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ABSTRACT

Einstein, translated into a philosophy of education, views the factors governing man's qualities--his genes, his parents, his neighborhood, his church, his country, his world--as relative forces in his development, susceptible to infinite growth, and depending upon various combinations of experience. These experiences, in turn, depend upon nature of the social structures within which he lives--upon the quality of his neighborhood, his school system, his church, and his government. Recognition of the differences among these life styles determines the quality of educational planning, of testing programs and student assessment, of teacher attitudes, of curriculum subject matter, of classroom structures and student groupings, and of educational life in the community, as well as in the self-contained classroom. What follows in this book is an attempt to describe such educational processes as comprehensive planning, student assessment, school and classroom structures, and teacher attitudes, in the light of this rationale, as such innovations have been noted across the country by one observer during the years since the enactment of the Civil Rights Act of 1964 and the Elementary and Secondary Education Act of 1965. (Author/JM)

Education for Einstein's World

by

Marie Myles Barry

COUNCIL FOR AMERICAN UNITY
New York, N.Y.

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For

MOZELL HILL

WHO, IN LIFE AND DEATH, EMBRACES ALL OF US.

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Introduction

THE DIRECTORS of the Council for American Unity have been concerned for some time at the failure of American education to live up to the potentialities it was afforded when the U.S. Supreme Court in 1954 struck down Jim Crow education. Here the American schools were provided an opportunity to play a directive role in the society. They had the chance to wipe out the trauma of the past, to bring to bear all their resources to achieve the American Dream by overcoming the racism which pervaded the culture.

Here was the chance to bring all the children of all the people of the community into a common experience and a common education of shared interaction, the cement to hold the country together in a great democratic consensus. In a sense, this opportunity was the fulfillment of the intergroup educator's ideal—that if people got to know one another they would come to accept and perhaps like one another. We doted on the Rodgers and Hammerstein lyric "Getting to know you—getting to know all about you."

In the first few instances this desegregation of children seemed to work. Then, as time went on, minority parents found that the "mixing of the bodies," as desegregation is sometimes called, had not made much difference. As a result there has been a growing hostility on the part of both majority and minority populations toward the schools. This has been reflected in the attitudes of the black children quite often, and disruption, alienation, and overt hostility have resulted. As such behavior has manifested itself, the parents of the white children have reacted by withdrawing them from the public schools and creating segregated private schools, and racial polarization has developed. Demands that local schools in minority neighborhoods be returned to the black people, in order that they may widen a power base on which to confront the white community, have grown.

In pondering this issue, the Council felt that a service could be rendered if some social scientist, working in the field of desegregation in the public schools, took a look at what has been happening and made an in-

terpretation of it for the education profession. Fortunately, we have such an individual on our own board in the person of Dr. Marie Myles Barry. Her broad experience in education, in community organization, and in research in business and industry, as well as her academic pursuits, provides a background from which to draw observations and interpretations of current educational philosophy and practice.

Dr. Barry is saying that desegregation is serving to bring American educators to the realization that they cannot solve the problems of desegregation without dealing with modern problems that would confront them even were desegregation not an issue. She is telling us that the correction of racial isolation cannot be accomplished creatively unless the totality of American education is reassessed. It cannot be brought off with an educational philosophy based on assumptions, mythologies, and rituals made obsolete by modern science, particularly by the work of Albert Einstein, whose theory of relativity applies to people as it does to planets.

Hers is not the only voice calling for innovation in public education. Four authorities have recently indicated that we have approached a watershed point in American culture. A new book by the dean of American educators, Ernest O. Melby, entitled *Education II—The Social Imperative,* maintains that we are entering a new era in education. Charles Silberman, in *Crisis in the Classroom,* was impressed with the revolution in education affected by new teacher training methods in the state of North Dakota. James Coleman, in his study of the effects of desegregation, pointed out that if the community and social class are held constant, inputs of money, better equipment, better trained teachers, better libraries, and more "hardware" made little difference in the educational achievement of children in American schools. Ivan Illich would "deschool society," so deadening has been the impact of our public education in his estimation.

Education for Einstein's World makes it clear that desegregation can create new and positive human relationships—even on a voluntary basis—in public schools. But it has to be done with a different sort of education from that of the past. The book makes clear what sort of education that should be. It is an education with a high degree of individuality, mingled with wide social experience among different cultural groups. It is an education which moves away from fixed and static relationships to relative and dynamic ones. It is an education which provides a continuous recycling of experience to increasingly higher levels of growth and development. It is an education which moves away from static concepts borrowed from the linear science of pre-Einstein days to an education based on concepts of relativity and operated along the lines of Alvin Toffler's concept of "Ad-hocracy": by inter-disciplinary task forces, teams of teachers, and other such innovations, constantly forming and reforming to accomplish specific tasks and constantly contributing the accumulation of their experimentation into the main stream of academic endeavor.

During a recent desegregation study, a representative of the Italo-

American community was astounded to learn that the schools had also failed his neighborhood, and that his children, now three generations removed from their European roots, still were far below national norms in reading and other measures of achievement. In his dismay, he exclaimed, "Thank God! One thing we are going to get out of this study is better education for all children."

If this happens, the travail will have been worth the price. It could just be that the contributions made by the corrections of racial isolation will be that of reforming all public education. If Dr. Barry's thesis is correct, this will happen.

DAN W. DODSON

Chapter One

Forces for Change In American Education

A NEW CHAPTER in American education began with the Civil Rights Act of 1964. Title VI of that Act mandated the end of public school segregation by law—*je jure*—and the active desegregation of such school systems, where this applied in the southern United States, to eliminate racial isolation. The penalty for non-compliance was the withdrawal of federal funds for education from those recalcitrant districts. Title IV of the Act provided for assistance in "coping with the problems occasioned by desegregation" to the superintendents and boards of education in districts that complied. Funds for these purposes were available to state education departments, colleges and universities, and local school districts. However, it was the Elementary and Secondary Education Act of 1965 which, for the first time since monies were made available for vocational education under the Smith-Hughes Act of 1917, provided significant federal funds to local school districts. These funds under ESEA were allocated primarily for compensatory education for the so-called "culturally deprived" or "educationally disadvantaged" and for innovations in education that might contribute to the solutions of the problems created by their social isolation.

It does not lie within the scope of this volume to report with authority the full impact of these two pieces of legislation on American public school education. But that story should long be the subject for Ph.D. theses. What is described here, however, directly reflects the efforts that have been made by school districts to utilize these funds to the best advantage and to employ these resources to restructure their schools, not only to cope with the problems occasioned by desegregation, but to improve the quality of education for all children—a cliché for which no adequate paraphrase has been found. Managed to the greatest advantage, the desegregation processes and basic educational innovation inevitably lead to a recognition of their common goals and to a synthesis of strategies.

While desegregation plans began to develop in the southern United States—based primarily on ways in which both black and white children

would be housed together for the first time—evidence of the general inadequacy of past educational patterns and practices began to accumulate. Popular and professional literature reported the failure of American education to teach children to read, to equip young people for the world of work, to develop the human values necessary to our survival in the world of Einstein. The experiences of the black child in our educational system dramatized these weaknesses, visited not only upon that black child, but upon all our children.

To cope with the processes of change necessary to adjust to this modern world is to rethink the human value systems from which these past practices derived. It is the difference between the worlds of Euclid and Newton and that of Einstein. The learning process, translated from Euclid, posits "intelligence" as an absolute—like the eternal dichotomy of two parallel lines—a fixed quality of personality determined by the genes. Within these limits little can be done to alter the child's ability to learn if, for instance, he is born to ignorant parents on the wrong side of the tracks. Learning theory derived from Newton's mechanism maintains that learning takes place in an orderly fashion, if only the child's environment—preferably under laboratory conditions—can be controlled. Thus, the brain of a child is a blank tablet to be written upon—for good or for ill—by parent and teacher and the immediate environment in which he finds himself. From such bases came assessments of personality and ability, standardized tests, track systems for teaching, programmed instruction, and generally static educational practices devised to develop man-as-robot.

Einstein, translated into a philosophy of education, views the factors governing man's qualities—his genes, his parents, his neighborhood, his church, his country, his world—as relative forces in his development, susceptible to infinite growth, depending upon various combinations and permutations of experience. These experiences, in turn, depend upon the *nature* of the social structures within which he lives—upon the *quality* of his neighborhood, his school system, his church, his government. "Intelligence" becomes infinitely modifiable, capable of development in varying degrees of rate and sequence, depending upon the opportunities which modern societies must provide if, indeed, our citizens of the world of today and tomorrow are to learn to cope and to survive.

Recognition of the differences among these life styles determines the quality of educational planning, of testing programs and student assessment, of teacher attitudes, of curriculum subject matter, of classroom structures and student groupings, of educational life in the community, as well as in the self-contained classroom. In effect, this adaptation to Einstein's world may serve to bridge what, in the 1920s and 1930s, was called "cultural lag," i.e., the hiatus between the discoveries of the physical scientist in communication and transportation and the findings of the social scientist in designs for human relationships through which to cope with this physical world.

What follows is an attempt to describe such educational processes as comprehensive planning, student assessment, school and classroom structures, and teacher attitudes, in the light of this rationale, as such innovations have been noted across the country by one observer during the years since the enactment of the Civil Rights Act of 1964 and the Elementary and Secondary Education Act of 1965.

Some experiences in desegregating the public schools of America over the past six years, instigated by the Civil Rights Act, have provided a base for hope, not only that racial isolation may be eliminated, but that the blatant inadequacy of past educational practices for the world of today may be remedied. But these solutions lie deep in an awareness of the roles that the history and philosophy of education play in determining our classroom practices. They offer no easy, simple-minded panaceas, no placebos. They demand searching answers to what it means to educate parents and children to Einstein's world, especially when the worlds of Euclid and Newton still dominate our social lives. It means an end to regimentation and over-simplification. It means creating designs for sustained educational planning for the whole educational establishment—the whole school district, the whole state, the whole country. It demands the mapping of strategies for change that will make every school building in a given school system equally rich in opportunities for every child, as he learns to cope with life with satisfaction. Such a concept demands, for instance, the end of the traditional neighborhood school, the resources of which have been determined by the socio-economic level of the surrounding residential area.

The experiences of the black child in the predominantly white middle class school have dramatized the educational inadequacies to which all our children have been heirs. As the black heritage has been discounted or rejected, so, too, have the cultures of the Irish, the Jew, the Italian, the Latino, the Pole—and the WASP born on the wrong side of the tracks. As the black youth has been denied opportunity for employment—out of ignorance of the world of work, lack of skill, and prejudice—so, too, have his fellows in other ethnic and socio-economic groups been deprived. The solution to our problems of racial isolation lies in the recognition of the depth and the extent to which these conditions have been common to us all.

The base for our current educational failures has been our inability to adjust educational practices to the world created by the physical scientist, our ineptitude in bridging, with the lessons of history and with modern tools, the chasm between the inventions of the physical scientist and the changes in human values demanded by Marshal McLuhan's "global village." In the world of "now," where change is the only constant, where our children must learn that mobility is the style of modern man, interethnic experience from the earliest years is essential. New modes of communication must be created to fit the new media. New information, insights, and skills are imperative for a continuing economic livelihood. New value

systems in the arts and humanities must reinforce more profoundly than ever before the tenet that all men—divergent though we be—are brothers.

While all practitioners of education are not conscious of such a rationale, the most hopeful single sign, after six years of observation of education in the United States, is that these manifestations of adjustment to change are everywhere evident—from Newton, Massachusetts to Tacoma, Washington and from Evanston, Illinois to New Albany, Mississippi. Deans of schools of education, college professors, superintendents of schools, principals, and teachers have addressed themselves with enthusiasm to the designing of new school buildings, new curricular materials, new classroom groupings of students, and new concepts of how children learn and what they need to be taught. What follows reflects some of the fruits of such efforts.

In sum, the operating concepts by which these innovations are conceived range thus:

1. Comprehensive planning for all school districts and all children in a given school district vis-à-vis a school-by-school allotment of funds and resources, which, in the past, reflected the socio-economic character of the neighborhood.
2. Individualized instruction vis-à-vis track systems.
3. The individual viewed as constantly changing, infinitely growing in comprehension vis-à-vis the view of heredity-bound man, doomed to live out a fate preordained by factors beyond his or society's control.
4. Varieties of instruments and techniques for student assessment vis-à-vis the scores of standardized tests as absolutes and constants.
5. The need for experience in interethnic and intergroup relations among both faculty and students vis-à-vis the preservation of primary group relationships and ethnic isolation.
6. Professional development for administrators and teachers, as a continuous, long-range function of inservice training vis-à-vis the assumption that college education certification is, in itself, the ultimate badge of professional competence.
7. Team teaching experiences for flexibility of student and instructor vis-à-vis teacher isolation in the self-contained classroom.
8. Teaching through experiential-developmental techniques vis-à-vis the structures and mechanisms of rote learning and highly programmed learning alone.
9. Student-to-student and student-to-faculty programs to provide joint decision-making vis-à-vis the faculty-selected student patterns of the past.
10. Parent and community participation in determining educational needs, in setting educational objectives for the school district as a whole, and in establishing criteria for the evaluation of teaching processes vis-à-vis the mandating of these functions and decisions by the education establishment alone.
11. Designs for administrative and instructional accountability based on

the functioning of the school system as a whole vis-à-vis the fragmentation and over-simplification of accountability for teacher performance alone.

Addressed to the superintendent, this blueprint suggests: designs for comprehensive planning as a major strategy for change; the instruments and techniques for student assessment and the counseling services necessary for more relevant career development; innovations in curriculum to provide more information and insights into the past, the present, and the future; training programs for administrators and teachers based on the constant need for strategies for and techniques by which to cope with change; channels for student-to-student and student-to-faculty exchanges and decision-making; organizations for parent and community programs designed for continuing participation in all educational planning processes; designs for comprehensive planning to assess the effectiveness of the teaching processes through the accountability of the education establishment and the community as a whole.

Chapter Two

Model From Mississippi

IN SEPTEMBER 1968, Superintendent J. Bryant Smith, Jr. began a program of educational innovation in grades one through five of the schools of New Albany, Mississippi. In September 1969, the middle and high schools in the district were similarly reorganized. The heart of these innovations lay in the concept of individualized instruction, with flexible student grouping and team teaching to complement it. That this two-phase plan also involved the desegregation of New Albany's public schools was no accident.

The day that all the black children and all their black teachers, from the first five grades of the all-black school, joined their fellows in the previously all-white schools of New Albany marked a new chapter in the history of education in Mississippi—if not in the nation. It was the culmination of three years of analysis and planning instigated by the Civil Rights Act of 1964.

Smith's first step toward that milestone began in the spring of 1966 in a meeting with some fifteen other Mississippi superintendents. This conclave, held at the University of Mississippi, was sponsored by Title IV of the Civil Rights Act, a program designed to assist superintendents and their boards of education in coping with the problems occasioned by desegregation. The interchanges during this three-day conference led to two conclusions: first, that strategies for change should be planned district-wide, instead of grade-by-grade, or school-by-school; and second, that there was a corollary between the processes of desegregation and certain innovations in education then being reported from school districts in other parts of the country.

During the year that followed, Smith and three of his superintendent colleagues applied for a grant under Title III of the Elementary and Secondary Education Act to explore the educational innovations made possible by these funds. In designing the Title III ESEA program, the superintendents decided, with consultants Dr. Ann Grooms and Dr. Roderick Hilsinger of the Institute for the Development of Educational Activities, to visit and assess for relevance to them such innovative programs. As a re-

sult, the superintendents and members of their boards of education visited such school districts as Nova, Florida; Newton, Massachusetts; Pittsburgh, Pennsylvania; and Evanston, Illinois.

