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ABSTRACT

This report comprises a critical analysis of research in the area of the disadvantaged student, mostly on population characteristics and on educational programs offered them. Much of the research on such factors as genetic and environmental influences, verbal ability, motivation, school achievement, attrition rate, demographic characteristics, health care and nutrition, has been biased; and efforts at intervention have been unsuccessful, with demonstration projects taking precedence over controlled experiments. Necessary to raise the standard of research and educational programs are: (1) increased funds for meaningful large-scale innovation; and (2) development of effective ideas for the best utilization of available funds. Suggestions for improvement include the better understanding, and more appropriate design and control of social-psychological learning conditions; greater qualitative analysis of learning behaviors; matching this broader range of characteristics to the design of appropriate learning environments and experiences; and the need to change political factors in education. It is especially important to hold educators more directly accountable to those they serve, and to give greater attention to the role of students in the direction of their own education. (KS)

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THE DISADVANTAGED AND HIS MILIEU¹

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The field of education during the 1960's was characterized by a heightened concern with the problem of educating underdeveloped or disadvantaged groups within the population. By the end of the decade, however, it was becoming apparent that the enthusiasm of the attack on the problem was not sufficient in itself to bring about an effective solution. The result of critical reassessments of the problem and attempted solutions has been a more sober view of the magnitude of the necessary effort, if not destructive pessimism. Well-intentioned but simplistic efforts to equalize educational opportunity and achievement by simply providing more or better quality facilities and personnel or slightly modified curriculums resulted in discouraging failures and a new recognition of the complexity of the problem. We are coming to realize that both causes and areas of necessary improvement lie not just in the school, but in the community and the larger society, in the social, cultural, political and economic conditions which influence the lives of the youngsters with whom we are concerned. As these problems become more clearly defined, we see that the attention of educators to these populations must serve political and social concerns broader than that of education alone; at the same time it becomes clear that, in attacking these educational problems for the benefit of certain specific groups, we stand to make major advances and gain vital insights for the field of education as a whole. We realize that at the heart of the educational problem lie such issues involving the very mechanisms of learning, how they function or fail to function.

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how a knowledge of them can be applied to better education for a host of individual children with varying backgrounds, opportunities, and patterns of intellectual and social function.

Research so far in the area of education for the disadvantaged has been plentiful and varied in approach. On the whole, however, it has fallen into two general categories, one relating to population characteristics of the groups regarded as disadvantaged, and the other concerned with description and/or evaluation of the various educational programs which have been offered to them.

Research in the area of population characteristics has too frequently emphasized those characteristics of life condition or behavior which are regarded as deficits, a judgment often made for the simple reason that the observed characteristics differ from some so-called "normal" population. Often the identification of these differences has been taken to be the identification of those factors responsible for the lower academic achievement of the group being studied.

Within the category of research into population characteristics, efforts have been directed both at assessment of life conditions and assessment of academic performance. Within the area of performance characteristics, the greatest amount of attention has been paid to intellectual status. Most of these research reports have concentrated on intelligence scores and all tend to suggest that high intellectual status is related to high economic, ethnic or social status; conversely, low status is associated with poor intelligence test results--poor children, lower class children, and minority group children do not score as high as white, middle or upper class children.² Where studies have included speculation as to the causes behind these differences, theories have ranged from the assertion that genetic factors determine and limit intelligence³ on the one hand, to an emphasis on environmental factors

as a major influence on intellectual status.⁴ At the extreme genetics oriented end of this spectrum are those few who have continued to search for a connection between race, genetics, and intelligence. At the other extreme are the "vulgar" or "mechanical" environmentalist who try to explain all variations of intellectual functions on the basis of environment input. Most specialists, however, tend to view intellectual function as the result of a complex interaction between genetic and environmental influences⁵ with each having a dialectical influence on the manner in which the other is expressed or experienced and with the interaction being crucial.

While many researchers have been concentrating on this type of quantitative analysis of intellectual status differences, only a very few have turned their attention to qualitative analysis of varieties of intellectual functioning within and between certain groups. Factor-analysis of standardized tests⁶ and attempts at identification of differential weaknesses and strengths in functioning among certain groups have been among the efforts in this area. Prominent among these studies has been the work of Lesser and associates, who have examined and attempted to identify qualitatively differential patterns of function in a variety of ethnic groups.⁷

Plasticity of intellectual function has occupied the attention of a large body of investigators. Studies of normal and below-average children, and even of mildly or severely retarded children, have yielded mixed results.⁸ It does not seem possible as yet to draw any definitive conclusion with regard to plasticity of intellect. Where modest changes have followed after various types of intervention, it is too often unclear whether these changes represent normal fluctuations in intellectual function which may occur over time or significant change in the quality of intellect. In those studies which have yielded significant differences in test scores,⁹ such improvement has most often been demonstrated on a modest scale, or over too short a period of time to lead to definitive conclusions: here again, there is dispute

as to the value of the test scores, with some asserting that the quantitative assessment of intellectual status at the outset was faulty, and that the later higher score is simply a more accurate reflection of basic capacity. However, there is nothing in research to date to justify the conclusion that Binet was wrong when he suggested that intelligence is a trainable function.

