored out" of the test situation.

Achievement Tests

In contrast, achievement tests are less concerned with the differentiation of the innate from the acquired, but the contention is that they measure variations in the skills the child possesses. Problems in test construction in this area are of another order. The prototype is the reading test. The child is given a passage of variable length, of more or less complex syntax, and of restricted or varied vocabulary. He is then asked to answer questions based on the passage. One immediate problem is whether the

answers to the questions require comprehension of the paragraph or can be deduced from the questions themselves. One of our colleagues (Arthur Applebee) has demonstrated that a respectable performance can be attained by children and adults given the questions without the preceding paragraph; the questions and multiple-choice answers are sufficiently interrelated that an intelligent person can deduce the probable answer from the nature of the question. A second problem in reading tests is that they depend, to a degree greater than recognized, on the language skills the child possesses *before* he begins to learn to read. The magnitude of the task he faces depends on the discrepancy between his native dialect and the standard language that comprises the reading test. For example, Mexican Indian children who are required to learn to read in Spanish at the same time that they are learning Spanish do poorly. If they are first taught to read from primers in the native language, they can then transfer their reading skills more readily to tests in Spanish. Nonetheless, if one asks whether a child can read proficiently in the language that is taken as the standard, the fact remains that he performs less well than does his advantaged age-mate. What differs is the explanation that one would offer for this deficit and the remedies that one would propose to diminish the deficit.

Differences, Real or Spurious?

In a variety of ways, we have been asking whether the manifest

differences in scores are “real” or “spurious.” That is, to what extent are they artifacts of test administration and/or construction? There are inconsistencies in the literature. Some evidence suggests that the race of the tester may have differential effects on the performance of black subjects; that is, black college students, given a group test by a white test administrator, will perform less well than if the examiner is black. These effects have been more difficult to detect in younger subjects; in some studies, they have been trivial. Other test conditions clearly do influence performance. Preschool children of lower social class will score better on such tests, as the Binet, if given experience with items similar to those used in the test itself; if encouraged to try when they might have simply given up; if required not to answer immediately but to think before replying; and if supported by a warm and sympathetic tester. Obviously, there are also idiosyncratic, individual factors that will depress performance: physical illness, excessive anxiety, distracting noise and other stimuli, and the like. Depending upon test demands, these effects can vary considerably. In a study of our own, black children were given an auditory-discrimination test. To our surprise, their performance was as poor as that of hard-of-hearing children, although they had normal audiograms! In the test employed, the Wepman Auditory Discrimination test, the child is asked to respond “same” or “different” to a pair of words that are either identical or differ in a single vowel or consonant. It occurred to us that either the children were simply not attending to the task or were so

uninterested in “doing well” on the test that they gave any answer that would get it over with. When the study was repeated with an alternate form of the Wepman and with the examiner using sternness or encouragement (depending on her assessment of what would be appropriate for the individual child) there was a striking reduction in the number of “erroneous” responses. Thus, we were able to demonstrate that the children had the “ability” to respond correctly under *altered test conditions;* yet we still must recognize that under standard conditions, the performance was subpar. Our assessment of a very large literature on this question is that, although conditions of test administration do account for some of the social-class difference, they do not account for all of it.

The matter of test construction is more complex. We have all seen young adults who have failed arithmetic, but who can lay bets, calculate odds, and play crap with much greater dexterity and rapidity than many of us who have done well in formal courses in probability statistics. In nonliterate cultures, adults may be able to tally large assemblies of familiar objects with impressive speed despite limited ability to count novel objects. Indeed, in some cultures, the system of numeration varies with the class of object to be counted. The same Guatemalan Indian child who is able to weave intricate geometric designs on a rug may be unable to match solid forms on a Seguin formboard. As a final example, the same person who fails to solve a Porteus maze may be able to track a wild animal through the bush or find his way

from one distant location to another.

Differences or Deficits?

The question we are now asking is whether we are measuring differences (just as some people have blue eyes and others brown) or deficits (as some see and others are blind). This becomes peculiarly germane in the assessment of linguistic competence. A lower-class, preschool child may demonstrate developmental immaturity on a test of syntax in standard English when compared with the competence of his middle-class age mate. That "deficiency" is important if it is going to be necessary for him to communicate to others in standard English. But the implications are rather different if it can be demonstrated that he has syntactical equivalents in his own dialect. That is, one would anticipate restriction in the finer discriminations of thought itself (if thought is shaped by language) when linguistic competence is deficient. If, on the other hand, the language possessed by the child is just as powerful though different, then there should be no impairment in thinking. There is a growing body of evidence that there are different but equivalent grammatical forms in black English. What appears to be a deficit in linguistic competence is a deficit in standard English but not in language competence.