This experience led Smith to the conclusion that it would be possible for him to employ the innovations of individualized instruction, flexible student grouping, and team teaching to improve education in New Albany and, at the same time, to move toward the desegregation of his schools. He found that, of the districts visited, Evanston, Illinois most closely paralleled the New Albany situation—not only because of the quality of the educational program he observed there, but because the successful desegregation of children was also at work.

With funds from Title IV of the Civil Rights Act, he proceeded, in the late summer of 1968, to provide three weeks of preservice training for all the teachers instructing grades one through five. Eight black teachers previously employed in these grades at the all-black school became part of the program with their white peers. The training was based on workshops designed to provide and project experience in moving from the mass instruction of the traditional self-contained classroom, where, day after day one teacher presided over thirty students, to the flexibility of the team teaching necessary to individualize instruction.

Among the new patterns demanded by these changes in teacher-role were constant planning with peers, new types of team assessment of student progress, and the development of the wide range of new materials necessary to reinforce individual student interest and skills. The teacher inservice training program during the school year 1968-69 provided an exchange between the administrators and the teachers of Evanston and those of New Albany. Thus, Evanston teachers worked with New Albany teachers in their classrooms for periods of two weeks, while New Albany teachers went to Evanston to share teaching roles with their counterparts there.

At the end of the first year, the white children not only sustained their previous achievement scores on standardized tests, but somewhat improved. The average score for the black children was two grades above their previous scores. The average daily attendance for the white schools, before desegregation, had been 97%. That in the black schools had been 68%. At the end of the first year of desegregation, the average daily attendance for all elementary school children was 97%. During the summer of 1969, Title I of the Elementary and Secondary Education Act funded a program for the "disadvantaged" in the New Albany elementary schools. A desegregated student body, of which 60% were black children, was carried out in a community in which 70% of the children are white and in which attendance was voluntary.

These statistics again indicate that, in the desegregated school, achievement scores for whites are not only sustained but improved and that black student scores are significantly improved. Moreover, the fact that black students regularly attended the desegregated schools exploded a previously

prevalent myth that low attendance records at the black school reflected a "different value system" in which the black parent was less concerned than the white for the education of his child. That white parents will send their children to a predominantly black school, when those children are getting quality education, was proved by the attendance at the Title I ESEA summer session.

The New Albany story could be repeated in school districts across the country, were time and attention given to its lessons. And the first lesson is that, like John Dewey's "whole" child, strategies for educational change must embrace the "whole" school district.

Thus, Smith conceived the processes of desegregation and innovation as a district-wide change, encompassing all administrators, teachers, and children to the ultimate end of improved education and desegregation for every school. This is in contrast to some other superintendents who belabored the minimum standards for compliance outlined in the early guidelines for Title VI of the Civil Rights Act. Such plans assigned one teacher across racial lines for each school in the district and stipulated a minimum percentage of desegregation for black children in each district, first under "freedom of choice," later under percentages based on black-white community ratios and the original percentages of black students attending previously white schools.

The New Albany experience and others comparable to it suggest that the processes of change, for either educational innovation or desegregation for its own sake, cannot be effectively initiated or sustained by fragmented, school-by-school planning. The superintendent of schools and his board of education must first acknowledge the need for change. If they are not prepared to recognize that prevalent educational practices, such as those described by Charles Silberman in *Crisis in the Classroom,* are responsible for chronic illiteracy, high drop-out rates and the hostility of our youth, little effective planning can be done.

But the analysis of the causes of these educational failures with "hard" data is no easy task. It leads immediately to a confrontation with history, philosophy, and the differences between the world of Euclid and that of Einstein. In brief, education through mass-production patterns may have worked at a time when our social and economic patterns could also be thus compartmentalized. When the compartments no longer obtain and education for individual ego strength is the order of the day, new structures for developing new social, economic, end educational values are imperative.

Throughout the recent dialogues among U.S. Office of Education administrators, certain concepts keep recurring. "Comprehensive planning" is among the magic phrases. Others are "assessment of educational needs," the "setting of educational objectives," the "establishing of criteria for evaluation." Many such efforts at both the level of the state departments of education and that of the school district have been made. An unpublished study of the interrelationships of these functions, based on designs for state

department of education plans for assessments of need under Title III ESEA suggests that the ingredients of research consistent with the innovations will, indeed, create the schools necessary for the world of tomorrow.

Among the generalizations drawn from this study are these:

First, a valid assessment of educational needs should be long-range and on-going. It should be inductive, rather than deductive; longitudinal, rather than cross-sectional. In many respects these dimensions of design mark the difference between the absolutism of traditional studies and that of the relativity of our present world. It tacitly discards the traditional premise that what is discovered to be true of education at a given moment in time has eternal verity. It provides for the concept of change as the only constant and for the projection of future needs different from those of the present.

Second, the design for an assessment of educational needs should include studies of the opinions of all constituents, including the disaffected parent and the drop-out boy.

Third, the findings of the assessment of educational needs should serve as the base for the definition of objectives; and both the findings and the assessment *and* the objectives should determine the criteria for evaluation. (Too often, evaluation instruments have been designed without concern for either needs or objectives.) A constant recycling of these functions of assessment, of definition of objectives, and of evaluation provides insights and strategies that will indeed meet the challenge for educational change.

On the basis of such principles, the Alabama state department of education reported at the end of its first year of research that individualized instruction, flexible student grouping, and team teaching were among the more frequently expressed needs. Since these are the three concepts forming the basis of the New Albany program, and among the recurring themes in discussions of educational innovation, they deserve careful scrutiny.

Experience has shown that the order in which these three constructs are developed is essential to the processes of effective change. To explore the need for individualization is to confront the need to reappraise all traditional patterns of classroom structure; true individualization cannot be achieved in the self-contained classroom or in the track system. Individualization—if it is not to deteriorate into complete *laissez-faire* for the child—demands flexible student grouping, and both these processes demand the flexibility of instruction made possible through team teaching.

Before discussing the interrelationships of these three innovations of individualization, flexible student grouping, and team teaching, a note on *laissez-faire*: there are those educators who, convinced of the inadequacies of past procedures, maintain that, given the proper ambience and materials, the child will learn on his own. The rationale for the present statement rejects this over-simplification of the learning-teaching relationship, subscribing to the premise that the child needs the more experienced adult to direct, stimulate, and share his educational adventures.

To comprehend the significance of the current trend toward individualized instruction it is necessary to understand the evils of the traditional track system. The introductory chapters of *The Nongraded Elementary School* by John Goodland and Robert Anderson contain a definitive description of the infinite variety of individual interests, skills, and potential for change. By the same token, John Holt, Charles Silberman, Jonathan Kozol, Paul Goodman, Edgar Friedenberg, Herbert Kohl, and George Dennison have described the wretched absurdity of these past patterns.

A classic example of the Goodland-Anderson thesis prevailed in a junior high school in northern New York state some years ago. At the end of the sixth grade, a test or tests were administered to all children. From the scores on these tests, the children were assigned to four groups representing four "levels of intelligence." Of course everyone—child and parent, as well as administrator and teacher—knew which group was made up of the "dumb ones" and which the "bright ones."

To a young teacher, just graduated from a liberal arts college, with a minimum of teacher training, learning to translate this academic experience into next steps in a child's progress in junior high school English was the first priority. The first objective in this acculturation was to conform to existing educational methods, curriculums, and patterns, including the existing outlines for lesson plans and homogeneous grouping. At that time, no questions were raised regarding the validity of the tests by which these children were grouped or what standardized or other tests were the instruments of these decisions. In the absence of a guidance counselor it can only be presumed, from the present vantage point, that the high school Latin-French teacher, considered the most sophisticated of the faculty because she had spent a year at the Sorbonne, administered whatever the tests and, from her position of authority, made the ultimate decisions regarding which children went into which group.

Throughout three years of junior high school there was no retesting or regrouping of these children. In a departmentalized program, where the basic subjects, such as English, mathematics, Social Studies, and science, were taught by specialists in each field, the bright ones, like the dumb ones, spent three years with the same group for all subjects. Standard text books were the only materials in general use. The same "prose and poetry" texts were used for all levels, differentiation of instruction depending upon the teacher's ability to water down *Ivanhoe* and *Silas Marner* in order to reach the dumb ones.

Formal lesson plans were built by dividing and scheduling text book assignments so that the required books would be "covered" by the end of school in June. Students who failed the final examinations repeated the same grade the following year. At the end of the ninth grade, a decision was made by the principal (who administered the entire school, grades one through twelve) as to whether a given child should repeat the ninth grade in its entirety or go on to the tenth grade and high school. This watershed

separated the dumb ones from the bright ones for the remaining three years of public schooling and the rest of their lives. Those who entered high school took college entrance subjects: Latin, French, mathematics, science, history and English. That this was an iron-mining town beset by the depression, where athletic scholarships given by The Company provided the only significant funds necessary for students to attend college, did not deter the board of education from imposing these limitations of economic opportunity with such a curriculum.

Even to a neophyte teacher such arrangements were disquieting. That the junior high school dumb ones never saw their peers in the bright group perform well raised grave questions of lost opportunity. Even in this careful compartmentalization, with teacher and text the sources of all authority, the idea that children learn from one another intruded. It was not difficult to sense that the disciplinary problems and the apparent indifference to learning among the dumb ones was the result of insult to their egos, frustration to their hopes, and the inevitable defensiveness the labels of tracking had visited upon them.

In the self-contained classroom, with from twenty (bright) to thirty-five (dumb) children, the teacher, programmed to progress through assigned text books, cannot individualize instruction. To observe what is now happening in classrooms like those of New Albany is to view solutions to the educational problems created by those past patterns. If nothing more than the change in the rules of the game of "discipline" were at work, such innovations would be justified. With individualization and flexibility, the sit-up-straight-and-be-quiet game is no longer feasible. The teacher-as-master-authoritarian, looking for infractions to prove her one-up-manship, only elicits the greatest student ingenuity to test her command; the teacher-as-guide-to-learning creates, with mutual respect, a student sense of dignity and responsibility and completely new ground rules.

The educational patterns described above were experienced thirty years ago. Unfortunately, they are not just history. They prevail throughout the country today in essentially the same form.

During one of the early phases of the preservice training program in New Albany, the teachers were asked to discuss together the meaning of individualized instruction, continuous student progress and nongradedness and to assess the value of such innovation. Finally consensus was reached: such departures from past patterns were desirable. The teachers were then asked to consider the ways in which individualization could be structured within the schools. These discussions led to teacher-decisions regarding flexible grouping and how to accomplish it.

Meanwhile, superintendents in other school districts in the southern United States, faced with the problems of desegregation, turned to the track system as the major basis for student grouping. Since, at this point in time in that part of the country, black students do not generally score as high as white students on standardized tests, they may thus be segregated

within schools. Such practices have raised legal questions in the courts, as black parents have protested such grouping as just another aspect of *de facto* segregation. From one point of view, such grouping for track systems is not only discriminatory, but a regression in educational practice doomed to visit inferior education on all the children trapped in these structures.

To provide flexible grouping for student growth demands new insights and new skills not only for teachers, but for administrators and superintendents as well. It demands new techniques for student assessment, a variety of new sequential instructional materials, new concepts of testing-for-learning, not testing-for-labeling-the-child. Flexible grouping for individualization provides attention for each child in one-to-one instruction, when appropriate; it involves homogeneous grouping for reinforcement and drill; it affords a wide range of heterogeneous grouping for extensions of experience with other children. Throughout, the child enjoys the opportunity to know and to interact with his peers of different ages, different cultural backgrounds, different experiences to share. Techniques and instruments of student assessment will include teacher-made tests, sequential instructional materials in various subject areas, and periodic standardized testing for calibrating teacher judgments. It will be recognized that no one teacher or team of teachers can provide all instructional and testing materials, thus the necessity for more standardized and sequential materials, when appropriate.

Concepts of testing-for-learning, rather than testing-for-labeling-the-child are to be encouraged. For too long the test has been seen as an instrument for determining supposed constants of personality, instead of as an instrument by which children learn. The teacher who interprets test results as evidence to the learner of what he knows and what he needs to know will succeed, where his colleague who interprets test results as evidence of immutable factors of the child's personality will not. The difference between these two views of testing is derived, in great part, from the history of standardized testing, beginning with Francis Galton and Alfred Binet. In their time, it was believed that such instruments provided absolute information regarding the individual, from which could be predicted his future accomplishments. This emphasis overshadowed the value of testing as a challenge to the learner, an index of his achievements, a base for learning from his failures.

In the classroom where the graded text book was the sole material for instruction, the child's accomplishments in learning were limited to those books. If, on periodic examinations, he failed to repeat for the teacher the information contained in these sources, he had, according to the teacher, totally failed to learn. That junior high school students might have learned to read and to communicate more successfully, were text books and materials other than *Ivanhoe* and *Silas Marner* utilized, was not considered. Because for years American children had been judged by their

ability to comprehend these hoary novels, all children were thus doomed to failure or assigned to success.

By contrast, current innovations in education provide the child with materials designed to encourage his interest by beginning with experiences and words drawn from his world. One of the artist-teachers observed at work during the past six years, is Sammye Wynn who, teaching in the primary grades of Knoxville, Tennessee, centered her instruction about the world of experiences she provided her pupils. Visits to the fire house, the police station, the airport were followed by talking about what had been seen, then using the child's words to describe these events, and, finally, producing such materials as a daily "newspaper" or a "diary." Thus vocabulary, spelling, and sentence structure were learned. This experiential approach to the integration of speaking, writing, and reading is quite a different world of learning from that of the junior high school described above. It is the difference between Arthur Jensen and Jean Piaget. But American education cannot be left to the chance skills of a Sammye Wynn. Educational leadership must find ways to institutionalize such solutions.

Nor do such designs for teaching and learning leave the individual teacher to her solitary devices. The need for flexibility of instruction creates the need for flexibility of teacher roles. Team teaching that parallels this student flexibility provides the same difference in values between the absolutism of the past and the relativity of the present.

Consistent with these values at work in these innovations, each teacher must also be seen by the school administration "as an individual." Teaming patterns that prescribe elaborate slotting for each teacher in a hierarchy, with the "master" teacher at the apex, usually fail to provide the human relationships necessary to the success of these educational changes. In addition to being an unfortunate phrase reminiscent of the master-slave day and Hitler's genetic Master Race, this hierarchial structure, by its very nature, inhibits the professional development of those who must fit into the places to which they are assigned. By contrast, peer grouping of teachers, with the opportunity for each member of the group to express himself in the security of equal dignity and importance, releases the enthusiasm and creativity of teachers as comparable patterns release children. Leadership of the peer group is shared through group consensus, as plans are made for the development of techniques for student assessment, for instructional materials, for assignment of teaching tasks, and for the projection of teaching strategies. By the same token, consensus determines the division of instructional leadership in subject matter, determined by each teacher's interests and skills.

Such team teaching provides a built-in professional development program. Teachers, like children, learn from one another. However, team teaching demands the most careful administrative planning to assure that the best that develops from such professional experience is captured and sustained. *Laissez-faire* administration in the development of team teaching

is just as detrimental to such programs as *laissez-faire* for students.

