PRENTICE, Marjorie Gray, 1925-
THEORY-BASED PARADIGMS FOR THE GENERATION
OF CURRICULAR DESIGNS.

The Ohio State University, Ph.D., 1971
Education, curriculum development

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1971
THEORY-BASED PARADIGMS FOR THE GENERATION
OF CURRICULAR DESIGNS

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Marjorie Gray Prentice, B.A., M.A.

The Ohio State University
1971

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ACKNOWLEDGMENTS

It is with more than conventional courtesy that I acknowledge the support provided by Professors Jack R. Frymier, Paul R. Klohr, and J. Kelley Duncan during the evolution of this study. Their perceptive questions and analytical comments helped to sharpen the original focus as well as to maintain balance between aesthetic and technical rationality.

The confidence and assistance provided by The Delta Kappa Gamma Society, both in the form of an International Scholarship Award and in expressions of personal reinforcement, are also gratefully acknowledged.
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CHAPTER I

INTRODUCTION

The educator active in "today's society" is faced with the problem of providing an instructional program in keeping with the often-conflicting needs and desires of the student, the academic community, and the lay public. To further complicate the problem, the instructional program must meet the rigid demands of both long-range and short-term planning, while remaining within the practical limits of existing resources.

Much valuable time and effort are expended by countless curriculum workers and other educational planners as they try to decide how to do what they should do, and how to know that they have succeeded when the task is completed. The ineffective use of time, money, and human resources associated with trying to "reinvent the wheel" is a problem for many an educational planner who tries to individually tailor an optimal program for his unique situation. In his effort to meet the expectations of both student and community, and still to meet the needs and demands of culture and society, frustration and duplication of effort are, at times, the only consistent reward.

In an attempt to alleviate some duplication of effort without losing the unique nature of the desired educational
product, a major assumption seems evident: it should be possible to identify many critical elements in the evolution of an educational system or instructional program that would be similar, whatever the circumstances. Whether one operates at a regional, state, or district level, in an urban or suburban setting, or in any one of a multitude of organizational formats, a number of similar questions need to be asked. It is in the unique nature of the answers to similar questions that one finds the individuality of each program which is necessary for the effective, efficient, and relevant involvement of each educational participant.

Two additional assumptions form the underlying rationale for this work. First, this is an era of accountability. Viable evidence of action, progress, and success is being demanded by a wide variety of constituents. Objective data on which to base decisions are being required by numerous and philosophically divergent decision-making bodies. Secondly, the thrust toward "humanism" and the related recognition of the nature of the affective domain are pressuring all sectors of society, but perhaps most strongly, that segment which has been assigned the task of educating, preparing, and socializing the members of society itself.

In education, as in other activities of a society, the demands for accountability and for humanism may seem to represent polarized positions, a paradoxical problem for those who continue to pursue the popular "either-or" stance
so long associated with the dilemma of process or content, subject matter or the individual, authoritarian or democratic structure. Such polarization, however, is at last being acknowledged as an inadequate base for problem-solving. Theories, research activities, and evaluative judgments are all providing data to support the need to balance elements in order to optimize the results of decision-making and to direct actions in the educational arena. Curricularists need the wisdom to use the data.

From such recently documented studies as those by Silberman and Goodlad, it can be recognized that there has been an increasing volume of educational research and related theorizing during the past decade. It is also clear that such research and theory remains relatively insignificant in terms of impact on the teaching-learning components of education.²

This lack of significance may be due to one or more common problems: inherent characteristics of the work of the theoretician or the researcher, attitudes toward theory and research held by many practicing educators, or quality

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²Silberman, ibid., p. 159.
of communication between the theoretician-researcher and the practitioner in the field. A contemporary challenge to each educator, and especially to each curriculum worker, is to cope with these problems and thereby find greater utility in the contributions made by basic and applied researchers as well as by theoreticians.

