

THE PROCESS OF LEARNING AND THE CORRELATES OF DEPRIVATION AND MENTAL RETARDATION

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Introduction

Possibly, the most important act of faith impressive numbers of behavioral scientists now advocate is the belief that intelligence is educable, is plastic, is a function of practice and training. The host of preschool studies, the Headstart movement, our attempts to break down barriers separating closed institutions from open communities, testify to this pervasive optimism and are the trophies--meager as they may be--civilization has won for the diligent pioneering works of Binet, Skeels, Sarason, Kirk and a great many other scholars too numerous to mention here.

The changes that have been fashioned in the general behavioral field have, in particular, been the achievements of our so-called field of mental retardation. And, to further particularize, the aforementioned and other scientists have led the way to new understandings of intelligence, its nature and modifiability, and the prevention and remediation of cognitive disorders. Stated another way, many of us in the field of mental retardation are now more optimistic than heretofore concerning possibilities for prevention and remediation of that broad group of conditions generally referred to as "mental retardation"--conditions that were once believed to be incurable, irremediable, and, for the most part, unpreventable.

This change in belief, based in part on hard data and in larger measure on the development of a new (or renewed!) clinical ethos, has resulted in shifting emphases in programs for all handicapped children, from those once embracing principles of habit training, to ones now encouraging the application of technique toward the remediation of dormant or regressed functions and capabilities. Although a ~~paper~~ ^{chapter} presuming to do justice to recent developments in the field of mental retardation might include a discussion of institutions and their changing influences, programs of medical prevention, the growing role of educational intervention and responsibility, and the basic contributions of geneticists, anthropologists, and learning psychologists, space permits no more than mention that there has been considerable progress in these areas.

This ~~paper~~ ^{chapter} will focus on a group of individuals who represent the overwhelming majority of the so-called mentally retarded and whose conditions may less be a function of their CNS's than for civilization's penchant for creating sick societies and guaranteeing incredible problems. It will deal with that group heretofore called "cultural familial" mentally retarded, what we have learned about the nature of intelligence, and the possibilities that--at least for this group--retardation may be preventable for most and reversible for many.

41

This area was selected for elaboration, because, in the writer's view, it may represent the best of what we have learned (i.e. how we have changed) during the past decade. For, if intelligence is educable, it is educable for all people--the back ward severely defective resident as well as for those of us who seek to find better answers to puzzling questions and better treatment for our currently untreated or untreatable brothers. It is the purpose of this paper--written on the brink of a hopeful new decade--to encourage the reader to renew the historic mission of the clinician; that is, our task is not merely to certify one's capability and prognosis, to determine whether a child will or will not change; our mission is to make it possible for a child to change, to learn. A review of how we, in this field, have changed vis-a-vis the concept of so-called cultural familial retardation may be an illustration of the general optimism and belief now prevalent among special educators and other practitioners with the mentally retarded. It may illustrate how we have returned full circle and have, once again, taken seriously Alfred Binet's hypothesis that intelligence is educable, that man changes, that I can change. Such a review may cause us to see, more clearly than before, why we must reject the Jensen antithetical hypothesis, not that his hypothesis is based less in the scientific tradition of evidence than is ours. Not at all! It is felt that the following discussion will lead some to conclude that we must reject the Jensen hypothesis concerning inheritability of intelligence and the relative invariance of mental aptitude, because it is not a very helpful hypothesis. It creates a mental set concerning man, his capabilities, and potentials. It pre-determines the consignment of 30 or 40 million Americans to illiterate, unproductive, impoverished lives. It isn't that Jensen is necessarily wrong and we are necessarily right about intelligence, its correlates, and modifiability (although obviously, we do not believe we are right and he is wrong). The point we will attempt to make here is that our hypothesis is a much more fruitful one, both for the purposes of attempting to better understand man, and secondly, for dealing more effectively with his needs and problems.

1. For a full discussion of classification and terminological problems in mental retardation see Blatt (1960, 1961) and Heber (1959). Traditionally, mental retardation was defined as a constitutional condition existing from birth or early age incurable and irremediable, oftentimes resulting in the inability of the individual to profit from ordinary schooling. This traditional definition was joined to a classification system that utilized arbitrarily determined I.Q. scores to categorize levels of intellectual capacity; e.g. 25-50 I.Q. was in the "trainable" category; 50-75 I.Q. was in the "educable" category. More recently (Heber, 1959), a new and widely used, definition and classification manual was developed by a committee of the American Association on Mental Deficiency. This new manual defined mental retardation as sub-average general intellectual functioning, originating during the developmental period and associated with impairment in adaptive behavior. This definition did not assume a constitutional condition as a necessary requirement for mental retardation (e.g. in "cultural-familial mental retardation," p. 39-40). It referred to function rather than, as is traditional, to capacity and it did not preclude possibilities for prevention, cure, and amelioration of mental retardation and its associated consequences.