If we interpret much of the best available research as suggesting that radical intervention may bring about improvement in intellectual function, then the question becomes the nature of that radical intervention. One of the most important attempts to answer this question is that of Zigler, who suggests that changes in the quality of intellectual function may result from changes in the affective state, in such variables as motivation, task involvement, aspiration, etc.¹⁰ Attempting to show that affective variables are more malleable than cognitive processes, he then argues that attention to this area as well as to the conative (skills development) area may result in improvement of cognitive achievement without an actual change in the character of the cognitive function. Zigler's theories show him to be in agreement with Bloom¹¹ regarding the stable nature of cognitive processes after about the third year of life. Zigler has attempted to offer an explanation for this stability by asserting a possible bi-modal distribution of intelligence, with abstract mental processes more heavily represented in the higher modal score group and concrete mental operations more prominent in the lower modal score group.

More recently, the work of Jensen¹² has represented an attempt to add support to this view of the cognitive processes as essentially stable; this support stems from Jensen's view of intelligence as being primarily genetically determined. Jensen's work has drawn protests from many specialists in the field who see this attempt to give prominence to hereditary explanations of low academic achievement as a misguided attempt to shift the

blame away from the educational system for its failure to improve the academic success of disadvantaged groups in the society.¹³ It is apparent that there have been no large scale attempts to implement any intervention of proven effectiveness for these groups, so that it becomes folly to assert that such treatments have been tried; in addition, work in the field of genetics has certainly not reached that level of sophistication which would make it scientifically sound to advance such an assertion of the extent of hereditary influence on intellectual function. A growing number of specialists are giving increasing prominence to the view of intellectual performance as the result of the complex interaction of environmental and hereditary factors. They maintain that it remains to educators and other practitioners of the biosocial professions to manipulate the environmental factors so as to make the interaction most advantageous to the development of the learner.

Several studies suggest that children from disadvantaged backgrounds are less able to use conventional verbal symbols in representing and interpreting their feelings and experience, though there is no definitive evidence that such children suffer from an underlying deficiency in symbolic representation. Available evidence suggests that depressed language function can be the result of a variety of circumstances. One study found differences on all quantitative measures of language function, differences favoring children raised in their own homes as opposed to children raised in institutions.¹⁴ Other investigators have demonstrated that children from low socioeconomic groups have less facility in the use of conventional verbal symbols.¹⁵ A greater frequency of mature sentence types, more complex construction and better elaborated concepts among Caucasian than among Negro children has been documented,¹⁶ while another study found that children with rich information backgrounds were better equipped for reading than were children with meager experience.¹⁷

In his study of linguistic behavior in lower and middle class subjects, Bernstein reported that the language of lower class youths tends to be "restricted" in form.¹⁸ Such language communicates signals and direction, confining thinking to a relatively low level of repetitiveness. On the other hand, he described the language of the middle and upper classes as "elaborated" and serving to communicate ideas, relationships, feelings, and subjective states. Symbolic representation is present in both classes, but this work suggests that important qualitative differences exist in the form and utilization of the symbol or language systems, differences which may have important implications for learning. Unfortunately the data does not enable us to determine accurately the specific nature of the learning disabilities involved. Riessman's description of concept formulation among the disadvantaged as content centered rather than form centered and their reasoning as inductive rather than deductive¹⁹ does support the conclusion, inferred in the above data, that school failure among disadvantaged children is related to the character of the language system and its derivative effect on thought processes.

Perceptual styles and perceptual habits inadequate for or irrelevant to the demands of academic efficiency represent another set of characteristics of disadvantaged children noted by investigators. Although high levels of perceptual sensitization and discrimination are often present, these skills appear to be better developed in physical than in visual behavior and in visual than in aural behavior.²⁰ The extent to which these children fail to develop a high degree of dependence on the verbal and written language used by academicians as learning cues is probably the most significant characteristic in this area.²¹ Many simply have not adopted the modes of reception and expression which are traditional to and necessary for success in school.

Socially disadvantaged children are alleged by several investigators to be less highly motivated and to have lower aspiration for academic and vocational achievement than do

middle and upper class children.²² The differences between the privileged and the disadvantaged in this area, however, are not so much differences in values as differences in the circumstances under which the values are called into play. Although the values from which motivation is derived in the disadvantaged child appear to reflect the dominant culture's concern with status, material possessions, in-group morality, Judeo-Christian ethics, competition, etc., the alleged middle class concern with aesthetics, symbolization, introspection and competition with self in their more traditionally encountered expressions are usually lacking.