If both the unique and the common, shared qualities of people are to be optimized, and if the human/affective dimension of each life is to be considered important, new models of intent are required by those responsible for decision-making. Models of intent, or curriculum plans, can be developed from a variety of perspectives. One of the objectives of this study is to explore the function of theory in forming viable bases for decision-making and action in the curriculum development arena. It is also proposed that these generalized models of intent, or paradigms, will allow the practitioner to operationalize theoretical constructs to meet his own unique needs as he develops curriculum for the educational enterprise, without the necessity of trying to chart completely new territory.

How one determines the boundaries of the curricular task obviously influences the elements and procedures involved in the task. In order to profit from the work of one's predecessors, it is beneficial to turn to the literature for historical perspective and guidance. One of the most obvious stumbling blocks to this procedure, however,
is the lack of consensus among writers in the curriculum field. There is lack of agreement in regard to not only specific definitions of terms, but even the general image of the concept "curriculum." One of the few points of agreement in current literature is an acknowledgment of the evidence of change in the conceptualization of that which is included under the heading Curriculum.

The Changing "Image" of Curriculum

While much has been written about change as it relates to all educational endeavors, and about changing perspectives toward curriculum as both a process and a product, it is difficult to identify a specific image associated with the generalized term "curriculum." Even without waiting for consensus on a single meaning associated with the concept, however, it is possible to glean from the literature of the past half-century a number of factors that have influenced the changes found in viewing the curricular image. A few of the most obvious examples are those concerned with changing views of the function of schooling; changing priorities assigned to curricular referents; increasing awareness of the need for a unified, consistent curricular pattern; and increasing impact of the change phenomenon itself.
The Function of Schooling and the Curriculum

There has been a lack of consensus among educators and laymen alike as to the basic function of the school as a social institution, which often seems to have had a reciprocal relationship to the periodic, cycling emphases of formal school curriculum plans.

The cycling changes in curricular emphasis have reflected many of the divergent philosophical perspectives held by both educators and laymen. Rather than following a linear developmental pattern, such changes have often followed a recurring pattern, emphases and "fads" coming in and out of favor throughout the years. At times it was popular to stress the cultivation of the intellect, at other times the cultivation of the skills and habits that would allow individuals to understand the social and environmental forces of the period, and through such understanding control rather than submit to their surroundings. Still another function assigned to the school, often in conflict with the socialization or mental development functions, was the cultivation of the "whole" child, the facilitation of development as a unique personality fully realized in both the intellectual and the emotional domains.

Whether one reads the works of educational philosophers, the "romantic critics" of the 1960's, or the popular press, there is no doubt that the traditional institution of
schooling presently conceived is not adequate to cope with the contemporary needs of the learner, the problems of modern society, nor even of itself as an institution in a rapidly evolving societal context.

Priorities of Curricular Referents

The emerging reconceptualization of many referents of curriculum are of such depth and complexity as to be without precedent. These reconceptualizations as they relate to the nature of man, of contemporary society, and of knowledge itself have demanded a reappraisal of priorities.

In the past there has been rather consistent agreement concerning the identification of at least three referents that are critical in determining goal specification, and that give direction to schooling in general and curriculum development in particular: (1) what is known about the nature of knowledge; (2) what is known about the nature of society; and (3) what is known about the nature of man as an individual. As Herrick states:

These three referents have given rise to the three basic curricular patterns. These

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are different from each other primarily by the extent to which subject matter and its various categories, or the society and its persistent problems of living and related social processes, or the individual and his perceived concerns and emergent experiences are used as the initial and overriding referents for planning the curriculum.4

Thus the priority rating of referents is seen as a critical factor in the shaping of educational programs, in defining needs to be served, and in providing the theoretical base for curricular decisions.