Assumptions and Expectations

There are few people today who are not aware of the existence of poverty in the United States. For many past generations, the poor have been favorite subjects of essayists, politicians, social workers, and social reformers. This concern for the welfare of impoverished people is still shown by these groups. However, new facets of support and personnel have been added to the traditions of charity and social reform in an effort to produce major re-study of the problems that result from poverty and to shift various strategies for dealing with these problems. The Economic Opportunity Act of 1964, other federal and state legislation, and the swelling civil rights movement have led to the support of numerous anti-poverty programs. It has become respectable, even fashionable, for researchers in the social sciences to devote major concern to the study of "disadvantaged children". Poor children are beginning to be viewed more as probable school dropouts, failures, recalcitrants, and retardates, than as potential welfare recipients or legal offenders. Lastly, an impressive accumulation of research on the nature and correlates of social class and intelligence is now available.² This research has generated speculation and study of the hypothesis that intelligence is educable; that is there are procedures and conditions that may intervene to increment an individual's potential for change. These affect, both in rate and complexity, his learning performance in school-related and other problem-solving tasks. Or, stated more generally, one's level of functioning is neither static nor predictable.

Why is there now so much concern about the poor and the conditions associated with their poverty? Is our nation now sufficiently affluent to afford the luxury of caring for all of its disadvantaged and underprivileged citizens? Has our nation developed a new wisdom? Do we realize that we can no longer dare to, or afford to, neglect such a large segment of America, one that has been estimated to represent as much as 77 million people and most certainly includes at least 35 million people? Have we finally been impressed by the convictions of our best statesmen, political scientists, and economists that our society will no longer be able to tolerate a dependent segment which is essentially ever-populating, noncontributing, and unproductive? Or, do we view all these possible outcomes with alarm but reserve our deepest fears and anxieties for the prospect of what may occur if the "other American" is not allowed to benefit from and contribute to the so-called "Great Society"?

2. For a detailed history of that research, as well as our own efforts in studying this problem, the reader may wish to examine the writer's monograph (with Frank Garfunkel), the Educability of Intelligence. Washington, D. C: The Council for Exceptional Children, 1969, 160 pages.

43

Imagine this nation in thirty or forty years, when the population has exploded and industries have become automated, and the earth will be more polluted and we will be less--not more tolerant. Manufacturers previously employing thousands of workers will now require only handfuls of people to produce the same quantity of goods more cheaply, more quickly, and of better quality. What work force will be needed for this automated revolution? Certainly, basic and applied scientists will be required to design and build machines which will produce our consumer goods. Skilled mechanics and technicians will be needed to service and repair the equipment of modern industrial complexes. There will continue to be a probable shortage of physicians, teachers, clergymen, dentists, accountants, lawyers, and other professionals. There will continue to be a need, although drastically curtailed for farm workers, laborers, domestic servants, public service people, and generally unskilled workers. In contrast with today's labor force, a very modest number of production workers will be employed. Labor experts, sociologists, and other social planners are predicting a culture--within our lifetimes--in which fewer people will be necessary to meet production standards and in which most employment opportunities will require advanced academic preparation.

What will become of those men, women, and children who are uneducated and untrained, and what will become of those who are currently employed or employable when the new mechanized economy makes their skills obsolescent? It is possible that, in this new culture, fewer people than ever before will be forced to live in poverty and degradation? It is possible that the affluence of the economy will permit guaranteed incomes to all human beings in a manner previously undreamed of and in a way that provides basic standards of shelter, nourishment, and clothing for all. It is possible that everyone--from the person with the highest degree of professional skills to the man who is unemployable--will have to readjust his occupational philosophy, to seek other avenues for fulfillment and satisfaction, and to view work as a small, necessary part of his life--but not as a dominant force. It is even possible--probable-- that "work" will be viewed as a privilege not a necessity. It has been predicted by recreation leaders, as well as those in labor fields, that a new relationship between work and recreation will be developed during the next half century. Leisure and recreation may become more than luxuries and relief from the strain of work. They may become a way of life needing no special justification.

However, one-third of America will be almost totally incapable of participating in this new culture other than as spectators and recipients of its charity. This group--the culturally deprived or disadvantaged--is denied opportunities for developing their potentials to learn, to be employable, to be economically independent, and, further, to be contributing members of society. Unless drastic measures are designed now to prepare those who are disadvantaged, especially the intellectually disadvantaged, for this new automated culture, differences between the advantaged and the disadvantaged will become greater not smaller, differences between the rich and the poor will be more glaring than ever before. We are heading toward a society of abundance that may prohibit large numbers of Americans from being employable. Ironically enough, by

necessity, this unemployable group may become the leisure class. Unfortunately, it is about as unprepared to participate profitably in leisure activities as in intellectual activities.