It is in the area of attitude toward self and others that the crucial determinants of achievement and upward mobility may lie. One of the clearest findings coming from the Coleman Report on equality of opportunity indicates the crucial role of a sense of environmental control in academic achievement.²³ It is in this area that the rapidly changing national and world situations involving underdeveloped peoples are likely to be most influential. There is growing empirical evidence to support the view that young people actively associated with the current politico-social struggles draw from their involvement in those efforts a new source of motivation and an enhanced view of themselves as capable of influencing their environments and their futures. The recalcitrance and repressiveness of the established order, however, may be too powerful countervailing force to permit these activities to be reinforced and the anticipated attitudes to be established.

Other topics which have been the focus of extensive but inadequate coverage in research are the areas of school achievement and school dropout rates. As in the area of intellectual status, studies of school achievement show results strongly related to social and economic status and ethnic group membership. Studies have been directed at every variety of low economic level group, whether black, white, red, or brown, and again these lower status groups score lowest in school achievement and highest in school attrition.²⁴

However, one of the most important results of this research has been the observation that these achievement patterns seem to relate to the circumstances and conditions of the schooling offered to the affected groups. In the 1930's and 1940's, research showed that achievement levels for black children educated in Northern schools were higher than those for black children educated in Southern schools. As black families migrated north and west, achievement levels for their children rose. However, in the late 1940's and early 1950's, as the South turned its attention to improving the quality of its black schools in order to avoid desegregation, and as urban ghetto schools in the North, now almost completely black, began to decline drastically in quality, achievement levels for southern blacks rose higher than those for urban northern blacks. After allowing for the influence of selective migration patterns, students of these phenomena conclude that quality of schooling must be considered as a determinant of achievement and retention rates. Again the Coleman Report data indicate that while quality of schooling may be a relatively unimportant independent variable for middle income majority group pupils, it is highly important for low income minority group pupils.

A great variety of research into populations characteristics has been directed at identification of life conditions, on the assumption that these factors must influence school performance. One such factor, which may be encountered in the school situation, in home life, or both, is the degree of separation in which the child lives because of his ethnic or socioeconomic status. Many research efforts have been directed at examining the relationship between separation in different schools or neighborhoods by ethnic or social status group, and school achievement.²⁵ The evidence gathered so far indicates that where low status or poor children constitute the majority in a school, the level of achievement in that school is likely to be depressed in relation to schools where they represent

less than 40% of the population.

Another way of looking at this problem has been through pre and post analyses of achievement in recently desegregated schools. These studies have tended to show higher achievement levels for the ethnic minority or low income group after desegregation however, these findings will be more useful when we have made progress in identifying and evaluating the various factors which may contribute to the change. If the fact of desegregation, for example, brings about changed teacher behavior or improved teacher attitude, then the process is contributing in a general way to the improvement of education throughout the system being desegregated. On the other hand, the change may be related to greater stimulation to the previously segregated lower status groups. Nonetheless, the evidence seems to indicate that children from minority or lower status groups attending school where they are outnumbered by children from higher status groups do improve in their school achievement, while the children from higher status families suffer no significant lowering of achievement.²⁶ This improvement seems to occur only in situations where the lower status groups are in the minority. It is evident from other research, however, that some qualification of this generalization is necessary,²⁷ for several types of experiments have shown that the performance of minority group children will vary under different circumstances of awareness on the part of the children concerning the ethnicity of the persons with whom they will be compared in the evaluation of their efforts. It is also known that grouping patterns within schools and within classes can distort desegregation efforts but also can influence educational experience and achievement. Thus for several reasons it would be premature to conclude that general class and ethnic group integration is sure to result in improved achievement for the disadvantaged groups.

A significant factor in the analysis of life condition, and one which has been given less

investigative attention than it may deserve, is the area of health status. Perhaps it has simply been considered self-evident that poor health and poor nutrition will handicap a child in all aspects of his life, his school performance included. It is also generally recognized that lower socioeconomic status groups receive health care of lower quality, in less than adequate facilities, and that their health and nutritional status is generally lower than that of more privileged groups. On the whole, this health handicap is thought to take its toll in lowered efficiency in performance, rather than in an actual impairment of mental function; in spite of what are increasingly coming to be acknowledged as an inadequate diet and a low quality health care system in this country, especially for disadvantaged groups, actual brain damage attributable to this poor record of medical care and nutrition is thought to be slight. The mechanisms of neurologic development may have sufficiently high tolerance level to survive these conditions.