Throughout most of the years of Western civilization, formal education--delegated to the social institution of schooling--has been variously engaged in the transmission of culture, the socializing of people, and the verbal-symbolic-conceptual-rational aspects of human functioning.5 These emphases have lead to the development of man in a predominantly dependent role, characterized by Puritanism, conformity to external norms, future-time orientation, rationality, and productive efficiency.6 Throughout the

4 Macdonald, et al., ibid., p. 52.


6 Paul Nash, "Motivation and Authority" (paper presented at the Centennial Conference on Human Motivation, held at The Ohio State University, November 19, 1970).
years, certain men have resisted this dependent role and instead have assumed an independent mode of reaction to authority. These men have been chiefly characterized by the dichotomized versions of the former style of behavior: hedonism rather than Puritanism, dissent rather than conformity, present-pleasure orientation rather than future-orientation, and a tendency toward existentialism and self-actualization rather than toward rationalism and productive efficiency.  

The question to be squarely faced by all, especially by those charged with the responsibility for the education of others, is whether that which has been at least in some respects adequate in the past can suffice for the future. Can the urgency of the situation be ignored any longer? What are the implications for modern man as he faces the condition Toffler labeled "future shock"? After five years of analysis of universities, research centers, laboratories, and government agencies, supplemented with hundreds of interviews with prominent scholars, analysts, and experts, Toffler made this observation:

I came away from this experience with two disturbing convictions. First, it became clear that future shock is no longer a distantly potential danger, but a real sickness from which increasingly large numbers already suffer. This psychol-

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7 Ibid.

biological condition can be described in medical and psychiatric terms. It is the disease of change.

Second, I gradually came to be appalled by how little is actually known about adaptivity, either by those who call for and create vast changes in our society, or by those who supposedly prepare us to cope with those changes. Earnest intellectuals talk bravely about "educating for change" or "preparing people for the future." But we know virtually nothing about how to do it. In the most rapidly changing environment to which man has ever been exposed, we remain pitifully ignorant of how the human animal copes.⁹

Enhancing the ability of each student to cope with the future takes on a new urgency in the light of Toffler's study. If one searches, there are proposals appropriate to consider in this respect. One such proposition is that submitted by Nash who envisions maturing man progressing from a state of dependency, through independency, to a state of interdependency, which he characterizes as a synthesis of the polarized attributes of the two former styles.¹⁰ This synthesis is only recently emerging as a social phenomenon, even though it has historical roots in the closeness of marriage, love, and family relationships, or in the "I-Thou" belief of Buber. Considering the impersonal, specialized nature of much of contemporary life, the enhancement of coping individuals who value self-actualization in community with others, who respect diver-

⁹Ibid., p. 4.

gent views, and who consider the effect of their autonomous behavior on others, seems critical for their personal survival as actualized human beings.

A very significant challenge to the schools lies in finding ways to enhance each person's skills, attitudes, and values, thus enabling him to become a coping being able to deal with "future shock," and able to take advantage of the multiplying range of choices and degrees of freedom not formerly available. If the schools could enhance the "coping" capability of a person, he would be less likely to feel trapped, alienated, and dehumanized—so often reported as the current dilemma. To do this, those concerned with educational decisions would find it helpful to identify the external variables and to reorder the priorities assigned to them. If knowledge is assigned to the position of an internal variable, a means to an end, it would then have a functional relationship with other internal, integrated parts of the system. The relationship of what is known about the nature of society to the well-being of the individual who functions optimally within that society should be recognized. In looking for a primary referent, it is imperative that the fully functioning individual give direction to the emerging society rather than be molded to fit predetermined societal patterns. If this is so, emerging designs for optimal curricular development must consider the individual as the
prime determinant. Technology is at a stage of development that will allow this design to become a reality, a condition appropriate to present needs, not a resurgence of the child-centered permissiveness of former times. The scientific advancement of recent decades has provided for the development, if not yet the refinement, of technological capacities that can bring heretofore undreamed-of personalization to the educative process. Proper design would allow us to pursue Fromm's goal to change the present methods of alienated bureaucracy into ones of human management. He tells us that "we are at the crossroads: one road leads to a completely mechanized society with man as a helpless cog in the machine--if not to destruction by thermonuclear war; the other to a renaissance of humanism and hope--to a society that puts technique in the service of man's well-being."  