Inherent in the hypothesis that intelligence is educable is the contention that there are many individuals who must be afforded more adequate opportunities to develop skills to better cope with our complex society. One could predict that the next half of this century will provide society with both a great opportunity and a great danger. Unless we are able to prepare the "other America" to become part of the mainstream of our national life--intellectually, vocationally, politically, socially, and in all other ways--our civilization will be in jeopardy. Basically, we believe that by early stimulating educational intervention designed to increase intelligence and offer children skills needed to make positive contributions in "the new culture," society will be dealing with a central--intellectual--poverty. This poverty is the one from which, to some degree, all other poverties spring and it is one which we contend is preventable or, when it exists, reversible.

Notwithstanding the current unprecedented interest in the learning patterns of disadvantaged children, the relationship between the nature and nurture of intelligence, and the development of special interventions to prevent or ameliorate intellectual deficits, few studies give illumination to the questions that are being raised. However, rather than wait for more data on which to base research and treatment programs, it may be wise (or necessary) to accept certain pro tem assumptions to permit us to, at least, continue our work and studies.

1. First, we assume that intelligence is educable (Blatt and Garfunkel, 1969). For many years psychologists and educators have been aware that the intelligence quotient of a person may increase or decrease substantially over a period of time. Initially, these changes were attributed largely to inaccuracies of the given test. But as tests were made more reliable, measured changes in a person's I.Q. became more a perceived indication that the person had, indeed achieved a different level (and rate) of general intellectual functioning. Further, if the level of general intellectual functioning can change, then we can assume that, by providing the proper conditions, we can cause and direct such increases in human intelligence--and, thus we can (with similar procedures) prevent or ameliorate mental retardation. We believe that estimates of the intellectual potentials of individuals have been distorted by the acceptance of the I.Q. as a limit of functioning rather than a level of functioning, and that factors such as heredity, learning disorders, and brain damage have been overestimated as determinants of limits of intellectual functioning.
2. Next, we assume that in order to maximize the possibilities that a person will change, three conditions should be met: the possibility that change will occur increases when an individual needs to change, aspires to change, and--most importantly--is optimistic that he is capable of changing. Educating intelligence refers to more than

hypothetical "mental faculties or abilities." It is associated with attitudes about self, learning, and abilities, without which the phenomenon of change cannot be comprehended.

3. Further, we assume that children whose central nervous systems are intact, who are physiologically sound, should be intellectually normal unless they are subjected to profound and continuing deprivation. However, differences appear as children grow. As disadvantaged children develop and mature, a cumulative deficit phenomenon may cause them to behave differently from children who are raised in more favorable environments. Resulting deficits are, initially, subtle but may eventually lead to disorders of cognition, language, and personality. In the case of advantaged children, the opposite occurs. As advantaged children develop and mature, a cumulative increment phenomenon may set in allowing them to function more efficiently.

Children learn and mature at different rates to different levels of competence. It is a fairly obvious empirical finding that disadvantaged children not only are less academically competent than their middle class peers, but their rate of change, frequently, decelerates. Thus, the problem is not simply one where groups of individuals are, age for age, less knowledgeable and skilled than other groups. We are confronted by children with relatively sub-normal rates of growth that are inconsistent with our expectations for them, as these are inferred from intellectual behavior observed in the preschool years. That is, the disadvantaged child begins life on a level of intellectual functioning that for all practical purposes, equals the performance of the average child; however, almost immediately the disadvantaged child's environment begins to act as a deterrent to his development. As a consequence, the child's initial rate of development is not as great as that of an average child, and it is not sustained for as long a period. By the fifth to seventh year, his rate of development begins to decrease. Usually the disadvantaged child reaches a learning-forgetting plateau at an earlier age than the average child. And finally, the disadvantaged adult usually is not able to maintain a level of intellectual functioning which is represented by the plateau for as long a period of time as the average adult; instead, he may begin to regress relatively early, sometimes by age twenty or thirty.

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3. This is not to imply--or even to suggest--that substantial intellectual growth is precluded for the so-called retarded brain damaged. While Helen Keller was not mentally retarded, before she was not retarded and before Anne Sullivan, she was mentally retarded.

The advantaged child also may be born with a level of intellectual functioning more or less equal to the average or disadvantaged child's. However, the advantaged child's environment begins to act as a stimulating, intellectual force. His initial rate of development is greater than the rate of either the disadvantaged or average child's, and it is sustained for a longer period of time during his life.