However, in the area of prenatal care, some investigators have found evidence which points to a possible relationship between inadequate medical care and actual impairment of mental function in the developing fetus.²⁸ It is clear that many pregnant mothers from lower status groups receive inferior medical attention. Some do not see a doctor until one or two months before the baby is due, some not until delivery, some not at all. In some cases, the only doctor consulted is a general practitioner. Other statistics indicate a higher incidence of premature births among these groups, with an accompanying greater risk of congenital abnormality and abnormal postnatal development. Poor nutrition may be as much a factor as poor prenatal care in these cases, for it has been pointed out that women from lower economic status groups are generally smaller and shorter, resulting in a greater likelihood of premature delivery. In addition, postnatal care for the children of these mothers is often inadequate or simply not available.

Even if a child from this sort of medical care and nutritional background does escape organic damage, there is evidence that height and weight do affect school performance; a smaller, less developed child may well suffer in his school achievement, although it is not known whether the relationship stems from actual mental impairment or a lower level of energy. In some cases, the abnormal development may be the result of a chronic illness which may go undiagnosed and which may, without actually damaging mental function, limit the child's exposure to learning opportunities. All of these observations demonstrate the great variety of ways in which health care, nutritional status, and circumstance of pregnancy and birth may affect school achievement. Much remains to be investigated in this important field.²⁹

A greater amount of research effort has been spent in the investigation of family life patterns among disadvantaged groups. Some investigators have concentrated their efforts on the collection of demographic data, others have concerned themselves with analysis of life styles within the family; others have limited their observations to aspects of child rearing related to educational performance, such as language development, task and value orientation, and cognitive stimulation.

Demographic studies have included those which have analyzed the educational, employment, and economic levels of the target families; those which have looked for indications of family disorganization such as consensual marriage, out-of-wedlock children, broken homes, divorce rates, etc.; and those which have concentrated on the phenomenon of female-dominated families. Best known of this last type of study was the Moynihan work on the Negro family,³⁰ which attempted to make an argument for large-scale government aid on the basis of an examination of the problems and deficiencies of the Negro family. The role of the black male was seen as a critical aspect of the problem, and the

nature of the black family structure was seen as culpable. The essentially negative emphasis of the Moynihan paper, concentrating as it did on supposed deficits in the population, and the failure to distinguish between the ethnic and economic basis for these characteristics, all of which were presented as negative, resulted in a storm of criticism. Many felt that Moynihan had failed to give adequate consideration to low economic status as an explanation at least as probable as ethnic identity for the styles of family life described. With economic status controlled for, many urged, the quality of family life in the black population is no different from that among white groups of comparable economic status, except, of course, for the effects of racial discrimination. Investigators such as Hylan Lewis have reported many positive aspects of life among black low-income families, including the benefits of the extended family, and have pointed out the damage inflicted by such outside influences as welfare laws which tend to affect the incidence of reported father absence from the home.³¹ Although many of Moynihan's observations and statistics are supported by the work of other noted sociologists, such as E. Franklin Frazier,³² the controversy aroused by his monograph perhaps serves to illustrate the difference between collection of data and responsible and wise interpretation of them within a social and political context. Another example of this type of reporting and its dangers is the work of Oscar Lewis reporting on Puerto Rican families.³³ Lewis took the additional risk of directing his work at both specialized and popular readers. In doing so, he incurred the responsibility for misinterpretation of his observations on the part of his popular audiences, especially in a work in which he concentrated on particularly negative characteristics and special problems of the Puerto Rican family being observed.

In the area of child rearing patterns, a greater effort has been made by investigators to evaluate objectively the impact of the observed practices on patterns of development in the child and on his later school performance.³⁴ For example, efforts have been made to

relate style and quality of intellectual function in the mother to the development of skill patterns and work style in the child. It is thought that the youngster's language usage may result in part from the patterns of decision making of his family. School achievement is examined in light of the child's attitudes toward school and the support he receives for his school activities from his parents. In these works emphasis is not placed on the determination of atypical patterns, but on demonstration of relationships between various patterns of family life and patterns of development in the child.

Before going on to discuss the other major type of research in this area, I would like to point out the misleading nature of the tendency to focus on population characteristics of the disadvantaged. Though I have tried to make qualifications in discussing this data, the reader is still tempted to generalize from the results. A variety of characteristics occur across all populations and no disadvantaged child possesses all those characteristics enumerated above. Thus, there are no clear implications for educational strategies which flow from this data. While I believed that such research is not without value, I think that human variability would indicate that rather than search for characteristics which we can ascribe to disadvantaged children so as to develop the educational approach, we should adopt the alternative strategy of attempting to diagnose patterns of functioning in individuals from which specific patterns of function specific intervention strategies can be designed.

Research into population characteristics of disadvantaged groups has been varied in design and quality; the other major type of research in the area, concerned with educational programs, has too often been characterized by superficiality, and frequently consists of nothing more than a description of a particular program or practice, with little or no attention to responsible evaluation. One fact that emerges from these descriptions is the general failure of educators and designers of special programs to utilize some of the

more valuable research that has been done concerning population characteristics; rather than being directed at those significant facts which have been revealed by research efforts, the programs too often are much more influenced by the particular atheoretical stance or bias of their designers, or are modeled after other approaches generally given wide acceptance, with no particular effort to match the proposed strategy to those characteristics of the specific pupils which have been identified.