Unification of Curricular Patterns

During the past decade the "entire field of education has been subjected to conflicting pressures from developments in cybernetics, curriculum reform, technologies, behavioral psychologies, and systems theories. As education is pulled and pushed first one way, then another, its


12 Ibid., p. vii.
emphases are frequently distorted. . . . These tensions, operating in a traditionally conservative environment, cause conflict and confusion. . . . "13 It is possible that such conflicts and confusions are the necessary con­comitants of growth and transformation of the image of curriculum.

Taba noted that some commentators have pointed out that the whole history of curriculum revision has been not only confused but piece-meal, "a mere shifting of pieces from one place to another, taking out one piece and replacing it with another without a reappraisal of the whole pattern."14 This concern about a holistic pattern is not new, of course. In 1904 Dewey told his readers that what was needed was the development of the "habit of view­ing the entire curriculum as a continuous growth. . . ."15 Yet in 1967 Broudy still found that the curriculum image


was a "hodgepodge"; his analogy likened its design to that of "Grandma's attic or handbag." He related that undoubtedly each item once had its justifiable reason for existence, "but having settled itself in the curriculum, its squatter's rights are virtually perpetual."\(^{16}\)

Can one learn to "stand aside" and gather perspective? Can one learn to consider the entire pattern of the curriculum when considering revisions in certain areas in addition to coping with immediate concerns? What are the consequences if both short-term and long-term perspectives are not considered? Eash specifies some of the problems that must be faced if the curricularist does not take a system-wide view; among those identified are curricular dissonance, excessive complexity, and internal-external pressures.\(^{17}\) Significant also among the net effects of fragmentation are the implications for students: "further competition for their learning time, a tendency to teach techniques and processes in isolation from social applications, and a reductionism of instructional goals to simple accumulation.

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of more subject matter."¹⁸ To meet the problems of fragmentation, isolation, and reductionism, a holistic, unified design concerned with the total curriculum is needed.

The consideration of a design exhibiting unity or consistency will, to many, conjure up the demons of regimentation and universal prescription. However, such internal consistency evolving from a total approach to curriculum development would allow for—indeed demand—diversification in approaches to freedom, uniqueness, and the needs of different individuals as independent learners.

The technological advancements of this era will allow such unity while permitting diversity and also will allow a high degree of personalization if properly managed. However, one must be willing and able to cope with an inherent problem residing in such technological advancements and their production-oriented operations: the specialization of action, departmentalization of structure, and fragmentation of process. Seldom are programs, projects, or productions seen as totalities by their participants. Production has become so efficient that each person does only his specialized part of the task. The field of knowledge has grown so rapidly that no one person can be in possession of even a reasonable fraction of all that is

¹⁸Ibid.
available. Therefore those who advocate efficiency and specialization have a base for argument. Too often, however, the point is carried to the extreme. For heuristic purposes many separate and classify even such attributes as thinking and feeling, the cognitive and the affective—sometimes so thoroughly that no effort is made to reunify them in reality. The process of design allows one to develop a unification of structure, to coordinate the parts, to make a total configuration available to any participant as needed.