Success in such educational processes can only be realized through the comprehensive planning for change mentioned earlier and developed hereafter. Preservice workshops for teachers, where they are given the opportunity to think through the implications of individualized instruction, flexible student grouping, and enriched instructional materials are essential. These instructions must then be sustained by on-going inservice training programs and careful evaluation of the daily planning necessitated by team effort. Again in the case of New Albany, special classes in Physical Education, art and music in the elementary school were so scheduled as to allow a period for team planning each day. However, teams inevitably differ in skills and accomplishment. It therefore becomes the role of the superintendent and his principals to develop schedules for conferences and evaluation sessions to extract the most successful procedures as a common ground for effective practice. Groups, like individuals, learn from one another. Teacher teams are responsible for designing, projecting, and executing four major functions in these educational processes: student assessment, student grouping and assignment, selection and development of sequential materials, team scheduling and individual teacher assignment.

In September 1969 New Albany desegregated its middle school (grades six, seven, eight) and its high school (grades nine, ten, eleven, twelve). The previous summer Smith resigned as superintendent to resume his graduate studies for his doctorate. Before his departure, plans had been approved for a new Vocational Education center at New Albany. Here, in the fall of 1971, it was anticipated that middle and high school students would begin preparation for careers commensurate with their interests and their abilities, as they continued to study the academic subjects and the humanities with their peers in the regular middle and high school classes.

Bryant Smith's successor came from a successful experience in developing a middle school in another Mississippi school district. His philosophy of education was consistent with that of his predecessor. He assured the teachers of New Albany that the innovations begun would continue.

The most pressing problem was to sustain what had been accomplished. In part, this was due to the waning of the Hawthorne effect, the high motivation generated by the attention given to something new and special. But, more serious, sufficient funds were not immediately available to the middle school for the staff, the building facilities, and the consultant services that contributed to the success of the elementary school innovations and desegregation. This is *not* to say that such innovations are more expensive than ordinary good education should be. Additional faculty and improved facilities in New Albany's middle school are basic needs. Whereas federal funds made possible the Physical Education, art, and music instructors in the elementary school, these special teachers had never been provided in the middle school. The desegregation of the middle school caused these grades in the formerly white school to be over-crowded.

Funds for the planned renovation of the formerly black school (grades one through twelve), where all students might be housed and black identity preserved, had not been forthcoming.

Such services and facilities should be available to all children at all times. They should not be budgeted as "innovations." Such basic resources as teachers and facilities alone do not make the difference between good and bad education. The manner of their deployment and use indeed does.

Consultant services, such as Dr. Grooms and her colleagues provided in New Albany, are an added dimension without which innovations cannot be affected in the public schools. *Ipso facto,* school districts cannot change without a new perspective. Educators who have been programmed to past practices cannot, alone, begin to think and to act within new designs without the opportunity to rethink past practices and to plan for themselves the changes necessary to meet the educational challenges of our current culture. At this time relatively few educators have thought through the significance of individualized instruction vis-à-vis tracking. Even fewer have had the experience of successfully instigating and sustaining these departures throughout an entire school system. Such individuals are to be cherished and their talents carefully deployed. Every effort must be made to increase their tribe. Dr. Grooms, now president of an educational consulting firm, has gathered together such a group, largely from the schools of Evanston, Newton and New Albany. Unlike many consultants, these infrequently lecture; they spend their days collaborating with teachers in classrooms and planning sessions.

Without sustained support from such outside sources, the adaptation of the American public school system to the needs of today's—and tomorrow's—children will not occur. These resources, in addition to private non-profit and business firms, are manifold within the education establishment—from the U.S. Office of Education, state departments of education, universities and colleges of education. Programmed to the past though they be, there are many voices from within, as well as from without, mustering a consensus regarding the kinds of changes in educational philosophy and practices reflected in the New Albany story.

Implicit in the testimony of educators during the Mondale Committee hearings on equal educational opportunity is evidence of the growing awareness of the way to the solution of our current educational problems through necessary innovation. The statewide North Dakota program, described by Charles Silberman in *Crisis in the Classroom* and in his testimony before the committee marks a significant effort in this direction. Britain's "free" schools, a similar effort, reportedly influenced a consensus among Albert Shanker, President of the United Federation of Teachers for New York City, Dr. Harvey Scribner, Chancellor of the New York City schools, and Ewald Nyquist, State Commissioner of Education for New York State, when they agreed that such changes in classroom structure might be

adapted in New York City's schools, as well as throughout the state of New York.

The relationship between successful desegregation and innovation in the public schools is implicit. The initial experience of the black child in the predominantly white school, where his scores on standardized tests were below those of the white child, dramatized the weaknesses of outmoded educational practices. His failure reflected comparable failures for hundreds of thousands of other American children, whose abilities and potential were never discovered in our prevailing educational patterns. The intellectual curiosity of our sons and daughters of all colors, creeds, and national origins has been desecrated by the track systems that have, for years, prevailed across the nation.

In the "good old days," when Johnnie failed, as all good parents knew, it was their duty to reinforce the opinion of the teacher by driving home to him his ineptitude. The black parents of Mississippi, challenging the use of homogeneous grouping to track children, like their counterparts in Washington, D.C., whose efforts led to the decision of Judge J. Skelly Wright in 1968, have put the responsibility for such failure squarely at the door of the American educator and the community which supports him. They and other disaffected parents, as well as observers like Charles Silberman and John Holt, have pronounced that, if children fail, the reasons must be sought and the solutions found in new perspectives in human values and educational philosophy.

Real individualization of instruction provides for the black child, whose previous education may, in fact, have been inadequate, the immediate assistance needed to rectify this lack. On the other hand, it provides the black child who has been more fortunate the opportunity to pursue his intellectual interests unhampered by any kind of stereotyping. Thus, overgeneralization regarding the quality of Negro education before desegregation is allayed: black children now being educated in the broader streams of American experience are free to exert their strengths.

Meanwhile, it is true that, in the proverbial self-contained classroom and under such patterns of mass education, the teacher of thirty children tended to teach to the hypothetical middle of the class, leaving to their own resources both the less well prepared and the above average in achievement. Individualized instruction allays the valid fear of a parent, in such circumstances, that his above-average child will suffer from lack of opportunity to explore the broader reaches of his interests and understandings.

To some observers, the hostility of black youth in the desegregated schools can be directly attributed to the awareness, not only that past patterns have conspired against him, but that, in the predominantly white traditional school, these disadvantages still obtain. No factor in public education more clearly defines the implicit prejudices of past practices than Vocational Education.

If the New Albany center develops as planned, it will mark another significant step in a trend away from student-stereotyping for the world of work. In the past, on the basis of scores on standardized tests, administered at the sixth grade level, children were tracked in the fashion described earlier. In comprehensive schools, where financial resources made more than college entrance training possible, the track system relegated students to business training, Industrial Arts, and Home Economics, in that descending order. In other words, the dumb ones progressed from the lower track in English, arithmetic, geography, and history to Industrial Arts, while the bright ones went on to college preparatory classes—whether or not they ever intended to go to college. Students majoring in Industrial Arts and Home Economics had no opportunity to explore or pursue possible talents in the humanities. The implication was clear: a low I.Q. score precluded interest in literature, art, or music, except at the most elementary level. Nor were students with high I.Q. scores encouraged—or, in most instances, allowed—to take courses in the "lower" tracks such as typing or wood working. Such tracking gave little or no heed to the student's expressed interest. The guidance counselor determined his fate on the basis of test scores and the socio-economic status of his family. It was assumed that only the wealthier families could afford to send a child to college and that they, inevitably, would. Within these patterns the really forgotten students were those prepared for college with all the academic subjects prescribed, but unable or uninterested in going on into the academic world.

The plan for the vocational center in New Albany, like others now emerging across the country, reflects the changes in educational philosophy based on recognition of the infinite diversity of the individual and dynamics of change with which we all must cope. What is being called "career development" or "career education" encompasses curriculums that, like Sammye Wynn's experiential approach to the Language Arts, begins at the primary levels to provide opportunities for the child to know the world outside the classroom. While he may be learning to convey his ideas verbally, to read, and to write, following a visit to an airport, he also learns how the hundreds of persons employed in this world of transportation make a living. Unlike the track systems of the past, each individual, at the time he arrives at a career decision, will have observed and discussed with teacher, counselor, and parent that realm of the world of work to which he feels the greatest commitment. And the kinds of experiences and observations necessary to arrive at that moment will have been an intrinsic part of his educational life throughout his school years.

The black youth, more sensitive to stereotyping than most, can only be satisfied if he is convinced that the public school provides him, from hour to hour and from day to day, the opportunities necessary to participate in all the dimensions of our current culture and that, as a man, he will be equipped to make a living, support a family, and contribute to the eco-

nomic, social, and artistic life of his time. Anything less is intolerable. Thus, when this chapter in the history of American education is written—if educators, black and white, meet the challenge—it may well be that the great contribution of the black child will be his having made visible the deep need for change in human values demanded by the latter days of the twentieth century.

Chapter Three

The Case For Comprehensive Planning

THE QUALITY OF school district comprehensive planning will determine the quality of education provided by that district. Inconsistency and fragmentation of programs and isolation of people—parents, students, teachers, administrators—account for the single greatest weakness in the public schools today. Every school district in the country has attempted some kind of "innovation" in one classroom or one school during the past five years. This has been done either under the pressures of desegregation or because of the encouragement to innovation sparked by the Elementary and Secondary Education Act. But practically no school district has extrapolated from successful innovations the principles and practices that would improve education for the district as a whole. This has left, juxtaposed even within the same school building, the worst examples of ineffectual traditional practices and the most hopeful new approaches to the education experience.

To be "comprehensive," educational designs must encompass the needs, the objectives, and the value systems of parents and community, and of students and teachers, as well as administrators. Educational planning and research must be designed to account for long-term change in demography, in economic resources, in tax patterns, in technology. If equal educational opportunity is to become a reality, the old concept of the neighborhood school, reflecting the socio-economic status of its residential setting, must be superseded by the concept of equal educational opportunities in every school in the district to provide social and economic mobility for every child. Such quality necessitates longitudinal planning for the pairing of existing schools, the renovating and rebuilding of other schools, and ultimately, perhaps, the creating of education parks to provide new and inclusive educational experiences for children whose parents were born on both sides of the tracks.

Suggested earlier were three major functions of comprehensive planning:

on-going designs for *assessments of need,* from which *educational objectives* for the school district may be derived; and the formulating, from both these functions, of the *criteria for evaluation* of all educational processes within the school district. Experience to date further suggests, *a priori,* that valid designs for these processes will provide data for determining the dimensions and directions for strategies by which equal educational opportunities and higher quality of education may be created. They will determine the needs for restructuring classrooms and schools, for reorganization and enrichment of curriculums, for reappraisal of current instruments and techniques for student assessment, and for "accountability" for educational results to involve community, parent, student, teacher and administrator. Also within these functions lies the basis for professional personnel policies and practices that will refer not only to the traditional procedures surrounding the recruitment, assigning, reassigning, and dismissing of faculty, but to the new concerns surrounding the recruitment and assignment of administrators and teachers for representation of the racial and other ethnic groups necessary for inter-group experience *and* quality education.

Last year's Emergency School Assistance Program, which provided $75 million for allocation to school districts extensively desegregating for the first time, designated six program activity categories: In general, they were:

1. Comprehensive planning
2. Pupil personnel services
3. Changes in curriculum
4. Administrator and teacher professional development and inservice training programs
5. Student-to-student and student-to-faculty programs
6. School-community programs

Experience has shown that these six categories do, indeed, "fit" the functions of a school district and thus lend themselves to the analysis and evaluation of the effectiveness of educational policies, procedures, organization, and programming.

Proceeding from the general to the particular, valid *comprehensive planning* will assure the validity of the five other functions. With the proper rationale, criteria, and organization determined under comprehensive planning, the five other activities will find their own levels of function in relation to the whole. Innovations in pupil personnel services will provide a wide range of pupil assessment tests, techniques, and other instruments. Changes in curriculum will be defined on the basis of the need for services to meet the skills and interests of all students. Having determined the needs, objectives, and criteria for evaluation of the educational processes in the school district and the innovations necessary to adequate pupil personnel services, the subject matter and techniques to be employed for inservice training for board members, as well as administrators and teachers, may be ascertained. Within this category, professional personnel poli-

cies and procedures for recruitment, hiring, assignment, reassignment, and dismissal of all professional staff will be implemented. And herein, in relation to comprehensive planning, the designs for accountability will be determined. Student-to-student and student-to-faculty programs should be coordinated with built-in channels of communication, decision-making and strategies for change. The same organizational principles should obtain for school-community programs. A recycling of these six educational functions as part of the longitudinal design for comprehensive planning will assure integrity and cohesiveness in the operation of the school district as a whole.

Obviously, the quality of comprehensive planning will be directly related to the educational leadership exerted by the school superintendent. Like President Harry Truman's comment on his responsibility as leader of the nation, the "buck stops" at the desk of the superintendent of schools. Developments in public school education during the past six years have increased the pressure of the superintendent's responsibilities and have suggested the need for further examination of the experience and training necessary to fill this position. They have made necessary a new definition of the role of the superintendent as leader of the education establishment.

Like the patterns for the education of teachers, colleges of education that have provided the professional training for superintendents and other administrators have concentrated on the technicalities of the profession, rather than on the academic or the philosophical bases on which public school education must also draw. Too often, especially in the rural areas—where superintendents are elected to office, rather than appointed by a board of education—the major qualification for the public school superintendent has been popularity as a football coach. Meanwhile, graduate schools of education provided courses in school administration, emphasizing techniques for budget-balancing, the proper maintenance of school plants, and the efficient running of bus schedules. (The dichotomy between these male-oriented courses and the curriculum-based courses for females deserves particular attention elsewhere.)

This technical, rather than philosophical-professional, orientation of the school superintendent may also account for the undue emphasis recently placed on purely mechanistic designs for educational "innovation," ranging from the teaching of reading with machines to the reassignment of teachers for desegregation and educational equalization by computer. In any case, the past limitations of training and experience of the school administrator have left many ill prepared for the range of human relations considerations created by such current social change as the processes of desegregation. Moreover, there can be little doubt that, as small rural districts have been consolidated into large urban and suburban school organizations, one man alone can no longer realistically cope with the complexity of political, economic, social and philosophical problems the school administrator faces.

One answer to this need for change of the role and the responsibility of the superintendent is the idea of the superintendency team. In such

school districts as Harrisburg, Pennsylvania administrative patterns are being devised to provide the superintendent with a central administrative group of educational specialists who will supplement his own expertise and support his recommendations to the board of education, on a sustained basis, with research data and the other evidence necessary to the improvement of public school education.

Such a team surrounding the superintendent will provide, in addition to administration for long-range organization in the area of planning and evaluation, the special attention necessary for innovations in pupil personnel services and curriculum design, faculty development and inservice training, student-to-faculty and school-community relations. Thus, a group of professional specialists, whose activities are coordinated by the superintendent, provide him and his board of education the data, the insights, and the skills necessary for valid decision-making. Such emphasis on professional expertise at the apex of the education establishment should greatly assist the lone—and sometimes defenseless—superintendent of schools in meeting the present buffetings of the winds of change created by the demands of politicians, the frustrations of students, and the hostilities of disaffected parents.