Most of the research literature in this area takes the form of descriptions of various programs and their major elements, or of the most striking aspects of a particular practice. At every level from pre-school through adult education programs, more attention is directed to the implementation of demonstration projects than to the careful design of controlled experiments. Because of the attention given to these large-scale demonstration efforts and the amount of funding which has been made available to them, they have too often come to be regarded as the best sources of models for new programs, without regard to careful evaluation of their effect.

Even when efforts were made to evaluate the programs or practices, too often the assessment consisted of subjective opinions and comments drawn from individuals involved in the program. In some instances, the group receiving the treatment was compared with an untreated control group. In almost all cases, there was insufficient attention given to analysis of those specific program features which may have been responsible for any improvement noted. As a result, it remains unclear whether the noted improvement should more accurately be ascribed to general experimental effects such as Hawthorne effects, arising from a changed situation, or Rosenthal effects, resulting from changed expectations. Where no improvement has been found, researchers have been too hasty in asserting that compensatory treatments do not work.

The purpose behind these efforts seems to be a search for the ideal program or practice

which can be applied on a large scale and which will be most effective for the greatest number of people. In a sense, this attitude can be viewed as a result of much of the research into population characteristics, which has given too little attention to individual and group differences and which has tended to treat "the disadvantaged" as a large and basically homogeneous population suffering from the same problems. What is needed is greater attention to the differential effects of individual treatments on individual learners with their differential learning characteristics.

The effect of ethnic or class separation has been a major concern of researchers into educational treatments as well as investigators of population characteristics. The concern has been reflected in a variety of studies examining the quality of opportunity available to children in school situations affected by varying degrees and types of segregation. School achievement, quality of school facilities, staff characteristics and teacher attitudes, and pupil performance and attitude have all been examined in various studies in the area. Many investigators have turned their attention to the examination of those social, economic, and political factors which influence the educational opportunity available to certain groups of children.

The conclusions drawn from these investigations have been mixed and somewhat confusing. On the whole, quality of school facilities does not seem to be a vital factor in determining school success for most pupils, and many studies have failed to find particularly significant differences in facilities provided for higher status or lower status children. It is generally believed that general life conditions, especially those found in the home, have a greater effect on the child's school performance than any other factor. However, a second important variable has recently been characterized as a "sense of environmental control"³⁵ and recognized as being almost as important as family background

in this area. A vitally important field for future research will be the origins of high or low degrees of this sense in individual children, and how this knowledge can best be utilized in improving educational achievement.

Similarly research effort has been directed at the examination of comparative opportunities in higher education for young people of various ethnic and social class backgrounds.³⁶ Here, the data are unequivocal: less privileged groups have far fewer opportunities to acquire post-secondary education than do more privileged segments of the population. Those facilities which are available to poor and minority group young people are far too often of much lower quality than those institutions which serve youngsters from higher status families. Although a comparatively great amount of concern and effort has been turned to the improvement of this situation in the past few years, substantive changes are not occurring fast enough to effect a real change in the urgency of the problem.

In reviewing briefly as we have done here the progress to date in research on the disadvantaged, I think we find in our list of weaknesses several important insights which not only apply to future research, but also have valuable implications for those of us who are more concerned with practice. Although it is certainly important to bring increased technical competence to research issues, improved research design simply cannot compensate for the lack of programs or material available for study. This is the problem we cannot avoid facing; if we can gain any general impression of the field, it is that not one program of demonstrated effectiveness has yet been successfully implemented on a large scale.

Two basic problems lie behind this disturbing failure. The first is the crippling lack of funds for meaningful large-scale innovation. In a report prepared for the Civil Rights Commission recently,³⁷ Jablonsky and I estimated that the cost of an effective effort would be one hundred billion dollars a year, which is just about double what we are presently spending on education in the United States. In a more modest estimate,³⁸ prepared for the

~~proposed for~~ the same body, David Cohen suggested that it would be necessary to spend ten billion dollars more each year than we now are spending. Even this lower figure contrasts dramatically with the one to two billion dollars yearly which in actuality are allotted to the effort to bring about quality education for disadvantaged children and youth.

However, even when money is available, we face another critical shortage: a lack of effective ideas for the best utilization of available funds. By 1966, when I worked with Wilkerson on a national survey of compensatory education programs,³⁹ we found very little that was substantially different from traditional approaches to education. In 1968 ~~with~~ Adelaide Jablonsky⁴⁰ conducted a similar survey in which she observed some few programs with promise, but their reflection in widely accepted practice was minimal. Still another study, conducted by Hawkridge in 1969,⁴¹ found a few programs associated with significant changes in the level of achievement. In review of his data, it becomes clear that he was no more successful than my colleagues and I in the identification of substantive innovations in this field so desperately in need of change.