This holistic pattern permits the consideration of a new dimension in the examination of essential parts. Within a unified design, as the "building blocks" of the educational program are analyzed, the result is not heterogeneous fragmentation but rather a new power. Gross and Murphy use the atomic analogy to explain this phenomenon: the breaking up of traditional units into essential parts results in the release of energy or power as in the product of fission. As the parts are reassembled into personalized coherent "wholes" for each student, there is still more power—the product of fusion.19

One problem encountered in attempting a unified approach to curriculum design goes beyond lack of harmony in

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viewpoint to outright conflict within the basic sciences from which education draws its data and guiding principles. Goodwin Watson acknowledges this problem in relation to his work in psychology when he states: "educators and others who wish to apply psychology in their professional work have long been troubled by controversies among psychologists themselves." Could part of the concern be that educators are in the habit of searching for THE answer while in reality complex problems require an array of appropriate alternative solutions rather than one universal answer? Waiting for theoreticians to agree, whether in psychology or any other field, is not an appropriate approach in this era which demands accountable results. Rather than looking for THE answer, educators might rephrase the question: Which theoretical stance will be most satisfactory, in which situation, with which participants, in order to optimally achieve the desired goal, at whatever level of specificity required?

The Phenomenon of Change

There is an emerging discipline in the social sciences focusing on processes of change, innovation, and knowledge

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20 Taba, Curriculum Development: Theory and Practice, p. 7.

Specific works explore the dynamics and problems associated with particular kinds of social change, as does the study by Frymier on educational change. This study identifies selected factors affecting change in the educational arena: the population explosion, the knowledge explosion, and conflicting and threatening ideologies.

The number of individuals, groups, and organizations that have taken an active part in the recent study of and search for solutions to change-related concerns is increasing at a sharply accelerating rate. This trend is indeed evident if the number of documented references and items in publication are adequate criteria for judgment. Many different approaches to the study of change have been taken. A number of theoreticians have undertaken the search for valid models to follow in adapting to and coping with accelerating change. Toffler cautions us in this respect, however, for he sees no viable models from the


24Ibid., pp. 2-4.
the past, or even in the present:

Much of our theorizing about social and psychological change presents a valid picture of man in the relatively static societies—but a distorted and incomplete picture of the truly contemporary man. It misses a critical difference between the men of the past or present and the man of the future. This difference is summed up in the word "transience". . . . Transience is the new "temporariness" in everyday life. It results in a mood, a feeling of impermanence.25

While impermanence implies a temporary state, it must not automatically be considered in a negative frame of reference. What seems to be needed is a changed attitude, an increased competence in coping and adapting skills, and an excitement and anticipation for the unknown, for ideas and processes as well as institutions that are in a state of flux. One organization specifically devoted to the study of change, the National Institute for the Study of Educational Change, is endeavoring to provide needed guidance for those who plan for educational change. In one of the first phases of their work, four major areas of need were identified:

1. the need for viable alternative solutions to existing educational problems;
2. the need for an understanding of the educational change process;
3. the need for competent personnel to study the change process, to exercise leadership in designing and mounting change

programs in action; and

4. the need for adequate tools and strategies through which educational improvements may be effected.\textsuperscript{26}

In these days of transition, it is not difficult to see that the educational planner must be able to design alternatives, understand change processes, develop leadership competencies, and employ successful strategies in order to offer effective leadership to the educational enterprise.

Of the factors that have influenced changes in the curriculum image, it is possible that the rate of change evidenced in education's societal context could be the most critical to the curricularist. In a time of transition one needs a firm foundation for stability without getting caught in the maintenance of the status quo for the sake of the "good-old-days." If all of society seems to be in a more or less temporary state, are there theoretical formulations on which curriculum can still be based? Are there enough generalizable data with which to start to face the problem?

Psychologists generally agree that significant behavior change comes as a result of value change. This theoretical construct will be of assistance in dealing

with the problem of the changing image of curriculum, for if there is a new view of curriculum, mere information about it will not suffice. The basic values of those who must deal with the change will need to be influenced and modified. No longer can the development of curricular plans and components be considered a purely mechanical or technical task, for it has aesthetic and ethical dimensions. It is Huebner's contention that the "building and renewing of the educational environment is not only a technological and economic task, taking place within a political, historical, and aesthetic framework, it is also an ethical task, taking place within the mystery of the social world."  