This need for the reassessment of the role and the responsibility of the superintendent and that of the educator-as-leader has immediate relevancy to the participation of laymen and community representation in educational planning mandated by recent education legislation, such as Title I of the Elementary and Secondary Education Act and the Emergency School Assistance Program. It is unrealistic to assume that the ordinary—or even the extraordinary—layman can make what often must be highly sophisticated judgments regarding improved classroom practices, without prior experience in participation in such vital decision-making. It also raises the perennial question of the "professionalism" of the public school educator. According to the present rationale, in order to cope with the world of Einstein, educators must be more highly trained and more sensitively conditioned than ever before, if the educational problems of our time are to be solved. By the same token, the education establishment, through the quality of its organizational structures, must involve, consistently and pertinently, the judgments and opinions of all socio-economic and ethnic groups among its constituents. But the responsibility for final decision-making can only be at the level of the superintendent. Meanwhile, the continuous involvement and sustained enlightenment of the board of education and all constituents continue to be the function of the superintendent and his administration.

Traditionally, the public schools of America were run by boards of education and superintendents in semi-royal isolation from the general public. Leaving the perfectly logical historical reasons for these patterns to be pursued in other sources, we must concern ourselves with the forces for change which are already at work altering these functions in the hier-

archy of the public schools and with the processes of decision-making which determine the difference between real quality integrated education and the destruction of the public school system.

In the past, the elected board of education represented primarily the real estate interests of the community, since our local tax structures provided funds from this source alone. Although the professional educator, in teachers' college summer sessions, endlessly argued the question of the role of the educator as leader vis-à-vis the educator as representative of the *status quo,* the preponderance of superintendents accepted the latter role without question. In most instances, the superintendent of schools who attempted to lead his community or his board of education toward educational innovations beyond their experience lost his job. While these relationships still obtain, education legislation and other impingements on this world of Euclid by the world of Einstein have conspired to force the kinds of reassessment of the roles and responsibilities of educators suggested here.

Congressional action in the poverty programs has brought the poor and the ethnically isolated into the councils of the school district planners. No longer are the real estate-oriented board of education and the conventional Parent Teacher Association considered adequate representatives of the community as a whole. It therefore behooves the educational leadership—superintendent and board of education—to recognize these changing relationships and to structure the educational organization accordingly.

In the world of today, the growing pressures for better education for more people are so strong that, if American public school education is to survive, educators must be better prepared as professionals than ever before. Without a widespread application of the highest level of expertise in dealing with current educational problems and in providing the equality of education necessary to future generations, not only the survival of the public schools but of democracy itself will be seriously challenged.

Unless the educational establishment succeeds in incorporating the efforts and energies of all its patrons into the processes of educational planning, and unless education can serve all segments of our society, not only our public schools, but the principles by which all of us have sought to attain the good life will be shattered. The rallying point is no longer altruism or idealism. It is survival.

And human survival depends, fundamentally, upon our ability to adjust to what Alvin Toffler has called "future shock"—the impact of change imposed from without by the physical world of communication, transportation, and technology—the continued impact of many different kinds of human beings upon our limited experience in social space. It follows, therefore, that abandoning Euclid and Aristotle as prime interpreters of the modern world, we move to what the social scientist tells us about today and tomorrow.

Also emerging in these new functions and responsibilities of school district leadership and in the search for expertise is the role of the educational

consultant, the "outside expert" called in to provide special assistance to the superintendent and the board of education in such special problems as the desegregation of students, the desegregation of faculty, and "accountability." Too often, again, the superintendent and the board of education have interpreted the presence of the consultant as reason to relinquish their own responsibilities for decision-making. The recommendations of the consultant, therefore, become nothing more than an excuse for prolonged argument by school and community, providing, consciously or unconsciously, an escape from facing squarely the problems of the district and the concentration of the thought and effort necessary to their solution.

These comments are not intended to disparage the function of the education consultant. On the contrary, wide observation suggests that the outside consultant is necessary to supplement the efforts of the resident administrators and teachers. His efforts cannot, however, be viewed as a substitute for the efforts of the school administration or as an isolated adjunct to the on-going educational processes sustained by the administration. Only if the superintendent is aware of how and why special expertise is to be utilized can the consultant's findings and recommendations be utilized effectively. These findings and recommendations can be no more valuable than the ability of the school administration to conceive and to implement them.

The design for comprehensive planning in the pages that follow, based on the three functions of *assessments of need,* setting of *educational objectives,* and establishing *criteria for evaluation* has been constructed, not from the planning patterns of any one "model" school district, but from a compilation of observations, discussions, and other sources of information surrounding the general subject of educational planning. It is hypothesized that any school district that applies the principles and practices suggested in this paradigm may more likely succeed in providing equal educational opportunities and quality integrated education than the school district that persists in more traditional forms.

In introduction, a word regarding the mechanistic vis-à-vis the humanistic design, and another comment on the contrast between the worlds of Euclid and Einstein. Briefly, the present rationale submits the premise that there are significant limitations to the findings of the completely controlled psychological laboratory and of the computer that can only be implemented by the best that has been spoken and thought in broader terms by human beings. It is proposed, for example, that adequate faculty desegregation or equalization of educational opportunities within the school district cannot be achieved merely by computerizing faculty assignments. Although computers do, indeed, have their important place in processing and presenting the purely "factual" in our educational concerns, it is contended that the quality of human judgment in programming and feeding these computers, as well as in interpreting their products, is paramount in creating true quality education.

A Paradigm for Comprehensive Planning in Education

The Rationale

The Quality of the Designs for Research

1. *Longitude*: The world of Euclid, where it was posited that two parallel lines never meet, has been reflected in social scientific research that assumed that a description of certain factors in the educational functions of a school district at a given moment in time would forever prevail. One salient dimension in current educational research, consistent with the world of Einstein, is longitude—designs for long-range, on-going educational observations and analyses based on the premise that the problems of today are not necessarily those of tomorrow. Among other components of such a design is that of recycling—the constant coordinating and periodic investigation of such fundamental factors within the design of assessments of need, setting of objectives, and defining criteria for the evaluation of the total educational processes within the school district.

2. *Causality*: As a corollary of these departures from mere description is the dimension of causality. Thus, research designs for comprehensive planning must incorporate data that will indicate the reasons for existing weaknesses and strengths in the education establishment. In this, the work of social scientists like Rensis Likert has pointed the way.

3. *Participation*: Unlike the function of the researcher of the past, who, many times in the name of "objectivity," operated above and apart from the human beings who provided his data, current social scientific research encompasses the participation of constituents. Such techniques are being employed by such practitioners as Louis Harris and, in industrial human relations practices through "participatory management," a concept spearheaded by the social sciences by Kurt Lewin and Douglas McGregor. Educational research in comprehensive planning should include data derived from samples of all socio-economic, ethnic, and other relevant groups among the administrator's constituents. By the same token, all components of the education establishment—from board member to bus driver—should be represented in such designs.

4. *Hard data*: The dimensions suggested above are not to be understood as rejecting out of hand the traditional descriptive data, such as standardized test scores and pupil-teacher ratios. Rather, they are considered significant new dimensions for designs for educational research. Moreover, it is important that traditional testing, such as that for the intelligence quotient, be recognized for its limitations and interpreted in the new light of relative value, rather than in that of the Euclidian absolutes of the past.

Thus, the research design for educational planning should include these categories:

Achievement and other standardized test scores
Other criteria for judging pupil growth and potential

Drop-out data
Other "hard" data
Educator opinion
Student opinion
Parent opinion
Other community opinion

5. *Other dimensions*: In the past, the focus of educational research has been the child-in-isolation, consonant with the medieval concept of earth as the center of the universe and man as the captain of his fate, the master of his soul. More recently, the focus has been directed at the teacher, based on a comparable premise. This has been most clearly illustrated in some of the designs for accountability. However, under the influence of more current scientific interpretations of the world, some social scientists, such as Henry Dyer at Educational Testing Service, have begun to develop models for education accountability that include the functions of the community, the parent, the school administrator, and the principal, as well as the teacher and the student, in designs consonant with all of the factors influencing the growth and development of the individual in our current culture.

6. *Political and psychological dimensions*: Such educational planning by the school district should help to solve several of the existing problems of school-community relationships, most significantly that of community and parental participation in school planning. Two factors are important in this interpretation of school-community relationships: (1) that all groups of constituents be represented through the sampling techniques of the research design in determining needs, objectives, and criteria for evaluation and (2) that the recycling of these three functions, over a period of years, provide the opportunity for renewed representation as demographical, economic, social, and other relevant forces change within the community. The knowledge of this long-range, on-going involvement of the community in such educational planning should go far to remove the existing pressures on the superintendent, now largely due to the frustration of parents hitherto barred from such participation in educational decision-making.

7. *The quality of inductive reasoning*: Finally, and perhaps the single most important factor in the designs for comprehensive planning, is that their basic logic be inductive, rather than deductive. Once more, as vestiges of past philosophies, educational designs have, until recently, tended to take for granted—as constants and absolutes—the practices of the past, such as standardized tests as valid measurements of student potential, thus providing a built-in rationalization for continuing such practices, valid or not.

Designs for comprehensive educational planning must be open-ended, providing for questions to be raised without foregone answers and for serendipity to occur. In other words, if one assumes the need for change, one must ascertain the causes for the weaknesses of current practices and

be prepared to move toward new behaviors to cope with this need for change. With such a rationale, the contributions of the disaffected parent and the drop-out boy will be respected as evidence in designs for assessments of need. And here again is a departure from the medieval/academic belief in absolutes and a move toward the scientific methods promulgated in education by John Dewey.

Assessments of Educational Needs

Incorporating the rationale suggested above into a design for the assessments of need for a school district, again the six categories adapted from the Emergency School Assistance Program application are pertinent. Somewhat over-simplified, this implementation of an investigation of needs may be based on these six school district functions:

1. *Comprehensive planning*
   - The role and responsibility of the superintendent and his administration
   - The role and responsibilities of the principal
   - The role and responsibilities of the teacher
   - The role and responsibilities of the student
   - The role and responsibilities of the parent
   - The role and responsibilities of the other community representatives
   - The rationale and quality of strategies for change
   - The rationale for school zoning: primary, intermediate, middle school, high school
   - The rationale for equalization of education: school-by-school, zone-by-zone, district-wise
   - Policies and procedures for recruiting, assigning, reassigning, and dismissing faculty and staff
   - Accountability
2. *Pupil personnel services*
   - Use of standardized tests
   - Use of other instruments and techniques for pupil assessment
   - Guidance practices
   - Counseling practices
   - Extent of guidance and counseling K through 12
   - Dimensions of education for the world of work
   - Individualization of instruction and student grouping
3. *Curriculum changes*
   - The world of work curriculum: its relevancy to present and future
   - The Language Arts of speaking, reading, and writing: their integration
   - Social science as history, current culture, future projections: new views of human relationships
   - The humanities: new channels of communication through the arts
   - Patterns in student grouping and classroom management

4. *Professional (administrator and teacher) development and inservice training*
   - Preservice teacher preparation
   - Programs for continuing individual professional growth and development
   - Inservice training and retraining for adaptability to the changing world
   - Policies and procedures for planning for these professional activities
   - Correlation with administrative policies and procedures for the recruitment, hiring, assigning, reassigning, and dismissing of professional personnel

5. *Student-to-student and student-to-faculty programs*
   - Student participation in curriculum development
   - Student participation in policy decisions regarding extra-curricular activities
   - Student participation in disciplinary policies and procedures
   - Review of existing student-faculty organizations: Student Government, Honor Society, etc.
   - Newer organizations in student-faculty relations

6. *School-community programs*
   - Role and responsibilities of parents in school district planning (needs, objectives, criteria for evaluation)
   - Organization for parents and other community representatives in school district planning
   - Representation of racial and other minority groups in school district planning and organization
   - Role of the parent as volunteer and paraprofessional
   - Role of the representatives of racial and other minority groups in school district planning and organization
   - Role of the representatives of racial and other minority groups as volunteers and paraprofessionals

Setting Educational Objectives

Millions of dollars have been spent during the past six years "brain storming" such techniques as "management by objectives" and program-planning-budgeting systems (PPBS). Too often these exercises yielded little of value, because the very circumstances surrounding their formulations were so far removed from reality. There must be more than chance inspiration in determining valid objectives. Moreover, the formulation of objectives by the "expert" in conference or seminar tends to reinforce deductive reasoning and past practices, rather than to open new vistas through open-ended research. Nothing could be more logical or relevant to the setting of objectives than the findings of assessments of need.

Implementing this correlation between assessments of need and the setting of objectives, the latter may be thus hypothetically derived from the previous section:

1. *Under comprehensive planning*
   - To create a superintendency team to complement the role and responsibilities of the superintendent
   - To establish a planning and research component within the school administration to provide longitudinal designs for assessments of need, setting of objectives, and defining criteria for evaluation
   - To develop administrative strategies for change based on this longitudinal comprehensive planning
   - To define policies and procedures for recruiting, assigning, reassigning, and dismissing professional personnel
   - To develop formulas for the equalization of educational opportunity using new zones to coordinate the desegregation of student and faculty desegregation with educational innovation
2. *Under pupil personnel services*
   - To research and apply new instruments and techniques for the assessment of student potential
   - To utilize the community as a whole to acquaint all children with the varieties of opportunity open to them in the world of work through an extension of the guidance function
   - To extend the guidance and counseling functions throughout the school operation—K through 12
   - To provide individualized instruction and flexible grouping of students more effectively to develop student potential
3. *Under curriculum changes*
   - To shift emphasis in the Language Arts from diagnostic-remedial techniques to the experiential-developmental approach to learning
   - To develop a social science research component in the middle and high school Social Studies curriculum
   - To encourage knowledge of and experience in the arts and humanities as a vital part of the world of work
   - To project a long-range plan for educational innovation in individualized instruction, flexible grouping, and team teaching, beginning with the levels K-2 and proceeding yearly through 3-5, 6-8, and 9-12
4. *Under professional development and inservice training*
   - To develop a long-range plan for professional development geared to the skills and interests of each individual
   - To organize an on-going inservice training program designed to train and retrain professionals to adjust to changing social, economic, and cultural patterns—in the community as well as in the classroom
   - To formulate personnel policies and procedures to assure the representation of racial and other interethnic groups within both immediate and broad cultural communities
5. *Under student-to-student and student-to-faculty programs*
   - To organize student-to-faculty human relations programs in each middle and high school

To organize student-to-student programs representative of all racial and other ethnic groups in each school, either within classroom programs (at the earlier levels) or within the school (at the middle and high school levels)
To supplement Student Government and Honor Society programs with others more broadly representative of student interests and skills

6. *Under school-community programs*
To so design patterns of comprehensive planning that all identifiable social, economic, and cultural groups among parents will be involved in these functions
To develop the role of racial and other minority group parents as volunteers and paraprofessionals
To schedule regular interviews with parents concerning the progress of their children

Defining Criteria for Evaluation

Comparable to the exercises in arriving at objectives-in-isolation have been the evaluation instruments developed without rationale, criteria, or data to justify their validity or assess their reliability. It is here maintained that valid instruments for evaluation—"accountability," if you will—can only be designed against a background of information, value judgments, and research comparable to that provided by assessments of need and clear-cut objectives.

A second questionable characteristic of the evaluation instrument, consistent with other traditional research patterns, is its static quality—its descriptive, rather than causal or longitudinal, design. Thus, there is need for evaluation (accountability) instruments and techniques designed to examine what lies behind the "facts" and to provide for continuing long-range assessments of the relationship between needs and objectives and the accomplishments of the education establishment in affecting the changes necessary for solving the problems thus stated.

Such an approach to evaluation demands periodic reporting on the progress of efforts defined by objectives to meet needs. In this connection, it has been said that, while periodic assessments of need and the full recycling of these comprehensive planning functions may be worked through on a schedule of from three to five years, there should be annual assessments of the progress of objectives, at least within the operation of the administration.