Obviously, then, we are not putting highly creative conceptions or necessary national resources into this task. I am not impressed that we are utilizing the valuable research information which is available to us. What are some of the conceptions and research leads which we can use immediately to improve the outlook for the attainment of a higher level of effort?

Upon completing the study with Wilkerson, I concluded that more effort was needed to improve technical educational procedures designed to change cognitive function. I felt then that we greatly needed to improve formal teaching behavior. I am certainly not ready to back away from this position now, but I do think there is increasing evidence that this cognitive emphasis may not really be the most productive pursuit at this time;

the field of education and its supporting sciences may not be able to move quickly enough to make meaningful modification in cognitive functions a viable goal. Zigler has suggested that affective processes may be more malleable and that we may better be able to modify affective than cognitive functions. In addition, we have good reason to believe that appropriate changes in affective state are likely to result in significant changes in the quality of cognitive function. I must emphasize that I do not mean to abandon a concern for understanding and improving teaching. I do believe that most aspects of the teaching-learning process can be identified and refined, that this process can be systematized, and that educability is primarily a function of the quality of the learning experiences to which pupils are exposed. However, although I believe that teaching may become scientifically based, I think we may not at present be able to sufficiently identify and apply those underlying scientific principles to the task at hand. However, we do seem to have better leads toward levers for involving ourselves and pupil environments in the changing attitudes, feelings, motivation, and task involvement.

Without demeaning the cognitive aspect, I think we may still conclude that effort directed at better understanding and more appropriately designing and controlling the social-psychological conditions in which learning occurs may, in the present period, be a more appropriate strategy. This rationale, viewed in light of the current socio-political scene, is obvious, and lends additional support for this position. Many argue that formal education, divorced from the main currents of the life experiences of our pupils, is perceived by them as irrelevant, and functions to retard academic development. As a result, such issues as ethnic studies, participatory democracy, and decentralization are seen as possible levers for making the learning experience more relevant to the conditions of life, and more conducive to success for greater numbers and varieties of students.

Once we have conceded the importance of social and psychological conditions to

success in learning, we will find ourselves with a valuable tool if we extend our use of it far enough. In the past, our concern with analysis of pupils has been characterized by a heavy emphasis on identification of levels of achievement. What we need now is greater qualitative analysis of learning behaviors, combined with the matching of this broader range of characteristics to the design of appropriate learning environments and experiences. Of course, this is not a simple task, since we know very little about the ecological or psychological environments of our pupils. Clinical psychology has at least provided us with models for investigating psychological environments, that is, the way in which the individual perceives his effective environment; but this expertise has not yet been systematically applied to education. The study of ecological environments, that is, the physical, social, and political conditions of the surroundings in which learning occurs, is still in its infancy. Yet it is increasingly clear to me that differences in achievement are more related to the circumstances and conditions in which learning occurs and the extent to which the environment supports the mastery of the learning task than they are a function of variations in measured intelligence. Looking at these variations in intelligence we don't see a sufficient relationship between alleged potential and actual performance to say that intelligence as we know how to measure it is the sole or most important factor; but the conditions under which learning occurs, the degree of support they provide for learning--these appear to be very important indeed.

Finally, I would like to turn to a completely different area of education and talk for a moment about the importance of the politics of education. I think all of us with any experience in the field know the difficulties to be encountered here, but perhaps we underestimate their importance, or underemphasize the problem out of fear of giving offense. But we must see the situation for what it is: from over-bureaucratized procedures all the way to the complacency and resistance to change of which any establishment is at least

sometimes guilty, we face a range of problems among educators themselves as great as those we face with pupils. It is vitally important that we bring about changes in attitudes, and changes in administrative structure to ensure that those ultimately responsible for decision making and governing of the educational system are, if not in the vanguard of innovators, at least responsive to new ideas and willing to depart from tradition and established procedures wherever there is hope that change may effect improvement.

Dealing with this problem may imply a variety of measures. We could start by insisting that educators at all levels be held more directly accountable for their success or failure to the communities, parent, and children whom they are responsible for serving. Adequate systems of accountability have not been developed in either privileged or underprivileged communities. Teachers and schools have been free to plod along year after year with little systematic attention given to whether satisfactory products are being wrought with the human material received. Protests and professional concern have resulted in some effort to improve the school's effectiveness. But nowhere have parents been able to say "No!" to the current crop of experimenters or practitioners. Nowhere have they been able to sit down with authority to participate in the review of institutional evaluation data and in the making of decisions about new directions and alternative strategies. Under these conditions the school has been free to conclude that alleged or acknowledged poor results are due to inadequacies in the children and in their homes, and not in the schools and their teachers.