Thus, quite apart from the debate about the "innateness" of intelligence,

there are problems inherent in the attempt to measure intelligence by particular problem-solving skills. Most psychologists believe that there is a general intelligence, the so-called g factor; many also believe that there are specific abilities that correlate only moderately with this general factor; fewer today would argue for a series of discrete abilities that show little intercorrelation. One does not have to believe that a Mozart is solely the product of his environment to acknowledge that he could not have written symphonies had he been born into a society without the musical heritage in which he was imbedded. Under such circumstances, would Mozart still have had the same musical genius even if it were unable to be developed or would the precursors of that genius simply have atrophied? If a society provides the opportunity to refine hunting skills but not mathematical skills, can some quantitative measurement of the skills the individual has given us a clue to what he might have shown in some other area? In the instances chosen, probably not, since one might expect a low order of correlation between hunting and mathematical abilities. Does solving the problems of survival in an inhospitable arctic environment predict how well an Eskimo might have done in the differential calculus? Closer to home, do the skills acquired for survival on the street in the slums of the inner city give us any measure of what that child might have done in academic subjects had he been born into a middle-class environment? The answer is unknown. The point of this exercise is to caution against the assumption that what is being measured in standard

tests of intelligence is adequate to comprehend all of what falls under the rubric of intelligent or effective adaptive behavior. The only thing that I.Q. tests predict reasonably well is success in school; success in school, however, is not a very effective predictor of success in vocational tasks, except insofar as it provides a credential necessary for entrance into a particular occupation.

Population Differences Versus Individual Differences

If, for the moment, we acknowledge that test differences on measured performance are real in the context of this society, it is necessary to emphasize one important caution. Such differences are differences between population means. The distributions for the two populations (whether they be black and white or rich and poor) show a very considerable overlap. Thus, a substantial number of the disadvantaged population will display performances that exceed the mean of the advantaged population. In short, whatever statements may be warranted in population comparisons, they do *not* justify any *a priori* conclusions about individuals. The fact that a child performs poorly on a given test may be a moderately accurate predictor of his performance in a classroom. The fact that a child is black or that a child is poor, however, does not warrant a prediction as to whether his performance is above or below the norm. Unhappily, psychological stereotyping is such that the demographic characteristic is often taken as though it were a reasonable basis for prediction; the child may be assigned to one or another

classroom as though his performance had actually been measured. Such evidence as we have suggests that assignment to a slow moving class and expectation by a teacher that a child will be a slow learner are likely to lead him to perform as the relevant social group expects him to. When he fails to learn, this may be taken as support for the original prediction; there will be a cumulative effect over time that will tend to further separate those assigned to better and worse classes.

Permanent or Reversible?

Let us suppose that we are dealing with deficits and that they are real. We then must consider whether they are permanent or reversible. Obviously, even temporary deficits are not desirable; they become far more ominous if they are irreversible. A scientific decision on this question must be taken with full foreknowledge of its consequences. Resources being finite, no one will support their expenditure to treat the untreatable. Unfortunately, moreover, the judgment that a deficit is irreversible and the consequent failure to try to remedy it will, ipso facto, guarantee that it will be permanent. We would therefore contend that such a conclusion should be accepted only on the basis of solid evidence lest we cripple children permanently by the very formulation of a prognosis.

Educational theorists have long held that the younger the child, the

more malleable he is and that the impact of early influences on character and intelligence is likely to be far more enduring than those of later years. This has been reinforced by metaphors drawn from embryology.' For example, there is a short interval in embryologic life when the extrusion of the optic cup induces in the overlying ectoderm the formation of a crystalline lens. Exposure of ectoderm to the optic cup, earlier or later than that critical period, shows no such induction. Animal behaviorists suggested an analogue to the phenomenon of this critical period when ethologists reported "imprinting." In certain birds and in certain ungulates, the newborn will become attached to an artificial object that it will follow as it would have otherwise followed its mother. Moreover, the consequence of the distortion in social development induced by this pattern will lead to difficulties in the display of species appropriate sexual behavior when the bird is an adult. However, these phenomena are restricted to a limited number of species; in general, the longer the period of dependency of the young on the adult of 'the species, the greater the time periods in which such crucial learning can occur and the more modifiable it is by subsequent experience.

It is more usual to find references in current literature to "sensitive periods" than to critical periods. This change in terminology reflects a growing recognition that there may be developmental epochs in which a skill is most rapidly and efficiently acquired, but that the time limits are greater and the differences in efficiency of acquisition are relative rather than

absolute. Moreover, many of the studies that emphasize the critical or sensitive period fail to take into account the relationship between the permanence of the effect and the organism's subsequent life experience. For example, Harry Harlow's motherless monkeys were not only motherless but also were confined to an environment devoid of peers or other adults. The clinical psychiatric literature, much influenced by these animal models, has stressed the permanence of the traumatic effects of early deprivation. What has been overlooked in these studies has been the persistence of the deprivation. There are growing numbers of case reports of youngsters rescued from early deprivation and placed in good homes under expert care; such youngsters function remarkably well (i.e., in relatively normal fashion) even though we have no way of determining whether their performance might have been even better, had they not suffered the early misfortune. The most remarkable cases reported are the children described a quarter of a century ago by Anna Freud, children who had survived the horrors of the concentration camp at Theresienstadt. Although detailed information obviously could not be obtained, these children had experienced inadequate, inconsistent, and minimal mothering; what was most striking about them was their fierce loyalty to one another. Under the expert care of Miss Freud's workers in a group home, these children were successfully placed in foster homes over the next several years. Unpublished information on them as young adults provides remarkable testimony to the resilience of the human

spirit—and to the skills and compassion of the Hampstead Group. As young adults, all but one are relatively well-adjusted members of society and that one functions at a better than marginal level!

Our main thrust in this section has been to emphasize the unjustifiability of conclusions that either intelligence or achievement cannot be modified by suitable therapeutic intervention even in the later years of childhood and adolescence. Military experience with marginal draftees in World War II indicates what can be done to improve the performance of young adults when a real effort is made. We do not suggest that all deficits are correctable; we do maintain that it would be premature as well as unethical to conclude that educational deficits are irreversible until the best effort we are capable of has been directed to their correction. All too often, brief trials of inadequate therapies are offered to socially handicapped children; results are meager and frequently transient; instead of concluding that we have failed them, as we have, we judge the children to be failures.