Again, hypothetically to implement these relationships, utilizing the two previous sections of the paradigm describing needs and objectives, the following criteria are suggested:

1. *For comprehensive planning*
The extent to which the superintendent has succeeded in organizing a superintendency team, defined the roles and responsibilities of

its membership, deployed its resources in providing bases for decision-making by board and community

The extent to which the administration has succeeded in developing valid designs for assessments of need, setting of objectives, and defining of criteria for evaluation

The extent to which the administration has succeeded in organizing and utilizing the judgments of parents and the community as a whole in comprehensive planning

The extent to which the administration has succeeded in organizing the participation of all levels of professional personnel in developing designs for needs, objectives and criteria for comprehensive planning

The extent to which the administration has progressed in defining policies and procedures for the recruiting, assigning, reassigning, and dismissing of professional personnel

2. *For pupil personnel services*

The extent to which student assessment instruments like the standardized test have been implemented by other tests and techniques

The extent to which vocational and technical programs have been implemented with main stream courses in literature, the arts, and the humanities

The extent to which individualized instruction, flexible grouping, and team teaching have been instituted in the school district as a whole

3. *For curriculum changes*

The extent to which experiential-developmental approaches to speech, reading, and writing have been instituted in Language Arts programs for the school district as a whole

The extent to which action research has been developed in the Social Studies programs in the middle and high schools

The extent to which new materials and new classroom organization have been developed for individualized instruction, flexible grouping, and team teaching throughout the school district

4. *For professional development and inservice training*

The extent to which personnel policies and procedures satisfactorily provide for long-range individual professional personnel development

The extent to which regular inservice training programs have been regularly scheduled and carried out

The extent to which the content of inservice training programs provide for professional education in adaptability to a world of constant change

The extent to which representation of racial and interethnic groups among professional personnel has been achieved at all levels

5. *For student-to-student and student-to-faculty programs*
   - The extent to which student-to-faculty human relations programs have been organized in the middle and high schools
   - The extent to which student-to-student human relations programs representing all socioeconomic and ethnic groups have been developed at all school levels
   - The extent to which minority students have participated in planning for and performing in extracurricular activities
   - The extent to which human relations experts have been employed to direct such programs at both the administration and school house levels

6. *Under school-community programs*
   - The extent to which representatives of minority group parents have participated in determining needs, objectives, and criteria for evaluation (accountability for) the operation of the education establishment
   - The extent to which minority parents are represented as volunteers and paraprofessionals
   - The extent to which the parent is directly involved with teacher and other professionals in sharing information about the child's attainments and in decision-making regarding his child's future career

This paradigm may appear complicated to the casual reader—or even to the educator. If that be so, it is primarily because such rethinking of current educational practice and planning strategies for change are, in themselves, exacting processes. If we are indeed to learn to cope with Einstein's world, it will demand educational expertise of the highest order—far beyond this primer for educational innovation.

Chapter Four

The Case for Quality Integrated Education

Educators, social scientists, and philosophers in general have, for decades, concerned themselves with the "cultural lag" between the accomplishments of the physical scientist and those of the "social engineer." It has been agreed that the latter, responsible for adapting to human relationships the logic of the mathematician that produced airplanes, television, and space ships, has failed. It began with Galileo, who in the early years of the sixteenth century, blasted the egocentricity of the medieval church and its dogmas concerning the importance of man by discovering that the sun, not the earth, was the center of our universe. This discovery paved the way to the observations of Isaac Newton, somewhat later in that century, and proof of the laws of gravity and their influence upon matter.

Prior to that time, the beliefs of the medieval world had rested upon the absolutes of the world of Euclid, where matter and man contained within themselves—for good or ill—all elements necessary to their survival and salvation. In reviewing these parallels between matter and man, and between the worlds of Euclid and Newton, Arthur Bentley (a John Dewey collaborator) posits, in a 1931 essay entitled "Sociology and Mathematics," that the early psychologists, recapitulating Euclid's view of the world, considered human personality as merely a complex of instincts and emotions. It was John Watson's behaviorism, with its emphasis on the environment, that made the social scientific transition between Euclid and Newton. Thus he viewed man, not as a self-contained organism whose fate was sealed by his genes and his ability to cope in isolation, but as a product of the outside influences which, like gravity, were perennially affecting his thought and his actions. It remained for social scientists like John Dewey to build the bridge between the world of Newton and that of Einstein.

Einstein's world of relativity expanded the limitations of the world of Euclid and Newton by describing the impact of vaster and more compli-

cated factors upon the world of matter in space—dimensions of influence beyond matter and gravity. At the same time, particularly during the latter decades of the nineteenth century in Germany, the new science of sociology began to describe men in what were known as "primary" and "secondary" groups. Such concepts, especially that of the secondary group, parallel the concept of physical space revealed by Einstein and his mathematics. And indeed the domains of these primary and secondary groups were identified by these nineteenth century social scientists as "social space."

According to these theories, the primary group is made up of the family, the neighborhood—the tribe, if you will—and other face-to-face groups of which the individual is an intimate and immediate part. The secondary group was first described in the researches of Ferdinand Toennies in studies of the church and the army of the nineteenth century. It was anticipated, however, that according to all signs, such relationships would be extended in the future, a prognostication verified with the growth of the business and industrial company and national and international governments. Hundreds of social scientists have written millions of words since that time on the subject of these intergroup relationships, with increasing evidence that, while the power of the primary group over the individual diminishes, that of the secondary group continues to gain in the modern world.

What follows is limited to some of the implications for education of the growing social theory that secondary group structure and quality must be improved if man is to survive the pressures of the physical world. It is an effort to distill, from hundreds of thousands of those words written by recent social scientists, a framework for viewing what is happening in American education today. One premise is clear: in order to teach the members of contemporary society of all ages to cope with an increasingly complicated physical, social, and psychological world, public education must provide the information, the skills, and the opportunities necessary to understand and cope with these complications.

This means that, beginning immediately, American public education must be geared to provide education of an infinitely higher quality than it has offered before. It must draw, from among many other sources, the findings of the social scientist in such research as that providing the frame for this chapter. Children must be taught to read, in addition to the traditional materials based on literature, a wide range of subjects such as economics, physics, and sociology. (One test of such an accomplishment in education will be that the average person understand a President's presentation of the state of the U.S. economy and the national and international measures to be taken to strengthen it.) They must be taught more sophisticated theories and more refined skills in mathematics and science than public education has hitherto provided to any but the elite. They must be given limitless opportunities to know, enjoy, and participate in music, drama, the graphic arts, the dance. Every child must be so edu-

cated that, ultimately, he may choose the career from which he can derive the most satisfaction, the most commitment, and financial remuneration adequate to satisfy the needs and aspirations of his family.

Among the theories of the social scientist working with groups is that man is moving inevitably—through the forces created by increasingly rapid transportation and instant, world-wide communication—away from the security and "warmth" of the primary family group to the impersonal secondary group of the "company" or the government. As the individual faces the sometimes traumatic transition from primary to secondary group relationships, two distinct attitudes, representing two kinds of individual reactions, are evident. The first is the individual who finds himself unable to move beyond the bounds of the primary group, unequipped to cope with the unknown world beyond these intimate dimensions of social space. There are those social scientists and others who propose that our social institutions should be designed to preserve these primary groups to the exclusion, or weakening, of secondary group relationships. Evidence of such efforts is apparent in the maintaining of black separatism, the preservation of the neighborhood school, and the isolation of the social elite in private schools.

The second attitude is exemplified in the individual who succeeds in moving quite effectively, even happily, from primary to secondary group, often finding greater satisfaction in the broader opportunities made possible in these relationships than in the simpler primary situations. The second kind of individual will find reinforcement among the social scientists who, believing the growth of secondary group relationships to be inevitable, have set about to preserve the moral, ethical, and "human" values of the primary group in the functioning of the secondary group. Such social engineers, like Douglas McGregor among the humanistic social scientists in business, industry, and education, apply to these secondary structures the kinds of policies and procedures that would preserve the best of the relationships implicit in the primary group.

From such a point of departure stems the premise that society, through the operations of the secondary group, should provide opportunities for all individuals to more effectively and happily move from the intimacy of the primary group to the more challenging and adventuresome experience provided by the secondary group. It follows that it is an asset for the individual to be able to associate with and interact to other individuals who come from primary groups whose culture is quite different from his own. By the same token, the traditional self-contained classroom with the lone teacher in the role of "mother," should be superceded by the classroom in which several teachers act in a variety of capacities to reinforce and extend the skills and interests of the child.

In a study published in 1960, Harlan Cleveland and his colleagues at the Maxwell School at Syracuse University found that Americans at work abroad in U.S. government, private industry, and eleemosynary organiza-

tions were most efficient and effective when they possessed the quality of *empathy,* i.e., the ability to understand and interact with persons who were culturally different from themselves. It was also found that those Americans who were most empathic were those who had been educated from childhood in schools and communities where they had known a wide range of individuals who were different from themselves socially, economically, religiously, and in other ethnic terms.

If knowledge of and contact with persons who are culturally different from himself is an asset to the individual in today's world, most of the social values to which we have been conditioned must be reviewed and our educational patterns reconstructed. Throughout the history of the Western world (one notable concept having been the Divine Right of Kings) social class, based on economic power, has formed a major structure for our social groupings. Concomitantly, exclusivity and social isolation have been considered desirable in maintaining them. Social "mobility" in a democracy, made possible in building the nation that became the United States of America, was a process of moving upward from one social stratum to the next by making money and sustaining these levels of social isolation. "Success" was the ability to make money and to adjust to these levels of exclusivity. Social isolation at the top was a desirable attainment, to be protected.

Physical and economic forces in the modern world have, in spite of comparable forces inherent in the *status quo,* created new kinds of mobility and have weighted "success" with different values. Such a characteristic is *empathy,* the ability to relate to an infinite range of other persons from cultural groupings different from one's own. Describing this quality, as he found it among the Arabs of the Middle East, Daniel Lerner in *The Passing of Traditional Society* suggests that it is necessary to survival, since "mobility is the style of the modern man."

It follows that a major objective for American public school education should be to provide such experience for all its children. In these terms, it is as desirable for the child of the rich white as it is for the child of the poor black to know all the kinds of people who inhabit the world he lives in. The opportunity to learn and work with his peers from various cultural backgrounds must be provided from hour to hour and from day to day, as classroom structures provide this flexibility of social experience.

However, before discussing the changes in classroom structure suggested by these approaches to education, certain past and present practices in education should be scrutinized for their relevance and validity in the modern world. Of these, current literature—undoubtedly to be stimulated to another round of social scientific brouhaha by Richard Herrnstein's recent *Atlantic* article—is rife with opinions regarding the validity of tests for the intelligent quotient. Viewed in the light of historical and social scientific thought, such a concept fits nicely into the categories of value articulated by Euclid. Assuming that there is a corrollary between

effectiveness of individual function in the modern world and modern social scientific findings, Herrnstein's arguments are antiquated.

The concept of the I.Q. as an absolute, due to the inevitability of genetic inheritance, besides evoking in educators and other agents of social change attitudes that reinforce the self-fulfilling prophecy for the child, relieve such agents of the responsibility to confront the needs for change in our society. Moreover, the only validation for the predictive qualities claimed by the psychometrician in the interpretation of the I.Q. score lies in the degree of failure or success ultimately attained by the subject. The rapidly changing economic factors affecting the fate of individuals in our current culture negates at the outset such implications so fundamental to the justification of the I.Q. as a test for human ability. For example, in the early 1950s young engineers graduating from college enjoyed the greatest market for their services in our economic history. Oil companies vied with the airplane industry to enlist these professionals at any price. The recent collapse of the airplane industry has dumped these same men, now middle aged, into the job market to face the future with little hope of ever again attaining the advantages they once enjoyed in salaries and fringe benefits. Assuming that most of these men had high I.Q.s, since they were college graduates with at least undergraduate degrees, the discrepancy between the qualities of the individual alone and the impact of the environment and economic structures upon his success or failure is apparent. This suggests that instead of educating children for high I.Q. scores, public education should provide for them the intellectual resources to assure their adaptability in this world of change.

Pursuing the arguments of such social scientists as Jean Piaget, intelligence is considered like a muscle, to be developed through exercise. This being so, it becomes the function of the primary groups (like the family) and the secondary groups (like the education establishment) so to design their structures that each child may have the opportunity to develop the "muscle" that is intelligence. Such structures and functions of groups will be quite different from those that assume that as a child is born so will he inevitably grow, without benefit of effort among those creating his environment. Piaget's rationale also puts the responsibility for the quality of intergroup relations in affecting this adaptability squarely upon the participants in the primary groups (the father and the mother) and the leadership of the secondary groups (the owner, the management, the supervisor) whatever the individual's genes.

Such concerns for quality among the leadership of the education establishment must embrace the full range of the primary and secondary group relationships—the most promising practices of all these worlds of Euclid, Newton and Einstein. But value judgments must be made regarding the use of such constructs as the I.Q. and of the place of programmed learning in reinforcement of the "facts" of a given subject. Ultimately, provision for individual experience beyond all of these earlier views of the world must

be made. Commenting on Norman Mailer's discussions of sex, Ruth Brine, in a recent TIME Magazine essay, noted that "to become anybody (certainly to become autonomous), one must make a creative leap beyond one's conditioning, not count on it or blame it." This necessary leap is a milestone in the experience of the individual in moving from the limitations of the primary group to the satisfactions of the world beyond—no simple thing, but imperative for adaptability to these latter days of the twentieth century.

Interestingly, the entire range of this intellectual history—from Euclid to Einstein—may be observed across the country in public education practices within a single school district, even within a single school. Unfortunately, not all superintendents have made the value judgments necessary to eliminate the fragmentation, if not actual inconsistency, that these eclectic patterns produce.

Assailed by the claims of Arthur Jensen and Richard Herrnstein, superintendents and their administrators should be forced to clarify their own convictions regarding the interpretation of the I.Q. score and how such information has been used within their jurisdictions. If, as in the traditional school, the administration assumes that an I.Q. score at the end of the sixth grade predicts the mental ability of that child forever after, the track system for static mass instruction is justified. If, on the other hand, the administration views the I.Q. score as evidence of the attainment of that child within a given range of semantic skills at a given moment in time, this construct of I.Q. becomes only one of many tools to calibrate teacher and student in the learning process, and the future attainment of that child will be determined by the wealth of experience open to him in the classroom and in the global village.

Nothing is more important to the structure and function of a school district than such decisions made by superintendents, administrators and teachers. Those superintendents who have chosen the latter course have moved from the traditional track system to individualized instruction, flexible grouping, and team teaching, but not without the time and effort necessary to resolve the "leap" from traditional patterns to those more relevant to the present. Many efforts made in the name of these innovations have completely failed, primarily because they have been erroneously conceived. Again and again one hears individualized instruction described as a kind of tutoring process—a one-to-one ratio of student to teacher. Nothing could be further from actual practice where individualized instruction has been successfully carried out. Whereas it has been shown that teacher-pupil ratios *per se* make no significant difference in pupil attainment, an education program geared to the achievement and interests of the individual student, like those in New Albany, Mississippi, have provided a base for individual growth and sustained student interest.