4. As children grow older, these differences in level of intellectual functioning become more and more critical. By the time children enter school, differences are very noticeable. Since most school programs are directed toward meeting "average" needs, the disadvantaged child is put into a learning situation for which he has not been prepared. As a result, he experiences little success and a great deal of frustration and failure in school.

In an effort to resolve the problem of helping him adjust to the school environment, educators have been developing preschool programs which hope to influence positively intellectual and social growth of the disadvantaged child. These programs, begun very early during the preschool years, may offer more expectation for the prevention of intellectual subnormality and more chance to remediate intellectual deficits which may have developed. Such programs have, as their objective, a reduction of discontinuities that exist between the home culture and the school culture by providing children with a set of experiences which are not available in the home and which will help them develop readiness for these academic, social, and physical activities formally begun in the first grade.

5. Of course, we assume that not all preschool programs for disadvantaged children prevent learning disabilities, nor do they necessarily prevent other disabilities associated with cultural deprivation; mere attendance in a program is not sufficient to prevent these disabilities. If a disadvantaged child is required to attend a preschool program which reinforces a dislike for school rather than an interest in learning, the child's progress is being inhibited as much by the program as by his home environment.⁴ If the program does not engender curiosity, inquisitiveness, or positive attitudes toward learning and if it does not provide the child with skills necessary for coping with school tasks, then it has failed to fulfill its purpose.

4. Further, unpublished data of our most recent follow-up studies of the children we began working with in 1962 confirm earlier suggestions (Blatt and Garfunkel, 1969) that the home and family influences learning and school behavior more directly and pervasively than do schools or teachers.

- 47
6. Considering growth patterns generally followed by disadvantaged children, and supposing that other factors which influence intellectual development and maturation are equal, we assume that long term will lead to more lasting gains than short term interventions, and, further, that earlier will produce more significant changes than later interventions.
 7. Although, there are many published curricula that can be utilized as theoretical referents in planning programs for "high risk" children, we assume that these will be more useful as heuristic rather than as activity-specific content guides. There are several reasons for our contention that procedures used in developing an early stimulating curriculum must be somewhat unstructured and emergent in nature. First, we are convinced that a most important factor relating to attempts to educate intelligence will be those interactions between teachers and children. Because such interactions are critical, experiences which teachers and children share in the emergence of the curriculum are similarly significant. As the teacher works to design an environment which stimulates intellectual curiosity and growth, she must study the children in terms of past achievements and areas of need. Curriculum development should continue in the same way, throughout the program, based on achievements and needs rather than on the implementation of a specific curriculum "package" delivered to teachers.

Secondly, because of the emergent nature of the curriculum, teachers should become more, not less, involved in development and formulation of curricular patterns and plans. They should be conscientiously and systematically developing and presenting case studies for staffings. They should become more involved in deciding upon policies regarding child placement, special interventions, and special studies.

Thirdly, all of this teacher involvement in curriculum development will be accompanied by a great deal of trial and error learning. However, the amount of error should decrease as teachers gain insight into behavior, learning patterns, and needs of children. The result of the trial and error period may be a curriculum that can be expected to narrow discrepancies between the insufficiencies of relatively unstimulating home environments and the expectations of schools.

Lastly, with this viewpoint toward curriculum development, teachers may better appreciate that curriculum is not independent of other factors. Its form and effect are dependent on the social-psychological setting in which it is used, on the needs and previous achievements of those for whom it is intended and on the insights and skills of those who are responsible for its development. No curriculum can be effective if these factors were not considered while it was being developed and as it is used.

8. Our concluding assumption relates to the expectation that all children are entitled to school experiences offering maximum opportunities for development of attitudes, motivations, and cognitive skills that are considered necessary for intellectual and academic growth. Most importantly, we should recognize that any kind of change--within children or change of attitudes about children--does not come easily. Moreover, when it does occur, we can be certain that such change did not take place independent of the belief a person--or persons--had that such change was both desirable and possible.

Final Comment

Little has been accomplished in recent decades to materially affect the lives or future expectations for the mentally retarded and other disordered children. However, although progress has been painfully inadequate insofar as those who most need special consideration and attention, the future promises to be much brighter. We, in the helping professions, more clearly than any time during this century realize that our mission is one dedicated to treatment and care rather than to the development of elaborate nomenclature systems that do little more than provide us with scientific sounding excuses for not accomplishing our one clear and historic mission--to help people develop to their full potential and maturity. Related to this understanding is the ever growing belief that intelligence--in fact, all human behavior--is plastic. Lastly, probably most importantly, is our return to the biblical belief that--as human beings--all people are equal and each man deserves his opportunity for fulfillment as a human being.

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