Do the Differences Have Consequences?

The final way of viewing the test discrepancies, whether they be differences or deficits, permanent or reversible, is to ask whether they are "consequential." That is, what do they portend for current as well as later levels of behavioral function? We do know that I.Q. scores correlate with

school grades at about a value of 0.6; in other words, I.Q. level "accounts" for about 36 percent of the variance in school grades. Clearly, even this leaves the greatest amount of the variance unexplained. The question remains: how much of the apparent correlation flows from the "I.Q." and how much from the fact that the same class and ethnic factors continue to operate on the child so as to maintain the relationship between I.Q. and grades? We suggest that the same cluster of elements that operate within the context of his family to bring the child to school with a borderline I.Q. acts to determine the school he goes to, the way he is treated at school, the way his family views his school work, the kind of experience he has after school, and the expectations others set for him. Thus, the apparent consistency of performance is not "intrinsic" to the child's nature but rather results from the set of external variables that continue to operate upon him. Furthermore, the association between dropping out of school and subsequent limited occupational attainment may reflect the lack of job opportunities as much as the lack of occupational skills. Black, high-school graduates are more likely to be unemployed than white, high-school graduates with similar academic records. The same applies, with even greater force, to white and black high-school dropouts. Since the high-school dropout is not able to demonstrate such skills as he may have in jobs where a diploma is a requirement, we do not know what that youngster might have done had the job been offered him. Even if we suppose, as is likely, that his job performance might not have been as good as that of a high-school

graduate, his poorer performance may reflect inadequate work habits, motivational factors, and personal deportment rather than intellectual or academic deficits. The point is that each of us is imbedded in a sociocultural matrix that imposes upon us a continuity of behavior that may be mistaken for intrinsic characteristics when, in fact, the key determinants are external.

We have stressed, throughout, alternative ways of viewing the abundant epidemiologic data that reveal group differences. Whatever the extent to which they are best accounted for in other ways than the conventional, the depressing facts remain: socially depreciated and financially impoverished children perform, in and out of school, at levels below the norms attained by their advantaged age mates. How is this to be explained?

Explanatory Hypothesis

The explanations that have been put forth to account for these differences fall into three broad categories: genetic, biological insult, and sociocultural "deprivation." Though these explanatory hypotheses are 'frequently stated as though they were mutually exclusive, it is clear that interactional effects not only can occur but often are decisive. For example, the Kauai Study demonstrated that the childhood morbidity, resulting from similar pregnancy complications, was far greater among children of lower social class than those of middle class. That is, not only was the likelihood of

prematurity greater among lower-class births but the likelihood that the premature child would show intellectual and academic defects was far greater when those who were premature and differed in class were compared to one another. Similarly, the child who is malnourished is more likely at the same time to have parents with little education, poor health care, and so on. Further, one would expect the child, who for genetic reasons has a borderline intellectual potential, to test in the mentally defective range if he is simultaneously exposed to biological or cultural disadvantage. To put this crudely, if cultural disadvantage lowers I.Q. attainment by twenty points, the child who might have had the potential for an I.Q. of one hundred and twenty will function at a test quotient of one hundred (or within the normal range); if he might have attained ninety, he will attain seventy and thus will function at a mildly retarded level. It is, of course, not necessarily true that the absolute depression of potential score would be identical in the two instances, but the use of simplified assumptions serves to illustrate the point.

Genetic Theories

The notion that social class is explained by heredity goes back at least as far as the Greeks. In Plato's *Republic,* Socrates sets forth the myth that God has framed men differently: of gold for those with the power to command, of silver for those who are auxiliaries, and of brass and iron for those who are to be husbandmen and craftsmen. He adds that the species will be preserved in

the children and that meddlesome interchange between the three classes would be mischievous. Thomas Malthus in the eighteenth century was not only concerned with the overgrowth of the population relative to the supply of food but with the large size of the families who were poor, a fact that he took as auguring deterioration of the quality of the species. In the nineteenth century Herbert Spencer was concerned that charitable measures to mitigate the struggle for survival would lead to the preservation of the imbecile at the expense of the wise. The eugenics movement, which began in America at the turn of the twentieth century, advised measures to sterilize the poor and encourage the rich to have larger families in order to avoid an otherwise inevitable decline in biological quality because of differential birthrates. All took for granted that success in society was a measure of biological superiority, a comfortable assumption for those who had it made, much akin to fundamentalist religious beliefs that worldly acquisition reflects God's rewards for good works.