At this time, while chronic illiteracy, high drop-out rates, and student charges of irrelevancy provide overwhelming evidence that traditional

methods have failed, American public education, in its research, has not adequately evaluated the general results of recent innovations in education. As Charles Silberman points out in *Crisis in the Classroom,* this weakness is partially due to the role of our federal government in education, in contrast to that of England. There the "free" schools adopted for all schools by the government, have been assessed countrywide as part of the operating function of the central government's education establishment. Here again, our fragmentation is apparent: while superintendents proudly describe the results of an innovative program in a given school, few have made the effort to adapt these successes to the district as a whole. At the present time, the innovations in our public schools can be more easily justified because of the obvious failures of past practices in the present world than through "hard" data proving the results of current innovations. Elsewhere the questions of "proof" and new patterns of research will be discussed apropos of "accountability" and "equalization." Meanwhile, the most promising practices observed across the country will be considered *a priori.* That such practices have sprung up in all parts of the nation, as though from grass roots response to need for educational change, may be considered, pragmatically, as significant in itself.

What might have been and what still may be a major influence for change in American public education are the processes of desegregation. That the black child is so dramatically identifiable has served to highlight, within the desegregated classroom and the desegregated school, the weaknesses of educational practices that have existed for many years in all our schools . Only white children happened to attend the school organized for tracking described in Chapter II, so charges of "discrimination" were never considered. Nothing short of a challenge to the fundamental premises of such a system could have changed it, and neither administrator, nor teacher, nor parent was sufficiently sophisticated at that point in time to have raised the necessary questions. Today, however, as educators observe the plight of the black child in the desegregated school and black leaders probe the practices creating this isolation within the classroom, these basic questions cannot be avoided.

In one Mississippi class of sixth graders, four tracks have been established: A, B, C and D. The racial make-up of these classes falls into a familiar pattern:

A — All white
B — 5 black of 22 in the class
C — approximately 50-50 black-white ratio
D — 29 black students, no whites

If the premise that the score on a standardized test is absolute and constant is accepted, the educator can go complacently along, convinced that his track system is valid. However, if this validity is questioned, a Pandora's box of doubts assail the educator, the parent, and the child himself. If, following these doubts, the standardized test is interpreted as an indi-

cation of the accomplishment of a child within the boundaries of certain subject matter at a given moment in time, the track system is no longer tolerable. The educational alternative to the track system is individualized instruction, based on opportunities within the classroom and throughout the community, as well as throughout the global village, for the infinite growth of that individual. But for public school education, the structure of the school district and of its classrooms is presently the key, and the possible rewards of this break-through in educational patterns accrue to the white child as well as the black.

Like the concept of individualized instruction, that of student "grouping" has been widely misunderstood. Obviously, the track system is based on homogeneous grouping, i.e., the assignment to the same group for all instruction in all subjects students whose scores fall within given ranges on a standardized test. Such grouping was deeply influenced by the patterns of large scale production and the assembly line in industry during the first decades of this century, particularly since the track system served to select out the "workers" in Industrial Arts, as well as the college-bound in the academic courses. It is ironic that even after business and industry have moved toward individualization (with the help of the computer) in employee policies and "participatory management," the schools have persisted in these outmoded practices.

In attempting to move away from homogeneous grouping, as it has thus existed in the track system, many educators have thrown out the baby with the bath water by assuming that "to group or not to group" was the question. On the contrary, students must and should be grouped in any sound educational process. It is the nature and the quality of the grouping that become the focus of the question, and *flexibility* is the magic word. Thus, for valid individualization of instruction, the child should know, in the course of a day, both homogeneous and heterogeneous group experience. He may be part of a homogeneous group for help in conquering a particular mathematical process, like fractions, or for reinforcement of his special interests in subject matter, like American history, while pursuing subjects like Social Studies as part of a heterogeneous group.

And his educational resources should not be limited to one teacher day after day for a year. He should find easily available for answers to his questions the expertise of a number of educators, including teachers, paraprofessionals, and parent volunteers. The bases for these groupings and the deployment of these resources are, of course, the responsibility of the school administration. The restructuring of a school district for the elimination of the track system and the development of flexibility of grouping is a major function of the superintendency, and only through careful comprehensive planning for change can this be accomplished.

One of the major problems for the school administrator is to plan strategies for change that will move his district from that most deep-seated of tracks, the neighborhood school, in order to equalize resources for all schools in his district, regardless of the socio-economic backgrounds of

their residential settings. Moving toward such innovation, school districts like Rochester, New York and Roanoke, Virginia have re-zoned their elementary schools to "cluster" within each zone the range of present socio-economic differences. They have thus zoned a number of schools, sometimes in the pie-shaped figure that most frequently includes the predominantly black inner city, the predominantly white suburb, and several schools in residential areas between. In the case of Rochester, some twelve zones have thus been designated to move toward desegregation and educational innovation during the next several years. To date, three of the twelve zones have been desegregated, while individualized instruction, flexible grouping, and team teaching are also being generally instituted. Learning from the experiences of this pilot move, the remaining zones are scheduled to continue this process until all elementary schools have been desegregated and new patterns for individualized instruction have been established.

In both these school districts, zones for the junior high or the middle school and for the senior high schools complement the elementary zones. Such patterns for elementary-middle-senior high schools, are in themselves, an important administrative consideration. Particularly where individualized instruction, continuous progress and/or nongradedness are at work, it has been found that organization patterns of three-year units are advisable, in order that the patterns of continuous progress may be established for the child. The exception to this is the return to the four-year senior high school, because experience with junior high school organization, which included the ninth grade, has convinced many school administrators that students at this grade level react more satisfactorily in the presence of the leadership of older students in the tenth through twelfth levels. In generai, it has been found that the following levels, within given school buildings, as well as within school organization, are the most advantageous: K-2, 3-5, 6-8, 9-12. It has been found that housing together only two grades creates instability when students are adjusting to arrival the first year and anticipating departure during the second. This provision for stability as the framework for flexibility is an educational equation demanding careful thought.

Finally, in considering individualized instruction, flexibility of grouping, and team teaching as the bases for educational innovation, there have been as many misconceptions of the function of team teaching as destructive to innovation in education as those surrounding the first two components in the pattern. One rule of thumb has been formulated out of recent experience: if strategies for change begin with a searching analysis of what individualized instruction really means, flexible grouping and effective team teaching will follow; if, on the other hand, they begin with team teaching, they are likely never to get past the job descriptions and definitions of responsibility of the teachers, ignoring the major consideration—the learning processes of the child.

The team teaching necessary to the quality of individualized instruction

and flexible grouping described above grows out of the planning begun with charting the progress of the individual and the structures of flexible grouping to stimulate and sustain that progress. No teacher in a self-contained classroom, assigned to a given "grade" for a year, can provide adequate individualization and flexibility of grouping—regardless of her skill. Only with flexible teaching teams can students enjoy flexibility of experience. It follows that, to initiate these innovations, the team begins with the planning of a group of teachers previously teaching across given grade levels, i.e., K-2, 3-5, 6-8, etc. Such a group becomes a team when some consensus has been reached regarding the bases (tests and techniques) for the grouping of children to provide sequential learning and continuous progress, the new materials necessary for individualized instruction (many of them teacher-made), the subject matter areas for which each member will be responsible, the role of each in the division of labor.

Such peer teaming of teachers, rather than hierarchial grouping, is desirable, since it extends the freedom and responsibility of members of the team, while hierarchial patterns tend to stultify and compartmentalize—track, if you will—the energies and interests of the team members. Through the processes of teacher peer teaming, leadership is, from time to time, determined by the group, as are assignments and responsibilities.

One of the major values of this kind of team teaching is its built-in training function: teachers, like children, learn from one another and grow with responsibility. It has been found that teacher-assessment of students, a vital responsibility of the team, is finely calibrated and validated by group decisions. Thus, the problem of individual "likes" and "dislikes"—the chemistry between certain children and certain teachers—is minimized as a factor in judging a child's potential. And since the grouping and regrouping of children is a major function of the team, many student assessment tests and techniques are employed.

No area of the curriculum has claimed more attention among innovators than that of Language Arts. Traditionally, reading and writing have been taught as separate subjects, with speech added as a "frill." Of these three skills—speech, reading, and writing—reading has been given most attention as a separate subject, particularly during the past thirty years since I. A. Richards' basic English and E. L. Thorndike's word scales became the framework for certain text books and machine-programmed learning. Some educators now believe that mounting evidence of public education's failure to teach reading during these years is no accident. Such misgivings about the reading methods exemplified in the repetitions of *Dick and Jane* and comparable materials utilized in machine-programmed learning derive from this over-simplification of the complicated skill called "reading."

This over-simplification and mechanization of the reading process has been reinforced by the role of the diagnostic-remedial reading specialist. Not only have his methods been limited by the same over-simplifications of *Dick and Jane* and the machine. The role has has played as specialist

and the "laboratories" and "clinics" that have grown up around him have created the very isolation from experience that exaggerates the problems of the poor reader. Again and again, during the past six years, as such patterns of education have been observed apropos of desegregation, it has been found that the "poor reader"—usually the black child—is relegated to additional hours in the diagnostic-remedial laboratory sitting in a learning carrel, while the "talented" child is taken on field trips to historical sites to "reward" and "enrich" his accomplishments.

Reading is an infinite process of association between the reality of experience and the symbol that, in our culture, is *a word.* Like John Flanagan's description of levels of intelligence, skill in reading proceeds from the single specific, to the category, to the generalization, to the ability to perceive the relationship of a generalization describing one situation to a second situation in a different context. The over-simplification and over-control implicit in many current reading materials used in the public schools build up frustrations and inhibitions in the child subjected to such circumscribed conditioning. Moreover, as one educator said, with some naïveté, "I find they can read from a screen, but not from a book."

Such a comment raises, of course, the question posed by McLuhan's claims as to whether or not book-reading will be necessary in the world of tomorrow. To those who, in spite of wide exposure to screen and computer, still derive education from books, such a question is heresy. That all children need not be given the keys to history and literature by being taught to read is unthinkable. To open up these treasures to some children, while denying them to others in any stratification of opportunity, they hold, is a travesty on the meaning of public education in a democracy.

To rearrange the educational values at work in recent educational methods, such as reading, is to move from the diagnostic-remedial techniques of Newton's psychometricians to the experiential-developmental approaches of a Piaget, the methods in Language Arts employed by Sammye Wynn in Tennessee. Fundamental to such methods is the integration of the three skills of speech, reading and writing.

At no time in our history has the American public school system given adequate attention to spoken English—not the spoken English designed for "proper" speech, but the opportunity to develop the many and complicated skills that are demanded in the ranges of communication from conversation with the family to participation in community group planning to addressing a congress. Moreover, the vital link between the spoken word and that read or written has been ignored—an omission encouraged, if not created, by our preoccupation with silence and order in formal education.

Teaching Language Arts through experiential-developmental methods provides children with the knowledge of the relationships between their experiences and the word-symbols that create communication through speech, reading, and writing. In the "free" and flexibly grouped classroom,

oral exchanges become the order of the day, with silence-for-silence's sake a non-existent stricture. Based on the child's experiences expressed in his own words, stories are written, diaries are kept, "newspapers" are produced, and the world of words is constantly explored. Vocabulary at all levels of generalization is thus developed, initiated by the child himself, extended and reinforced by his teachers, his peers, and his experiences in real life and in the vicarious realms of the written word.

At the upper levels of the child's learning experience, beyond the primary years, to teach reading—the association of more complicated symbols to broader and more generalized experience—becomes the responsibility of all teachers of all subjects. Thus, the unfortunate isolation by the teaching of reading through diagnostic-remedial specialists alone is counteracted, and the reading specialist becomes a resource person for teachers, instead of a tutor for children, a consultant whose knowledge of special reading problems and their solutions can be transmitted to teachers without destroying their function as facilitators of experience within their chosen fields.

Communication between blacks and whites, at all levels of comprehension and within all ranges of groupings—from conversations to bi-racial committee meetings, to community forums—has been among the problems most frequently mentioned among both blacks and whites as they moved toward desegregation. Inevitably, the inability of the white teacher to "understand" the black child in her classroom has been a frequent plaint. It is difficult, first of all, to measure the extent to which pure prejudice colors such a claim, and, by that token, to what extent the child's awareness of this attitude creates and increases his reluctance to express himself to that teacher. However, the most constructive and successful approaches to such differences of speech patterns in the classroom are those borrowed from the techniques employed in teaching English as a second language.

Begun in the teaching of English to foreigners in this country, instructors approach the learner with respect, in the knowledge that he has already mastered his native tongue. Like the methods described above, such instruction begins with the spoken word and draws from the experience of the learner, without belaboring rules of grammar or memorized vocabulary.

Such an approach is a significant departure from the attitudes and methods used in the public schools attended by children from families who spoke languages other than English. In our "melting pot" enthusiasm to make "good Americans" of all immigrants during the early decades of this century, our methods of teaching English implicitly and explicitly rejected the family tongue of the foreign born child, even punishing that child for using words other than English within the school. Such attitudes often engendered in the teacher a kind of moral judgment of the child, a basis for rejecting him and his family because their speech was different from her own.

Translating the techniques of "teaching English as a second language" to the teaching of standard English as a second language can carry with it the inherent respect for speech patterns that are different from one's own, as the research of the Center for Applied Linguistics, in evaluating the significance of Afro-American speech, has suggested. Approaching standard English as a desirable skill for all Americans, while preserving the values of localisms of all kinds, can be as educational to the teacher as to the student.

Since "standard English"—unlike its counterpart "British Received," the cultivated language of the elite—is the language of the majority of Americans, it follows that this pattern provides more immediate communication throughout the country than do any of our regional speech patterns, charming and colorful though they may be. It therefore becomes an asset for any child of any race, creed, or national origin to be able to communicate with a minimum of doubt in most communities in this country. But, more than mere pronunciation, the teaching of speech should provide exercise in what experts call "the use of the mechanism"—the ability to enunciate and project for understanding. It should provide for the child increasing opportunities to improve his speech skills through conversations with classmates, interviews for information, group experience as participant and leader, and presentations of ideas to audiences of all sizes comprised of all kinds of people. Thus, the study of speech becomes a vehicle for improvement in communication for teachers and students in a world that demands more and more thoughtful solutions to the problems of the human condition that is our common bond.

A second curriculum area of paramount significance to educational change is that of Social Studies. The emphasis of the black community on black history, as one factor in fostering black identity, has, in a sense, revolutionized this course of study. Often begun as an isolated unit, black history, successfully coordinated with related historical events, evokes a new perspective not only in our view of America, but of Western civilization for hundreds of years.

In this connection, it is important that, in his current search for identity, the black child not be allowed to fix his interests and the limits of his experience to his primary group in the black community. His pursuit of the history of his people must include research and investigation into the social, economic, religious, and philosophical settings of which they were a part.

Nor should he go alone on this journey. It is important for his ultimate good that he take along with him his white companions, since their forebears, too, were part of these scenes, and, together they must go on. Black and white alike must be given the opportunity not only to identify with their cultural beginnings, but to learn the social and economic skills necessary to move with ease from these relatively simple primary group situations to the more demanding, but sometimes more rewarding, sec-

ondary groups. Even as in the past, the child who is "tied to his mother's apron strings" is at a disadvantage. The more so today is it necessary for education to foster the "autonomous" individual, he who can make his way unafraid in many realms of social space.

Thus, in addition to the traditional information provided within the Social Studies curriculum, enriched by the new perspectives that well taught black history is bound to provide, the Social Studies curriculum and the Social Studies professional should incorporate into this subject and its exercises the history of psychological and sociological thought, particularly as they pertain to coping with the problems occasioned by desegregation. Stimulated by Emergency School Assistance Program funding, Human Relations Councils for students and faculty have grown up throughout the country, particularly as black students in junior and senior high schools protested their isolation from participation in extracurricular activities and decried the irrelevance of the prevailing academic programs for the college bound, for which many of them had not been previously prepared. In such programs, these students find a forum for their opinions and a mechanism for student involvement in decision-making.