Participation in the planning and evaluation of services rendered by colleagues and clients--or, in the cases of school children, the clients' parents--does not mean a loss of professionalism, as some teachers fear. Professionalism is based on specialized competence; on independence of judgment concerning professional matters; on quality

of service rendered, and on responsibility for that competence, that independence of judgment, and that service. The concern with professionalism among educators has tended to favor the former two to the neglect of the latter two. Quality of service has not been a critical concern and responsibility for the outcome has been essentially ignored.

It is also necessary that we give far greater attention to the role of students in the direction of their own education, recognizing that "student power" does not necessarily mean instant anarchy, and that students have a great deal of intuitive wisdom about what is best for their own development. The educational establishment, of all professions, should be most ready to acknowledge that it has much to learn from a great variety of sources outside itself, and educators should be so aware of the vital importance of their task to the survival of society, that they will be willing to take any reasonable risk in the hope of moving closer to the goal of a rewarding education for every member of that society.

FOOTNOTES

- 1 This is a revised copy of a paper delivered at a conference on "Models and Methods in Research on Compensatory Education: A Conversation in the Discipline" at the State University at Albany. New York, April 9-10, 1970.
- 2 Kennedy, W. A., Van De Riet, Vernon, and White, James C., Jr. A Normative Sample of Intelligence and Achievement of Negro Elementary School Children in the Southeastern United States. Chicago, Illinois: Society for Research in Child Development, Serial No. 90, 28 (6), 1963
- 3 Jensen, Arthur R. "Social Class, Race, and Genetics: Implications for Education," American Educational Research Association Journal, 5: 1-42, 1968
- 4 Hunt, J. McVicker, Intelligence and Experience. New York: Ronald Press, 1961.
- 5 IRCD Bulletin, 5 (4), Fall 1969. [See especially "Behavior-Genetic Analysis and Its Biosocial Consequences" by Jerry Hirsch (pp. 3-4; 16-20). This article also appears in the February, 1970 issue of Seminars in Psychiatry, Henry M. Stratton, Inc., Publisher.]
- 6 Cleary, T. Anne, and Hilton, Thomas L. "An Investigation of Item Bias," College Entrance Examination Board Research and Development Report 65-6, No. 12. Princeton, N. J.: Educational Testing Service, 1966. (ED 011 267)
- 7 Stodolsky, Susan S., and Lesser Gerald, S. Learning Patterns in the Disadvantaged. New York: Yeshiva University, ERIC Information Retrieval Center on the Disadvantaged, 1967. (ED 012 291)
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- 9 Smilansky, Sarah. "Promotion of Preschool, 'Culturally Deprived' Children Through Dramatic Play," American Journal of Orthopsychiatry, 35: 201, 1965
- 10 Zigler, Edward. "Mental Retardation: Current Issues and Approaches," in Hoffman, Lois W. and Hoffman, Martin L., eds. Review of Child Development Research. New York: Russell Sage Foundation, 1966. pp. 107-168
- 11 Bloom, Benjamin S. Stability and Change in Human Characteristics. New York: John Wiley, 1965
- 12 Jensen, Arthur R. "How Much Can We Boost IQ and Scholastic Achievement?" Harvard Educational Review, Vol. 39, #1, Winter 1969, pp 1-123.
- 13 IRCD Bulletin, 5 (4), Fall 1969. Includes several such articles and an extensive bibliography.
- 14 Pringle, M. L. Kellner and Tanner, Margaret. "The Effects of Early Deprivation on Speech Development: A Comparative Study of Four Year Olds in a Nursery School and in Residential Nurseries." Language and Speech, Vol. 1, October-December 1958, pp. 269-287

¹⁵Two examples are:

Templon, Mildred C. "Norms on Screening Test of Articulation for Ages Three Through Eight." Journal of Speech and Hearing Disorders, Vol. 18, December 1953, pp. 323-331

Irwin, Orvis C. "Infant Speech: The Effect of Family Occupational Status and of Age on Use of Sound Types." Journal of Speech and Hearing Disorders, Vol. 13, September 1948, pp. 224-226

¹⁶Anastasi, Anne and D'Angelo, Rita Y. "A Comparison of Negro and White Preschool Children in Language Development and Goodenough Draw-A-Man IQ," Pedagogical Seminary and Journal of Genetic Psychology (Journal of Genetic Psychology), Vol. 81, December 1952, pp. 147-165

¹⁷Hilliard, George H. and Troxwell, Eleanor. "Informational Background as a Factor in Reading Readiness and Reading Progress." Elementary School Journal, Vol. 38, December 1957, pp. 255-263

¹⁸Bernstein, Basil. "Social Class and Linguistic Development: A Theory of Social Learning," Chapt. 24, pp. 288-314 in Halsey, A. H.; Floud, J. and Anderson, C. A., eds. Education, Economy and Society. New York: Free Press of Glencoe, Inc. 1961

¹⁹Riessman, Frank. The Culturally Deprived Child. New York: Harper & Row, 1962

²⁰ibid.