The same concerns are reflected in contemporary debate on the subject. None of the handwringers have been troubled to explain why there has not been a decline in average I.Q. despite the long existence of this differential in the birthrate. Most of the arguments have been innocent of any consideration of population genetics. For optimal adaptation to occur in a population, a wide range of individual variance has to be maintained. Lionel Penrose has shown that in order to maintain an average population I.Q., inheritance must

be derived from a wide range of individual genotypes. Genetic contributions from those functioning below average as well as those functioning at a superior level stabilize average function over time. Moreover, eugenic approaches assume we know how to identify optimal characteristics in order to breed supermen. Given the likelihood of polygenetic inheritance for intelligence, as well as the probability that individual components of intelligence may be linked to other biologic attributes that may not be desirable, artificial imposition of mating patterns could lead to disastrous results. An example from agronomy may clarify the point. Strains of wheat have been carefully selected for optimal crop production under current environmental circumstances, which include reliance on petrochemical fertilizers. The introduction of a new pathogen or a change in climatic conditions or unavailability of oil can have drastic effects on the yield from a strain of wheat with little genetic variance. Such events have already occurred. Recently, the National Academy of Sciences has urged the necessity of maintaining, in a central repository, a "bank" of seed of the widest variety in order that we may be able to reintroduce strains resistant to some new hazard, should it appear. By analogy, were we to be able to select those with the right to reproduce in order to encourage the flourishing of some ideal type, the restricted variance would put this new "race" in grave danger of a biological calamity from some unanticipated environmental change. Diversity insures survival, just as variation serves to guarantee the uniqueness of each

human being.

The development in the modern state of the belief that there is a national responsibility to mitigate the extremes of poverty has resulted in more visible “welfare” costs. The advocates of family planning, long assailed for their efforts to make contraception available to the poor, suddenly found new allies. Those opposed to welfare costs became convinced that reduction in family size might diminish the drain on the tax dollar. During the 1950s and 1960s, there were openly racist arguments for making contraception imperative or sterilization mandatory as a condition for obtaining welfare “benefits.” Some welfare-rights organizations and some black nationalist groups began to oppose family-planning clinics as instruments of genocide.

This is to confuse the motivation behind a program with its potential value for the population at whom it is directed. Whether or not covert racism is behind the push for family planning in poor communities, family planning itself increases the options available to minority-group families. Obstetrical evidence indicates that spacing of pregnancies diminishes the hazards to both mother and child. The need to divide meager resources among many children increases the burdens on the whole family. Mothers overwhelmed by too many young children can hardly be expected to function at their best. And the mother condemned to have child after child because contraceptives are unavailable to her is denied her human right to choice. The availability of

contraception and therapeutic abortion—as a voluntary decision of each family—enhances the freedom of that family. The ecological arguments in favor of population limitation are, in fact, more appropriately directed at the haves than the have-nots. Our major environmental problem is not food supply but the consumption of energy, the production of wastes, and so on, to which the affluent contribute in greater proportion than the deprived, not by design but because of the availability of resources. On a worldwide scale it is the developed nations whose population provides the greatest risks to world ecology rather than the developing or the quiescent.

None of this denies the existence of a genetic basis for elements of that complex of behavior that we regard as intelligence. What we question is the ready assumption that phenotypical population differences reflect genotypes. Since one never proves the negative hypothesis, it is of course possible that there *may* be a difference in gene distribution related to intelligence among ethnic groups. To suggest that this should be a major focus of research is evil on two grounds. First, we simply do not have the methodology to separate nature from nurture in assessing *social* behavior. Second, it lends credence to prevailing bigotry. As noted earlier, even if we accept present test data as though they measured genotypes, the overlap among populations is so considerable that the variation is more impressive than the differences between the means. Thus, if the argument is raised that we should be concerned to identify characteristics of children that make them better able

to profit from particular modes of instruction, we still face the necessity of evaluating each child *individually* to determine his suitability for a certain program rather than to classify the child by class or race. Given the intertwining of test results and prior experience, test classification itself is suspect because test-based segregation is likely to increase divergences rather than to ameliorate them.

Biologic Insult

The disadvantage to which the lower-class child is subject begins, not only before birth but before conception. Intergenerational effects of malnutrition have been demonstrated in animal experiments and are strongly supported by human data. One clear consequence of malnutrition in childhood is the stunting of growth. Short mothers (less than five feet one inch) have been shown to have higher rates of fetal mortality, delivery complications, prematurity, and perinatal deaths. In part this appears related to a difference in pelvic outlet and in part to reduced reproductive efficiency. In studies with rodents, mothers starved as infants show reduced reproductive efficiency. If they, in addition, are malnourished during pregnancy, their offspring are twice as vulnerable.

Numerous studies have demonstrated that complications of pregnancy and parturition are greater among women of lower social class, for reasons

related to poor nutrition and poor health care. Pasamanick and his coworkers have introduced the concept of a "continuum of reproductive casualty." Abortions and stillbirths are taken to represent the extreme result of reproductive failure. The less severely impaired child will survive, but it may have epilepsy, cerebral palsy, mental retardation, and/or behavior disorders. Premature infants (below fifteen hundred grams) have been shown to fare poorly in elementary school in contrast to their well-born peers. As noted earlier, the child born of a complicated pregnancy is more likely to demonstrate permanent sequelae if he is raised in a lower-class home, thus demonstrating an interactional effect.

The major spurt in human brain growth extends from mid-pregnancy well into the second postnatal year. Early, there is multiplication of neuronal cell number, later glial multiplication and continuing myelination and proliferation of dendritic connections. Severe malnutrition during the last half of pregnancy or in the first year of life has been shown to be associated with reduction in brain cell number and with retarded intellectual performance in those children who survive.' Less severe malnutrition is probably associated with less dramatic but nonetheless demonstrable academic retardation. In the studies in Jamaica by Hertzig and coworkers, index cases were chosen by identifying children who had been hospitalized in early childhood for severe malnutrition. At school age these youngsters were contrasted with sibling controls and classroom controls. The children with known, severe

malnutrition performed less well than their siblings, thus indicating that the decrement in performance could not be explained simply by the culture of the home. On the other hand, the sibling control group remained inferior to the classroom controls. It is likely that the siblings of children who had experienced severe and obvious malnutrition underwent chronic sub-nutrition, although without the acute episodes. They may also have experienced home environments less conducive to learning and thus exhibited the product of both biological and psychological malnutrition.