But good intentions are not enough if such programs are indeed to assist in alleviating the frustrations thus created in the desegregated school. A professional knowledge of the psychology and sociology of group process is demanded of the leadership of such efforts. As anyone who has participated in the most elementary of "confrontation" groups can attest, "the group" can be atavistically destructive and irreparably damaging in the absence of leaders skilled in the techniques of creating group cohesiveness, a vital component in problem-solving.

Within the Social Studies curriculum should also be instilled a sense of history through a knowledge of what has gone before us in man's long effort to cope with his environment and the vicissitudes of the human condition. No more important group process exists than that of social problem-solving. To reject the past out of hand and to attempt to begin again at this point in time to construct the wheel is nonsense. Without the resources of the public school to provide a knowledge of the past—with its successes and failures—and of the best that has been said and written in the solution of our problems through the ages, democracy, as Americans have known and idealized it, has little chance for survival.

Once again the black student in the desegregated junior and senior high school has personified the frustrations that certain folkways and mores, customs and structures have long visited upon all our children. Among these limitations of public school education thus revealed is the inadequacy of opportunities for career development available to our youth. Consistent with the tracking patterns of the past, children have been assigned to vocational compartments early in life, usually at the age of eleven, at the end of the sixth grade.

Throughout junior and senior high schools across the country the

twelve-year-olds lived out their remaining school years in the following water-tight compartments: the academic course for the college bound, the business course for those scoring just below the cut-off point of the percentiles reserved for the college bound, the Industrial Arts course for the boys being prepared for work in industry and its mechanical adjuncts, and Home Economics for the girls who were low scorers. Nor was there any repeal from this doom. All students at all levels pursued their education in self-contained classrooms isolated from their fellows, from the community and from the "real" world they would enter later. Fundamental to all of this has been the status attributed to the college bound and the implicit rejection of all who did not "make" this rarified realm. Such attitudes prevail in our secondary schools today, in spite of the knowledge that many students prepared for college in our high schools do not matriculate and, of those entering college, another significant percentage drop out.

The most destructive factor in this compartmentalization has been its inflexibility, its built-in limitations of opportunity and experience in social space. The tragedy lies in the assumption of educators that because people have been programmed to this stratification in the past—because it exists—it has validity in itself. Thus, at all levels of the education establishment, especially in the schools of education, educational leaders perpetuate these educational fallacies, in spite of the evidence of their failure. For example, when Herrnstein postulates that our society is moving toward social stratification topped by an elite, he is bolstering the very social isolation that the academic community should be reassessing in the light of the evidence of the need for change.

But in spite of some educational leadership still programmed to the past, significant forces for constructive change may be observed in the rationale for the vocational center at New Albany and in the implications for Philadelphia's "school without walls." Moreover, the Vocational Education Act of 1963, its amendments of 1968, and the guidelines that followed describe new directions away from the compartmentalization of the past and toward a wide range of educational opportunity surrounding the area of special career development.

First of all, new concepts of career development vis-à-vis the slotting by tests in the past must permeate the entire school organization K through 12. Thus, by providing children from their earliest years with opportunities to observe the world of work in community services, in the arts and humanities, and in the academic community of colleges and universities, each individual may see for himself the range of interests he may pursue. And as the child moves from the primary levels of his first years in school to those of the intermediate and middle years, the flexibility of his social and educational experiences will allow him to amass the information and develop the skills that will make his career aims a reality. His interest in business and industry as a career will not preclude his

participation in the arts at any level of interest or skill he may attain. And while he learns the skills necessary to the career of his choice, he may enjoy the fruits of the novelist and the insights of the historian.

Finally, when the time comes, during the high school years, for the student to make his career decisions for the years that follow, he will be able to make his choices on the basis of the broadest possible experience and observation provided during his earlier school years. Among these experiences and observations should have been opportunities for work and study programs, for volunteer service in community organizations, for participation in the world of the arts, and for a foretaste of the academic life of the college or university. Thus, the emphasis on the importance of the individual and provision for his wide social and intellectual experience in the public schools comes full circle.

And all of this is designed to lead to better education than we have ever known before, because better education for all of us is mandated by the world of Einstein.

Chapter Five

The Educator in the World of Einstein

INNOVATIONS in the education of the educator have paralleled those evolving in the education of our children. Obviously, the changes in the structures of the classroom, mandated by individualized instruction, flexible grouping, and team teaching have demanded comparable reconstruction of teacher values and teacher skills. However, no significant adaptability to changing cultural patterns is possible for the teacher alone. If the superintendency fails to recognize these needs for change or to provide the leadership necessary to effect and sustain them, little can be accomplished.

In order to enlist the support of his faculty and his community, the superintendent must produce evidence of the valid needs of his constituents. He must determine the directions for change necessary to meet these needs. He must develop criteria by which progress toward the improvement of education can be measured. And in all of this planning, he must provide for the participation of faculty and community in arriving at his final decisions.

It was suggested earlier that the role and responsibility of the superintendent have changed during the past six years, when desegregation and federal assistance to the poor have taken their places among his major concerns. There can be little doubt that the role and the responsibility of the superintendent has become more onerous and complicated than in the past, and that few superintendents in the country were prepared for the pressures of the courts, the community, and the federal government ushered in by the Civil Rights Act of 1964 and the Elementary and Secondary Education Act of 1965. If education is indeed to be improved by these federal efforts, the superintendent of schools must be given special assistance in meeting his obligations, a need anticipated by Title IV of the Civil Rights Act.

Superintendents themselves, recognizing the need for assistance, should carefully explore the possibilities of organizing superintendency teams to delegate among several assistant superintendents responsibility for re-

search, planning, and other special areas of growing importance in school administration. Such assistants should provide him with the information and the expertise to communicate more effectively than in the past with his board, his faculty, and his community. Too long has the superintendent, as politician, budgeteer, maintenance engineer, and public relations practitioner—roles usually played by ear—stood alone before the sling and arrows of boards of education, the community and his teachers. The educator in this position needs the support of a much stronger base of communication between himself and his community and between himself and his teachers, with a much stronger central staff than he has been afforded in the past. Among his supporting organization should be, in addition to research and planning, experts in professional personnel policies and practices, in pupil personnel services, in curriculum development, and in student, parent, and community relations.

One evidence of this need to supplement the superintendent's expertise has been the increased use of the educational consultant, the specialist who can bring to the superintendent, his staff, and his faculty broadly based experience in special educational fields. Among the experts most frequently employed are: the planner and the researcher to assist in designs for evaluation and accountability; the consultant with special background in professional personnel policies and procedures; the curriculum specialist who not only works in the planning processes, but participates with teachers in classroom activities; the human relations specialist to provide leadership in student-to-student, student-to-faculty, and school-community processes of problem solving.

But the value of such expertise will never be greater than the ability of the superintendent and his team to direct and implement the findings and recommendations of the consultant. Too often reports by consultants have been requested in the naïve belief that they will relieve the superintendent of his responsibility to make the final decision. Because of this attitude, the consultant's recommendations, after having been argued by board and community, are ultimately ignored. Only the superintendent can decide, on the basis of the best available evidence submitted by his staff, how his administration can be implemented. Such devices as the superintendency team and the use of special consultants will be only as valuable as the superintendent's ability to delegate responsibility and to coordinate the results of the efforts of his advisors.

In sum, the role and the responsibility of the public school superintendent have changed and grown during the past six years. As never before, these leaders in education must be equipped with the best available resources in order to discharge their duties. To do this, American public school administrators must be better equipped than past roles and responsibilities made necessary. Unfortunately, the unprecedented pressures occasioned by desegregation and equal educational opportunity have left no time to prepare to meet the current exigencies. In no profession or

in no other current dilemma of social control has the impact of "future shock" been more overwhelming. The training of our American superintendents must be "on the job" with no moratorium on responsibility to act.

The most important single factor in the administration of a school district at this time is the quality of its research—the basic tool in the design for the most vital functions of comprehensive planning. While the superintendent himself need not be a professional researcher, his training in education should provide for him a philosophical base for making value judgments regarding the principles of research he deems valid. In the absence of such expertise, millions of educational dollars have recently been spent without contributing one whit to the solution of our pressing educational problems. On the contrary, in many cases, the projects funded have only exacerbated them.

That principles and patterns of educational research are in transition from Newton's psychometrics to Einstein's relativity only adds to the difficulty of educational decision-making. The failures of such efforts at "accountability" as that attempted at Texarkana were predicted by some social scientists because of the very nature of the design for this program. The psychometric base for the Texarkana project contained all of the limitations—and fragmentation—implicit in this pattern: before-and-after responses to a highly controlled, relatively small number of subjects; a rationale limiting the test of responsibility for student achievement to a relatively small number of teachers; results based on comparatively limited material that can be "controlled," but of questionable validity for judging ultimate reading skills.

Such patterns are typical of the conventional techniques that have been employed in educational research. One premise used traditionally to justify such research has been the spurious factor of arithmetical quantification, a pseudo-validity created by weighting all variables with a mathematical symbol. The application of comparable mathematical values to more sophisticated but more useful formulas has only recently developed.

Consistent with Henry Dyer's critique of the Texarkana project is the assumption that the success of a school district in the education of children cannot be assessed by limiting the design to the performance of the teacher alone. The success of a teacher depends directly upon what the school superintendent decides are the needs, objectives, and criteria for the evaluation of the operation of the school district. In the past, the philosophy of the superintendent alone determined whether teachers taught to subject matter or to students, and the teacher at odds with the superintendent's philosophy left the district, either by his decision or her own. And if, for example, a school superintendent in New York state viewed "his" Regents record as the principal criterion for the success of his stewardship, the school system was geared to fulfill this objective. Students who might jeopardize this end by failing were early "selected

out" and assigned to the "general course." The "bright ones" went on to sustain that 99.9% attainment for the superintendent. The irony that the teachers "rewarded" by teaching Regents classes had easier jobs than those teaching the less highly motivated students was lost on all educators concerned.

More recently, under the influence of such social scientists as Henry Dyer, some school superintendents have assumed the formidable task of assessing their district operations as a whole. Among the salient factors influencing these kinds of research are congressional demands for "accountability" under Title I ESEA, and the concept of "equalization," most recently brought to public attention by the California Supreme Court decision regarding the inequity of local real estate tax bases for the financing of public education.

The crux of Dr. Dyer's rationale is *joint* accountability. He points out that what happens to any child in a school is determined by a multiplicity of transactions with different people on the staff, performing different roles and having differing impacts on the child's learning. Dyer sees accountability as a two-way street, wherein the school staff is held accountable to higher authority for its own operations, while the higher authorities in turn are held accountable for supplying the appropriate information and facilities each school staff requires to operate effectively.

He describes four groups of variables in the school social system: *input*, the characteristics of the child when he enters school; *output*, the same characteristics of the child as he emerges from a particular phase of his education some years later; *surrounding condition*, home conditions, community conditions, school conditions; and *educational process*, all activities in the school expressly designed to bring about changes for the better in pupils.

Describing school effectiveness indices (SEI), the base for his design, he states that all variables in the system must be measured and appropriately interrelated and combined to produce readily understood indices by which the staff can know how much its own efforts are producing hoped for changes in pupils. He states that, in preparing school profiles based on SEI, he rejects grade equivalencies as meaningless numbers and that appropriate indices in the SEI profile of any given school at any given level can be derived only through procedures involving *all* the schools at the same level in the district. Only with such a rationale, framed by district-wide assessments of need as the base for setting objectives and the criteria for evaluation, can designs for accountability, comparability, and equalization be valid. Anything less is meaningless.

And as the experiences of the black child in the desegregated, predominantly white school have revealed the weaknesses of our past educational practices in our current culture, so the experiences of the black educator in the processes of faculty desegregation have revealed the paucity of sound professional personnel policies and procedures in our

American public schools. Black educators, throughout the desegregating South, are said to be "disappearing." Study after study, during the past six years, bears evidence of the dismissal or down-grading of black principals and teachers and a steady decline in their numbers, with a comparable increase in the number of white principals and teachers hired to replace them. Legal efforts to restrain this trend have failed, in the absence of "hard data"—or admissible evidence—by which to determine the qualities of a principal or a teacher that justify a dismissal or a downgrading. Thus, a black principal, more expert than his white counterpart, may easily suffer the loss of his job because of the sheer prejudice of the superintendent. But, as the experiences of the National Education Association and the American Federation of Teachers have made clear, discrimination in equally subtle ways may apply to white educators in the absence of clear professional personnel policies and procedures throughout the workings of public school education in America.

Again, only yesterday has the education community—the NEA, the AFT, and certain forward looking social scientists—become activated to concern for such over-riding functions of public education as policies and procedures to assure the growth and development of professional personnel. Again, only inklings of the possibilities of improved professional development are apparent. However, what exists is encouraging.

Beginning with what appeared to be Robert McNamara's key to secondary group performance—PPBS, meaning program-planning-budgeting-system—educators during recent years have made considerable effort to apply to the management of the public schools the results of comparable successful practices in business and industry. Ironically, too often they have chosen Newtonian designs—like PPBS—which ultimately fall short of their purposes, instead of the more promising techniques also employed by business and industry in human relations personnel policies. While business and industry learned some time ago that the investment of time and money in the training of personnel produced a precious resource, education has been profligate in its use and misuse of human beings—children and adults alike. Parallels between the preponderance of the mechanism of Newton and the absence of more humanistic practices are obvious.

No social scientists in any field have been more influential than Kurt Lewin and Douglas McGregor in applying the philosophy of humanism and Einstein's relativity to the practices of business and industry. As an outgrowth of Lewin's field theory of social space and the concept-of-the-whole in human relationships, McGregor defined the differences between the traditional and the current in human relations through the models of Theory X and Theory Y. Theory X describes the past authoritarian-paternalistic philosophy of business, while Theory Y presents the application of more recent concepts of social relationships, focusing on the importance of the individual and his participation in decisions that determine his fate and his future. Out of this philosophy came that of "participatory

management," a kind of redefinition of the democratic process.

Such principles are at work in designs for assessments of need derived from the opinions and judgments of the entire school district constituency, including the disaffected parent and the drop-out boy, and in the formulating of educational objectives and criteria for the evaluation of the school district operation thus based. They are also at work in the concept of "participatory assessment" growing out of Marion Richardson's techniques of forced-choice. These techniques, originating in the need for new criteria for the selection of officer personnel in World War II, have since been applied throughout the world in Edwin Henry's work with Standard Oil (N.J.) in the development of criteria for the selection of supervisory personnel. However, the value of these techniques of participatory assessment lies, not so much in their ultimate "objectivity," as in the *processes* of personnel involvement in arriving at the ultimate instrument.

This instrument for the selection of supervisory personnel is the product of the most careful interchange of opinion among three levels of management. (What in industrial management is the first line worker, the first line supervisor, and the first level of management becomes in education the teacher, the principal, and the central staff administrator.) The process begins with the developing of peer group statements of how a good first line worker performs and how a poor first line worker performs, in behavorial terms. Similar data are developed through comparable peer group participation at the second and third levels. After validating the items finally selected, the correlation between the statements (or items) from the three levels of the operation forms the basis for the instrument. Obviously, such a process produces criteria not only for the selection of first line supervisors but for the assessment of the performance of the first line and the third level participants.