²¹See, for example:

Jensen, Arthur R. "How Much Can We Boost IQ and Scholastic Achievement?"
Deutsch, Martin and Brown, Bert. "Social Influences in Negro-White Intelligence Differences." Journal of Social Issues, Vol 20, April 1964. pp. 24-35

²²One example is:

Sewel, William H.; Haller, Archie O. and Straus, Murray A. "Social Status and Educational and Occupational Aspiration." American Sociological Review. Vol. 22, February 1957 pp. 67-73

²³Coleman, James S. and others. Equality of Educational Opportunity. Washington, D.C.: U.S. Government Printing Office, 1966.

²⁴For a Collection of this literature see:

Goldstein, Bernard. Low Income Youth in Urban Areas, A Critical Review of the Literature. New York: Holt, Rinehart and Winston 1967. (The "Annotated References for Chapter One" [Family of Orientation], are especially relevant.)

- 25 For the most complete review of the research in this area, see:
St. John, Nancy H. Minority Group Performance Under Various Conditions of School Ethnic and Economic Integration: A Review of Research. New York: Teachers College, Columbia University, ERIC Clearinghouse on the Disadvantaged. 1968 (ED 021 945)
- 26 Coleman, James S., 1966
- 27 St. John, Nancy H., 1968
- 28 The work of Lilienfeld and Pasamanick during the 1950's is still among the best concerning possible effects of various pregnancy experiences. Two of the best references include: Pasamanick, Benjamin, and Lilienfeld, A. M. "Association of Maternal and Fetal Factors with the Development of Mental Deficiency, I: Abnormalities in the Prenatal and Perinatal periods," Journal of the American Medical Association, 159: 155, 1955.
- 29 No investigator has been more critical of the lack of research in this area than Birch, who recently published a comprehensive and incisive volume emphasizing which specific mechanisms actually affect performance. The book's particular strength is its inclusion of references to research which substantiates what has been assumed for some time. See: Birch, Herbert G., and Gussov, Joan D. The Disadvantaged Child: Health, Nutrition and School Failure. New York: Harcourt, Brace and World, 1970.
- 30 Moynihan, Daniel P. and Barton, Paul. The Negro Family: The Case for National Action. Washington, D.C.: U.S. Office of Policy Planning and Research, 1965
- 31 Lewis, Hylan. "Culture, Class and Family Life Among Low-Income Urban Negroes," in Employment, Race, and Poverty. New York: Harcourt, Brace and World, 1967
- 32 Frazier, E. Franklin. The Negro in the United States. Revised edition. Toronto, Ontario: McMillan Co., 1957
- Frazier, E. Franklin. The Black Bourgeoisie. Glencoe, Illinois: The Free Press, 1967
- 33 Two examples are:
Lewis, Oscar. The Children of Sanchez. New York: Random House, 1961
- Lewis, Oscar. La Vida: A Puerto Rican Family in the Culture of Poverty--San Juan and New York. New York: Random House, 1966
- 34 The work of Robert Hess and his associates done at the Urban Child Study Center at the University of Chicago should be noted. A representative piece is:
Hess, Robert D. and Shipman, Virginia C. Maternal Attitudes Toward the School and The Role of Pupil: Some Class Comparisons. Paper presented at the 5th Work Conference on Curriculum and Teaching in Depressed Urban Areas, Teachers College, Columbia University, 1966.
- 35 Coleman, James S., 1966

- 36 Gordon, E. W. Opportunities in Higher Education for Socially Disadvantaged Youth. Paper presented at the Work Conference on Guidance for School-College Transition, Teachers College, Columbia University. 1964
- 37 Gordon, E. W. and Jablonsky, Adelaide. "Compensatory Education in the Equalization of Educational Opportunity: A Summary Evaluation of Compensatory Education, Some Models for its Impaired Application and Some Projected Costs of their Implementation, a Report to the U.S. Commission on Civil Rights" New York: Yeshiva University, ERIC Information Retrieval Center on the Disadvantaged, 1967
- 38 Cohen, David K. "Policy for the Public Schools; Compensation or Integration." Paper presented at the National Conference on Equal Educational Opportunity in America's Cities. (Washington, D.C., November 16-18, 1967)
- 39 Gordon, E. W. and Wilkerson, Doxey A. Compensatory Education for the Disadvantaged: Programs and Practices, Preschool Through College. New York: College Entrance Examination Board, 1966
- 40 Jablonsky, Adelaide. "Some Trends in Education for the Disadvantaged." IRCD Bulletin, Vol. 4 (2), March, 1968. New York: Yeshiva University, ERIC Clearinghouse on the Disadvantaged.
- 41 Hawkrige, David G. and others. A Study of Further Selected Exemplary Programs for the Education of Disadvantaged Children. Palo Alto, California: American Institute for Research in the Behavioral Sciences, 1969

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