Malnutrition, through its depression of immunologic defense mechanisms, also renders the infant and child more vulnerable to infection. Infection leads to reduced dietary intake at the very time that metabolic demand is increased. Thus, the impact of malnutrition is exacerbated. Indeed, cultural practices to reduce child feeding in the presence of infection may lead to a further decrease in intake when additional nourishment is what the child requires.

There is growing evidence that malnutrition in itself leads to central nervous system damage. Moreover, malnutrition leads to apathy, unresponsiveness to the environment and, thus, loss of time and opportunity for learning, particularly when associated with hospitalization. Hospitalization itself, though it may be necessary as a life-saving measure, removes the child from a familiar environment and may induce further

apathy. This interlocking sequence of biological and behavioral consequences may have its impact heightened if it occurs during a sensitive period for the acquisition of particular developmental skills. It is to engage in scholastic argument to insist on the priority of one or another factor when they occur concurrently and when they interact. It is the *complex* of malnutrition, infection, and social disadvantage that combines to produce children and adolescents markedly impaired in their adaptive capacities.

In a letter to the *Lancet* on January 6, 1973, John Dobbing wrote:

> On the available evidence, may we now beg pediatricians, and more especially politicians, to accept the whole of the human brain growth spurt? From mid-pregnancy well into the second post-natal year, is a period, not only of brain vulnerability, but of opportunity actively to promote the proper growth of the human brain, by providing the best environmental conditions.

There is an additional class of biological insults to the brain that merits close attention: environmental toxins. Lead poisoning serves as a prototype. Epidemiologic studies reveal differential social-class distribution. One major source of this difference is the frequency with which lead-containing, interior paints are found in dilapidated housing in the inner city; atmospheric concentrations of lead vary in different sections of the city because of traffic patterns and industrial pollution. The encephalopathy that results from acute exposure is well recognized as a major public-health hazard. More recently, there have been suggestions that continuing exposure to dosages that do not

produce acute symptoms may nonetheless lead to chronic brain syndromes with manifestations such as hyperkinesis, learning disorder, and behavior problems. Housing conditions, disorganized family life, and lack of adequate supervision of young children result in an excess of cases of accidental poisoning from ingestion of other toxic substances. Moreover, the same factors plus traffic conditions in the inner city put these children at greater risk of brain trauma from automobile and other accidents. Finally, the limited availability of health care and its inadequate quality subject the lower-class child to the persistence of uncorrected health deficits that impair his adaptation.

Emphasis on biologic insult to the brain does not arouse the political passions that are stirred by genetic hypotheses; yet, it can lead to similar hopelessness about efforts to help children already damaged. While we lack therapies to restore brain integrity, sequelae can be minimized by vigorous treatment and by the provision of adequate rehabilitative measures. There remains a wide discrepancy between what we know how to do and what we actually do do for the endangered children. Handicapped children are too often condemned to levels of social function far below their capabilities because of social stigma and lack of suitable occupational opportunities (sheltered workshops and the like).

Cultural Factors

We have thus far employed “class” and “ethnicity” as if they were almost interchangeable terms. This becomes an inevitable shorthand because minority groups are disproportionately represented among the lower social classes. When attempts are made to “match” class among majority and minority groups, minority-group children continue to test at a lower level. In part, this reflects the imprecision of matching for class. Families at the same income level may not be in the same position as consumers. Housing segregation leads to higher rents for those forced to live in ghettos. Prices for staple items are not equivalent throughout the city. Supermarkets and drugstores have been shown to charge higher prices in the inner city because they have a captive population, which cannot travel as readily for shopping. Thus, disposable income is not the same for white and black families with identical earnings.

Our knowledge of the interrelationship between child-rearing practices and child development remains fragmentary. Nonetheless, there are a large number of studies that indicate that lower-class families are more likely to rely on nonverbal than verbal cues, to transmit concrete rather than abstract problem-solving modes, and to be strict rather than permissive. This is thought to result in a set of attributes that are dysfunctional in school.

Contrariwise, the middle-class child is more likely to have been exposed to books, to sophisticated language, and to games with parents and siblings

that encourage attention, reflectiveness rather than impulsiveness, and an awareness of language nuances. Moreover, the middle-class child will have been prepared to take school seriously (perhaps even too seriously) as a determinant of his occupational mobility.

There are important differences in family structure between blacks and whites. In part, this stems from historical roots. Slave owners deliberately maintained matriarchal patterns by using the male as a salable commodity. Welfare regulations tend to reinforce the same structure by making support more available when there is no father in the household. Given the lack of opportunity for employment for the black male, the family may be better off financially if he is out of the home and unemployed rather than home and unemployed. The black family, more often than the white, is an extended rather than a nuclear family, with grandmothers, collateral relatives, and even strangers providing care and support at times of family stress. Black mothers express the same hopes for their children in education and occupation as do middle-class mothers; however, the same mother who expresses the wish to see her son go on to college and become a professional conveys to him the futility of her hopes because of her own long experience with the discrepancy between dream and reality. The child's own experience reinforces this sense of futility when he or she observes how often children in the neighborhood drop out of school and are locked into the ranks of the uneducated and the unemployed.