In the process of establishing criteria for the performance of the principal, all three groups—the teachers, the principals, and the central staff administrators—have determined among themselves the criteria for performance at all three levels. And having shared in this process, consensus among the three groups is assured: the teacher understands the terms by which his work is judged; the principal has explored not only the bases upon which he judges a teacher, but the bases upon which a teacher judges his competence; and the central staff administrator is made cognizant of the interaction among all three levels of operation, including his own.

But all of these efforts at the administration level will go for naught if, in the technical details surrounding the development of such procedures, the primary objective of it all is lost: the education of the child and the skill of the teacher in leading him to broader information, greater skills, and deeper insights as he learns to cope with the world he lives in. Thus, all these comprehensive planning measures must finally be focused on the responsibility of the superintendency to provide professional development for all professional personnel.

In the past, a teacher's graduation from college with the proper teaching certificate provided the security of a life-time permit to teach. It was assumed that all the information and the skill necessary to the performance of her professional duties were capsulated in her teacher training in college and its confirmation with her certificate. Such complaisance is no longer possible. Only by continuing concern for the adaptability of educators to a world where change is the only constant can public school education be sustained. This sustaining of the growth and development of the educator—at all levels of the education establishment—involves not only continuing graduate work at the university, but, perhaps more importantly, inservice training supported by the school administration.

Fortunately, the innovations in education described here, particularly the processes of individualized instruction, flexible grouping, and team teaching provide built-in professional development for the teacher, the principal, and the administrator. Such innovations cannot be effectively instituted without the full knowledge of the superintendency and the school administration of the ramifications of such concepts. The pursuit of this information is, in itself, educational. Moreover, such innovations cannot be sustained without the consistent participation and observation of all supervisory personnel, to the end that all such efforts are carefully coordinated within the school and throughout the school district.

Before any such innovations are introduced into a school district, extensive preservice training is necessary, as are carefully formulated phases for the strategy for change. As such practices are extended from one school or from one zone to the next, experience must be refined and techniques calibrated to improve the processes as they are extended. Nothing is more important than the scheduling of inservice training programs throughout the school year—not to provide the lecture-information courses marking past training programs, but problem-solving workshops for interaction among teachers, principals, and administrators in sessions designed to develop integrity of effort throughout the district.

And in these terms, each educator, like each child, must be honored as an individual with infinite capacity to grow. Thus, sound personnel policies and practices will assure that the interests, skills, and motivations of each professional in the school district are recognized and utilized to their greatest possible limits. Only through the consistent application of such principles can the education establishment, with all its resources, become sensitive and adaptable to the world of Einstein, else, like the dinosaur, it perish.

Chapter Six

The Case For Democracy

THOSE OF US born and educated in the United States have been taught that the political system known as "democracy" provides, through our state legislatures and our Congress, true representation of all the people and, thus, "the greatest good for the greatest number." We have been taught that this was a significant departure from the past, when monarchies preserved the dominance of given families on the principle of the Divine Right of Kings. We were taught to believe that it is more likely to succeed as a governmental structure than modern dictatorships, where the will-to-power of a charismatic leader is the primary unifying force.

We have been taught that, out of the fortunate coincidence of an inspired leadership, great riches in natural resources, and the relatively untrammeled conquest of an under-populated land, democracy and the United States were born. Because our Congress represents the people, the President is their elected leader, and the Supreme Court sustains the best that has been thought in the tenets of jurisprudence, we have enjoyed the advantages of political processes responsive to the will of the people and protective of the rights of the individual and the common man. Founded by English, Dutch, French, and Spanish immigrants from western Europe, the new country produced, out of these many nations, a world addressed, not to the preservation of the identity of European nationalism, but to the solution to the problems of the human condition common to them all: religious conflict, economic inequity, political prejudice, social stratification.

According to our school text books, the United States provided, for the first time in history, limitless opportunities for the individual to achieve, through stick-to-itiveness, enterprise, and good works, the heights of economic and social achievement. In this new world, the evils of the old were non-existent. For the immigrant in America, the barriers to economic opportunity and the strictures of social class were ultimately meaningless.

However, we have also been taught that these ideals must constantly be renewed by the citizens of this country, lest, through complacency, they be lost. The implication inherent in this alarum is that all things change

and that the satisfactions of a given social system can only be sustained by the adaptation of its ideals to constantly shifting relationships. Therefore, our institutions must constantly be monitored—by the people, by the press and the news media, by built-in government controls, and by the education establishment. And at no time in our history has the education establishment had a greater opportunity to discharge this responsibility than at the present time.

The Civil Rights Act of 1964 and the Elementary and Secondary Education Act of 1965 may be said to reflect more profoundly than any other education legislation at any time in history the needs and aspirations of the American people—albeit the focus is on the blacks and our poor. To any careful observer of the education scene during the past six years since this legislation, the conclusion is clear: the needs of the black child and the needs of the poor reflect the deep and general need for all Americans of all ages and all walks of life to reassess our human values, particularly as they apply to our public schools. Because the role of the public schools of America is the most important single factor in the sustaining of our democratic government.

The threats to public school education at this time are obvious: inadequate local funding, especially in the cities; inequities on all scores insidiously growing during the years since World War II; the difficulties of transition from outmoded past practices in education to the application of relevant innovations; racial prejudice that has ironically deterred us from the very changes in school district structure that would solve the educational problems of both the "advantaged" and the "disadvantaged" alike. It is equally clear that the quality of the decision-making by educators at all levels of the establishment will determine whether the public schools fulfill their role in our democracy or fail to preserve our heritage.

But the educator alone cannot confront and solve these problems. The enlightened assistance of the community, of the local government, of the state government, and of the federal government is imperative. Less obviously, the enlightened assistance of other arms of the education establishment is equally essential: the intellectual resources of the university and especially the social scientist. For in the reappraisal of our human values, as they are reflected in public school education, no professional group bears more responsibility than that social scientist.

That Arthur Jensen and Richard Herrnstein have claimed such wide attention in our major news publications is significant. It is significant of the paucity of understanding among social scientists—to say nothing of the editors of our most prestigious magazines and the general public—of the current relevance of the philosophical discoveries of such thinkers as Kurt Lewin and Jean Piaget and the relation between their findings to the world of Albert Einstein. Unfortunately, the public which reads in the daily press about Jensen's genetic dogmas accounting for the I.Q. is not equally well informed of the replies of his critics, though they filled the

greater number of pages in the two issues of the *Harvard Educational Review* that followed the Jensen pronouncements. The potential tragedy for American education lies in the fact that, if such regression in philosophical thought as Jensen and Herrnstein have enunciated are sustained by the general public, the news media, and the education community, the progress of public school education may be impaired beyond redemption. For the literal translation of the constructs described by the Jensens and the Herrnsteins lead directly to the statement of Lewis Solomon published in a *National Review* of recent date entitled "Stop Trying to Make Equal Education."

The ramifications of such ideas for the education of our children can only be recognized in the perspective of the history of philosophical thought. No easy man-in-the-street clichés can convey the fallacies of such arguments or the significance of the more enlightened views of our modern world that are also to be found in the literature of education and social science. In the all too cursory analysis that follows, one important generalization must be stressed: history is the key to the assessment of such ideas. Euclid and Newton made possible giant leaps for the peoples of the worlds they lived in and for the generations that followed. (Pyramids may still be built by the rules of Euclidean geometry—but not space ships.) The discovery and development of the construct of the "intelligence quotient" by Galton and Binet was a giant leap forward in the thinking of the educator and the psychologist of their time, as it objectified and calibrated judgments regarding the abilities of children living under the economic and social patterns that then prevailed. That these constructs, as they were originally conceived, are outmoded and often irrelevant in today's world and that comparable giant leaps are demanded at present can hardly be denied.

As the point of departure for this over-view of history, the following paradigm is offered:

A Historical Catalogue of Social Scientists

Euclid — Circa 300 B.C.
- Francis Galton — 1822-1911
- Alfred Binet — 1857-1911
- *B. F. Skinner — 1904-
- Arthur Jensen — 1923-
- Richard Herrnstein — 1930-

Isaac Newton — 1642-1727
- Ivan Pavlov — 1849-1936
- John B. Watson — 1878-1958
- *B. F. Skinner — 1904-

Albert Einstein — 1879-1955
- John Dewey — 1859-1952
- Kurt Lewin — 1890-1947

Jean Piaget — 1896-
Henry Dyer -— 1907-

This catalogue could, obviously, be developed at length, but for present purposes it has been limited to mere illustration by reference to social scientists hitherto mentioned in this text or of immediate association with these three chapters in the history of Western thought. To point out the relationship between these three worlds and current public school education is to return to earlier themes: the difference between track systems and individualized instruction; the education for mobility in social space demanded by Einstein's world; the nature of the structure and function of modern institutions such as the education establishment.

No tool in education has contributed so directly to the psychological isolation of children in the American classroom as the standardized test in general and I.Q. test in particular. This isolation, as previous chapters have described it, is visited not only upon the black child, but on all American children, when tracking becomes the *modus operandi* for the grouping of our young for instruction in our public schools. If the premises for the constructing of the I.Q. test, so clearly enunciated by Jensen and Herrnstein, are accepted, the logic of the arguments that follow is irrefutable. It is in these premises that their fallacies lie.

The Euclidean psychologist assumes (1) that what has been symbolized by "g" to denote intelligence is an absolute and a constant in personality, as blue eyes are an absolute and a constant in physical characteristics; (2) that the genes, foreordained by heredity, are more important to the success of an individual than the circumstances of the social and economic strata into which he is born; (3) that the nature of our institutions, including the function of the federal government in a democracy, is determined by past practices instead of by responsiveness to the forces of change. Thus, it follows that the teacher or the school can do little to educate the child whose father and mother score low on a standardized test. According to this view of history, our public schools, and, by implication, our political institutions should be structured to reinforce current socio-economic strata without a searching reassessment of their efficiency in a modern society or concern for the historical evidence that homeostasis can never be long sustained.

To the Euclidean even "mobility" is static. Whereas Herrnstein refers to this quality only as the ability to rise on the economic scale (if the genes provide a high I.Q.), other social scientists view this variable as a dynamic element in personality that, through empathy, makes possible the efficient association of many individuals of different economic, racial, religious and national groups in a variety of social situations. In contrast to Herrnstein, such observers as Alvin Toffler describe the complexity of factors in our world that impinge upon our traditional cultural patterns, and like the coming of the American oil companies to the Middle East after World War II, demand that modern man, like the Arabs in Lerner's study, be

mobile and adaptable to make the giant leap across two millenia, if necessary.

Such a view of history and our world deems it the function of the modern political institution—the secondary group—in a democracy, to respond and adapt to these needs for change. Therefore, to meet these demands for mobility, the American public school establishment should provide for its children the multiplicity of social and intellectual experiences that will equip them to cope with the future.

When John Broadus Watson extrapolated from Ivan Pavlov's experiments with dogs the construct of the conditioned reflex and applied it to children, he made the giant leap in the social sciences from the world of Euclid to the world of Newton, causing a furor in his time comparable to that of Galileo in his. He would no doubt have been amazed at what use B. F. Skinner has made of his ideas, as, during his life time, he was puzzled that his notions had caused such distress, when his intention had been "to make happy children." His primary premise had been that no child is doomed to failure if his environment can be properly controlled.

Such a view of a child, among educators, leads to assessments of children by teachers, not only in terms of what that child brings to the classroom, but what the teacher brings to the child. That, in the years since Watson's *Behaviorism* was published, his experimental designs have been applied primarily to training astronauts for instantaneous response to the mechanisms of space rockets and to the psychometrics of programmed learning in the classroom is ironic. Not that these applications are, in themselves, undesirable—or that Watson would necessarily have objected to them—merely that in some of the programmed learning observed in public schools, the "environment" for the child has been limited, in effect, to the Skinner box and a comparable isolation of that child from the real world.

It is also ironic that the concept of control of the environment should have found its corollary as a political philosophy in the structures of social control in communism and fascism—say nothing of the Utopia that Skinner describes in his current book, *Beyond Freedom and Dignity*.* That such visions of the total control of a society may be unrealistic in the long run has not deterred such leaders as Adolf Hitler and Benito Mussolini and their followers from setting back the progress of the democratic ideal for inestimable generations.

In education, the experimental designs of the Newtonians have led inevitably to the fragmentation of research into components that can be "controlled"—to the exclusion of the reality of many factors which may be the determining forces in a given educational situation. In other words, since Newtonian research must, of its nature, be limited to what can be

*Surprisingly, in this volume, we find Skinner with one foot in the world of Euclid, the other in the world of Newton, and with only unconscious strivings to encompass Einstein's world.

controlled, only controllable fragments of human behavior can be examined—a kind of sophisticated example of the self-fulfilling prophecy at work. No better example of this was the performance contracting effort at Texarkana, where researchers fell into their own trap by allowing the obvious to become blatant: that psychometric programmed learning demands that the ultimate response be elicited by the same stimuli by which the subject has been conditioned. Thus, high scores in reading may be ascertained if the same words and phrases as those used in preparation are repeated on the final test. This, as every teacher knows, is the same technique that has long been employed in principle to student preparation for College Entrance and New York State Regents examinations.

The present answer to such limitations of educational devices lies in social scientific concepts that will encompass the whole educational environment, as Dyer has conceived it in his designs for accountability. Such designs are a direct reflection of the philosophy of Dewey, whose concept of the "whole" child, often reduced to a truism by the uninformed, assumes new relevance as educational research moves toward more effective adaptation to Einstein's world. Thus, the individual is conceived as the sum of his genes, his immediate environment, and the political institutions of which he is a part. Neither his biological traits, nor his father and mother, nor his nationality alone will determine the outcome of his career. Together they all do.

In a world of such complicated variety, this question of accountability—for the individual, for his father and mother, for his political institutions—has become paramount. And at the present time, none of these factors is more widely discussed than the nature of our educational establishment, its relation to our democratic political philosophy, and its accountability for the fate of our children. It is to be hoped that the implications for education exclusively according to Euclid or exclusively according to Newton have been made clear. It follows that education according to Einstein—and according to Dewey—must be pursued.

This means education for a world of constantly expanding social space for all peoples and an end, whether or not we prefer it, to the social isolation of the past. From this vantage point, the desegregation of the public schools and the confrontation of the races in this adjustment to the realities of modern living were inevitable. If this be so, the withdrawal of the white parent in the concept of the neighborhood school as a haven from encroaching social change and the comparable phenomenon of black separatism are both doomed to failure. On the other hand, those who embrace the challenge—the adventure—of moving in social space beyond the immediately known will experience the satisfaction of conquering the unknown and of being at one with the world.

To educate for adaptability in social space means education in empathy—the ability to understand, respect, and work with those who are culturally different from oneself for the improvement of the human condi-

tion. In the future, a high score on a test for empathy—a high E.Q.—may well be more significant as a quality of personality and successful living than a high I.Q. Education for empathy and what Lerner refers to as "efficiency" in movement in social space means education for successful transition from primary to secondary group relationships. To do this, the parent must be aware of the necessity for the child to be allowed to expand his social horizons beyond the immediate family to broader worlds of many kinds of people. The school must pave the way by providing many experiences with people and in places where cultural differences prevail. And secondary group leaders, such as those in the education establishment, must so formulate their policies, structure their organizations, and develop their programs that the human relations values, once the province of the primary group alone, may be preserved in the ever-changing social space that is Einstein's world. Only thus will the democratic principles by which Americans have been nurtured be preserved.