All of this has been condensed into the slogan: “the culture of poverty,” an expression that implies that the poor remain poor because of the social customs that stabilize poverty-producing behavior. This runs directly contrary to G. B. Shaw’s dictum that what the poor lack is money. The concept of the culture of poverty permits policy makers, teachers, and other professionals to conclude that no matter what is done to employ and educate the poor, they will remain poor. But the poor exist in a structured society that requires poverty as a condition for maintaining its differential wage structure and institutionalizes stereotypes of behavior to guarantee the existence of this under class. It has been suggested, for example, that schools are not failing; to the contrary, they are doing what they have been designed to do: namely, to produce that variety of competence and incompetence which will provide occupants for the occupational niches that society requires.

Further, the emotional response of society to crime results in a disproportionate emphasis on the amount and kind of social deviance among the poor. Crimes like income-tax evasion, stock manipulation, and embezzlement arouse far less public condemnation than crimes against property and person. We do not suggest that either type of crime is trivial; rather, we take issue with the stereotyping of lower class morality. Public morality *is* a serious issue throughout this country at a time when railroad stockholders, corporation executives, federal judges, and elected officials including the president himself do not hesitate to enrich themselves at the

expense of the public. The tax structure of our society has built into it major inequities in the burden exacted from below-median and above-median income earners.

The developmental failure of poor and black children is exacerbated at adolescence. It is most evident in the high rates of school casualties at this period. During puberty the child is beginning to evaluate his environment and to develop ways of thinking about and interacting with it. Given his limited choices, the lower-class youngster has difficulty in establishing effective modes of behavior that are both satisfying and accepted by the mores of the majority culture. One of the few pathways to personal success is through sports. This has been true for successive waves of immigrants for the last century. For the vast majority, this is not an available track; failure is multidimensional with school being pivotal. Resort to personally less-satisfying and, at the same time, socially disruptive kinds of behavior is common as is attested by the population of the jail system where poor minority group members predominate.

The systematic devaluation of the person and the family of the minority-group child operates upon him so as to create a negative self-image; having been pressed to devalue himself, he acts out the stereotype of those expectations. Treated as though he were “stupid”, he acts stupid, that is, he fails to try to learn, he gives the first answer that comes to mind as a way of

avoiding the question rather than thinking about it. He belittles school just as school denigrates him and shifts his investment to those out-of-school activities which offer some promise of success: rage against a hateful environment is transformed into self-hatred. His values become a negative image of the values of the majority culture but, nonetheless, a mirror reflection of them. Unless he is helped to develop a perspective that makes understandable the nature of his circumstances and suggests constructive modes of action to change them, he becomes what he was predicted to be; his behavior provides further "justification" for prevailing beliefs.

The most noteworthy development in grappling with this psychological problem has been the emergence of the concepts subsumed under the term: black nationalism. The positive aspects of black culture and group identity are stressed as the basis for the acquisition of a sense of personal integrity through social action. It is perhaps inevitable that a social movement, emerging to resist white stereotypes about blacks, will result in some stereotyping of whites, most obviously present in the Black Muslim movement. However disagreeable counter-violence may be, the most effective way of dealing with it is by terminating white violence against blacks. More dangerous to the constructive creation of black pride is a too ready identification of black with good, thus constraining the availability of self-criticism. A sociopolitical movement can be subverted from within as well as from without; its slogans can be prated by those more concerned with self-

advantage through political office than with group progress. Black studies can become an effective medium for learning how to read, but rap sessions cannot substitute for learning to read. The technical skills essential for a productive role in contemporary society will more readily be acquired by a student who believes in his people and in himself, but the concentrated, personal effort to master them remains essential. All in all, it is our view that the movement for black pride is one key to reversing the waste of human talent and the loss of human happiness that have been the terrible price of a racist society.

Future Directions

The social disadvantage of poor and minority-group children has been so thoroughly documented that there is no need for further descriptive research. We need to undertake a coordinated program of preventive and remedial measures now. We need prompt action to combat malnutrition—during pregnancy and the early years of life in particular—but throughout childhood and adolescence. We need a system of health care that will ensure delivery of health services to all Americans. First in order of priority would be pregnant women, infants, children, and adolescents. But there is no excuse for inadequate health care for the aged and the adult. Family-income-support programs should assure parents and their children an equal opportunity for lives of dignity. Good foster-care and group-care homes must be available to children whose families are disrupted. Enforcement of existing legislation can

mitigate occupational discrimination if not altogether eliminate it. For these things we may need periodic checks of social indicators to measure how near we are to our goals. But it does not take research to prove that we should move forward. The problem is moral, not scientific.

We are on less certain grounds when we confront the challenge of undoing the effects of early neglect. It is not enough to label an educational program "compensatory" or "enriched." It must be demonstrated that the new program is responsive to the children's needs and, in fact, produces the desired changes in behavior. Here research in child development must play a central role in guiding public policy. What is needed is action research: the assessment of the changes that follow the introduction of experimental programs rather than merely the continued documentation of failures to satisfy traditional standards. We face, however, a major problem in persuading the public to support the long-term investment required.

Typically, educational innovation has consisted in the introduction of a new program, usually underfunded, for a brief period. Even when good results, the changes prove to be transient when the child moves from the experimental into the regular classroom. It is as if we expected a good diet at the age of five to prevent malnutrition at the age of six after dietary supplementation has been discontinued. It is necessary to impress on our national consciousness Jean Piaget's metaphor that cognitive development

depends upon psychological "alimentation" *throughout* the years of childhood and adolescence. Once this principle is accepted, the challenge to educational and psychological knowledge remains formidable; namely, the systematic construction of public systems of education that will promote child development at an optimal level. Research in the school setting that assesses the characteristics of the children, the behavior of the teachers, *and* the operation of the system as an institution, will be crucial if we are to do our children justice. Present research methodology will enable us to address some of the foregoing issues, although available instruments will require further refining, and better conceptualizations are needed.

The tools of social psychiatry are the least adequate when it comes to understanding the inertia of social institutions and the ways of fostering institutional change. These problems play back onto individual development; the individual must feel himself to be to some degree the master of his own fate before he can undertake the prodigious efforts necessary to change the world outside. The complexity and the bureaucratization of our society generates apathy in the face of cumbersome and unresponsive social institutions. Even when an investigator is able to demonstrate that instructional method A produces results better than B or equal to B at less cost, there is frequently no visible consequence to the demonstration. It is published, forgotten, and perhaps rediscovered a decade later. One does not have to invoke malevolence to explain this disregard. Inertia and self-

protection account for much of it. The new method may require a teacher or a principal to unlearn old ways; it may threaten professional prerogatives; it may produce more cognitive dissonance than the audience is willing to tolerate because it belies conventional wisdom. The gap between research and its application can be appreciably diminished if the consumer (the educator and the parent) is involved from the first in generating the questions to be asked, in participating in the gathering of data, and in analyzing the results. There must, in the first instance, be a willingness to recognize the inadequacy of traditional formulations. Without such a climate, data will produce no change in conviction. One has only to consider official attitudes on marijuana and pornography to recognize that systematic documentation proving that conventional attitudes have no basis in fact does not by itself shake belief.

Finally, there *is* a malevolent component in resistance to change. One does not have to be a prophet to predict that those who benefit from social injustice will fight to maintain their privileged position. Slum properties bring profitable rents to their owners. Disenfranchised voters enable those who possess the vote to control the outcome. The existence of a pool of unemployed acts as a brake on wages. Bitterly enough, the sense of superiority generated in whites, who are taught to look down on blacks, permits the exploitation of lower-class whites by political leaders who seek their own advantage. It is not merely ignorance, though ignorance is present,

that permits our society to tolerate the social ills we have outlined; they are perpetuated by the short-run view of self-interest. Those who challenge privilege can expect little praise. Their sustenance must come from the recognition that, in the words of Frederick Douglass, "Without struggle, there can be no progress."

Bibliography

Baird, D. "Social Factors in Obstetrics," *Lancet,* 1 (1949), 1079-1083.

----. "The Epidemiology of Prematurity," *J. Pediatr.,* 65 (1964), 909-924.

Berg, I. *Education and Jobs: The Great Training Robbery.* New York: Praeger, 1970.

Billingsley, A. *Black Families in White America.* Englewood Cliffs: Prentice-Hall, 1968.

Birch, H. G. and J. D. Gussow. *Disadvantaged Children: Health, Nutrition and School Failure.* New York: Harcourt Brace and World, 1970.

Birch, H. G. and A. Lefford. "Intersensory Development in Children," *Monogr. Soc. Res. Child Dev.,* 28 (1963), 1-48.

Birch, H. G., C. Pineiro, E. Alcalde et al. "Kwashiorkor in early childhood and intelligence at school age," *Pediatr. Res.,* 5 (1971), 579-585.

Bowles, S. and H. Gintis. "IQ in the U.S. Class Structure," *Soc. Policy,* 3 (1973), 65-96.

Caldwell, B. "Critical Issues in Infancy and Early Child Development," *Res. Publ. Assoc. Res. Nerv. Ment. Dis.,* 51 (1972), 3.33-351.

Campbell, A. *White Attitudes Toward Black People.* Ann Arbor: Litho Crafters, 1971.

Chase, H. P. and H. P. Martin. “Undernutrition and Child Development,” *N. Engl. J. Med.,* 282 (1970), 933-976.

Chow, B. F., B. Blackwell, T. Y. Hou et al. “Maternal Nutrition and Metabolism of the Offspring: Studies in Rats and Man,” *Am. J. Public Health,* 58 (1968), 668-677.

Cole, M., J. Gay, J. A. Glick et al. *The Cultural Context of Learning and Thinking.* New York: Basic Books, 1971.

Cowley, J. J. and R. D. Griesel. “The Effect on Growth and Behavior of Rehabilitating First and Second Generation Low Protein Rats,” *Anim. Behav.,* 14 (1966), 506-517.

Corwin, R. and S. M. Miller. “Taxation and Its Beneficiaries,” *Am. J. Orthopsychiatry,* 42 (1972), 200-214.

Cravioto, J., E. R. DeLicardie, and H. G. Birch. “Nutrition, growth, and neuro-integrative development: an experimental and ecologic study,” *Pediatrics,* 38 (1966), Part II, Suppl., 319-372.

Darety, W. A. and C. B. Castellano. “Family Planning, Race Consciousness, and the Fear of Race Genocide,” *Am. J. Public Health,* 62 (1972), 1454-1459.

Davison, A. N. and J. Dobbing. “Myelination as a Vulnerable Period in Brain Development,” *Br. Med. Bull.,* 22 (1966), 40-44.

Dillard, J. L. *Black English.* New York: Random House, 1972.

Dobbing, J. “The Influence of Early Nutrition on the Development and Myelination of the Brain,” *Proc. R. Soc.,* 159 (1964), 503-509

Editorial. “Subclinical Lead Poisoning,” *Lancet,* 1 (1973), 87.

Eisenberg, L. “The Sins of the Fathers: Urban Decay and Social Pathology,” *Am. J. Orthopsychiatry,* 32 (1962), 5-17.

----. “Neuropsychiatric Aspects of Reading Disability,” *Pediatrics,* 37 (1966), 17-33.

----. “Racism, Family and Society,” *Ment. Hyg.,* 52 (1968), 512-520.

----. “The Human Nature of Human Nature,” *Science,* 176 (1972), 123-128.

----. “Poverty, Professionalism and Politics,” *Am. J. Orthopsychiatry,* 42 (1972), 748-754.

Elliot, K. and J. Knight, eds. *Lipids, Malnutrition and the Developing Brain.* London: Assoc. Sci., 1972.

Ellison, R., L. R. James, and D. G. Fox. “The Identification of Talent Among Negro and White Students From Biographical Data,” *Catalogue of Sel. Doc. in Psycho.,* 2 (1972).

Frazier, E. F. *Black Bourgeoisie.* New York: Free Press, 1957.

Greer, C. *The Great School Legend.* New York, Basic Books, 1972.

Greulich, W. W. “Growth of Children of the Same Race Under Different Environmental Conditions”, *Science,* 127 (1958), 515-516-

Greulich, W. W., H. Thoms, and R. C. Twaddle. “A. Study of Pelvis Type and Its Relationship to Body Build in White Women,” *J.A.M.A.,* 112 (19.39), 485-492.

Hertzig, M. E., H. G. Birch, J. Tizard et al. “Growth Sequelae of Severe Infantile Malnutrition,” *Pediatrics,* 49 (1972), 814-824.

Jacobson, M. *Developmental Neurobiology.* New York: Holt, Rinehart and Winston, 1970.

Knobloch, H., B. Pasamanick, P. A. Harper et al. “The Effect of Prematurity on Health and Growth,” *Am. J. Public Health,* 49 (1959), 1164-1173.

Kohn, M. L. *Class and Conformity: A Study in Values.* Homewood, Ill.: Dorsey, 1969.

Lesser, G., G. Fifer, and D. Clark. “Mental Abilities of Children from Different Social Class and Cultural Groups,” *Monogr. Soc. Res. Child Dev.,* 102 (1965), 1-115.

Lewis, M. and H. McGurk. “Evaluation of Infant Intelligence,” *Science,* 178 (1972), 1174-1177.

Liebow, E. *Talley's Corner.* Boston: Little, Brown, 1967.

Ludmerer, K. M. *Genetics and American Society.* Baltimore: Johns Hopkins University Press, 1972.

McFarland, R. A. and R. C. Moore. "Childhood Accidents and Injuries," in N. B. Talbot, J. Kagan, and L. Eisenberg, eds, *Behavioral Science in Pediatric Medicine,* PP. 35-396-Philadelphia: Saunders, 1971.

Myers, M. L., S. C. O'Brien, J. A. Mabel et al. "A Nutrition Study of School Children in a Depressed Urban District. 1. Dietary Findings," *J. Am. Diet. Assoc.,* 53 (1968), 226-233.

Pasamanick, B. and H. Knoblock. "Brain Damage and Reproductive Casualty," *Amer. J. Orthopsychiatry,* 30 (1960), 298-305.

Pierce, C. "Violence and Counterviolence," *Amer. J. Orthopsychiatry,* 39 (1969), 553-568.

Rutter, M., J. Tizard, and K. Whitmore. *Education, Health and Behavior.* London: Longman, 1970.

Ryan, W. *Blaming the Victim.* New York: Pantheon, 1971.

Scrimshaw, N. S. and J. E. Gordon, eds. *Malnutrition, Learning, and Behavior.* Cambridge: M.I.T. Press, 1968.

Stein, A. "Strategies of Failure," *Harvard Ed. Rev.,* 41 (1971), 158-204.

Thomas, A. and S. Sillen. *Racism in Psychiatry.* New York: Brunner-Mazel, 1972.

Tobach, E., L. R. Aronson, and E. Shaw. *The Biopsychology of Development.* New York: Academic, 1971.

Werner, E. "Cumulative Effect of Perinatal Complications and Deprived Environment on Physical, Intellectual and Social Development of Preschool Children," *Pediatrics,* 39 (1967), 490-505.

Wiener, G., R. V. Rider, W. C. Oppel et al. "Correlates of Low Birth Weight: Psychological Status at Eight to Ten Years of Age," *Pediatr. Res.,* 2 (1968), 110-118.

Willerman, L. “Biosocial Influences on Human Development,” *Am. J. Orthopsychiatry,* 42 (1972), 452-462.

Winick, M. and P. Rosso. “The Effect of Severe Early Malnutrition in Cellular Growth of the Human Brain,” *Pediat. Res.,* 3 (1969). 181-184.

Wortis, H. “Child Rearing Practices in a Low Socioeconomic Group,” *Pediatrics,* 32 (1963). 298-307.

Notes

1 To the memory of Professor Herbert G. Birch (1918-1973) whose scientific life was dedicated to the understanding and amelioration of those factors that interfere with the optimal development of every child and whose work, both conceptual and empirical, provided much of the groundwork of this chapter.