This reference to the educational environment reminds one of Dewey's often quoted comment that "we never educate directly, but indirectly by means of the environment." It is now important to try to synthesize these factors of change, individual values, and environment with the development of curriculum.

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A Partnership for Mutual Learning

In view of the recent work of psychologists, sociologists, and anthropologists, there is growing agreement that man exists in a state of continuing interaction with his total environment. Many educators are willing to consider the importance of the transactions that take place between the individual and his environment as critical to the educative process. This idea is not new, for early in the century Dewey advocated the importance of the environment as a means to the educational goal.\(^\text{29}\) Once again the cycle of acceptance is returning to acknowledge the critical role of the contextual setting in the educational experience.

For those who acknowledge the educational goal of the optimal development of each individual (and who would deny this goal at least lip-service?), it is important to realize that each person is in continual give-and-take with his environment, the environment supplying personal knowledge, the person responding behaviorally. This interaction results in a dynamic condition for both the environment and the individual.

Every person finds himself simultaneously in a number of environmental contexts: those of societal institutions, ecological relationships, physical surroundings, and peer-parent relationships, to name only a few. One of the tasks

\(^{29}\text{Ibid.}, \text{pp. 18-22.}\)
assigned to the institution of formal schooling is to provide selected input for each individual who participates in the program. Ideally the "school" confines the contextual environment to practical limits without narrowing it to the point where it no longer can provide the wide variety of adequate options necessary to meet the needs of all participants. Its failure to provide adequate options, resulting in myopic limitations, has led to the current call for "de-schooling."

To operationalize the task of providing adequate options for the development of each educational participant, a redefinition of the participant is necessary. First, those "typically" called teacher and student, or seen as "information-giver" and "information-receiver," become mutually supportive in a learning environment. Secondly, a redefinition of the role of the curricularist is required. This redefinition demands a new working relationship with the instructional technologist, the designer of technologies or techniques that enhance the instructional process.

If the educational participants are to be personally involved in diagnosis and prescription at the one-to-one and small group operational levels, then at the other operational levels (e.g., building, district, state), the team of curricular-instructional technologists must work together to provide the options—the micro-segments of
curricular input—needed in the prescription process at the interpersonal level.

After a study of the curricular reform movement of the 1960's, Eisner reaffirms that "virtually all of the new curricula have been designed to fit into, rather than to challenge or to alter, the existing organizational structure of the schools." If, however, the organizational patterns, teaching strategies, role definitions, and political sanctions are to be in harmony with the philosophical assumption of the worth of personhood, a new "image" of schooling is essential.

This new image of schooling could well be considered a partnership for mutual learning, rather than a hierarchical structure for the dissemination of information. In this frame of reference, the goal of optimizing each person's development becomes more attainable.

If the school is consistent in its commitment to the optimum actualization of the individual both as a person and as a fully functioning participant in society, then individual or self-based desires need not conflict with social or other-based expectations. School objectives based on a "total-human" philosophy include recognition of the development of personal talents and interests and of

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social explorations and relationships as well as the traditional acquisitions of skills and knowledge. Skills and knowledge become the means to the end, rather than the goal per se.

The educational participants work together in recognition of their value systems, in the diagnosis of "where they are" and "where they want to go" as well as in the decisions required in the process of prescription. The role of evaluation is no longer seen as a primary rating process, but rather as an integral part of the continual diagnosis-prescription process. Each measurement or judgment is input for decision-making for the succeeding cycle of involvement. (See Figure 1.)

Among the conditions necessary for the attainment of the educational goal of optimum development for each participant is a commitment to the following assumptions:

1. The nature of man is one of worth and dignity.
2. Social reality and the school curriculum must strive toward congruence.
3. Cultural and individual diversity must be encouraged.
4. Academic learning, personal growth, and social competence are all critical dimensions of an emerging educational pattern.
5. The hierarchical pattern of organization needs to be reconceptualized toward a partnership for mutual learning.

In order to implement a curriculum based on these assumptions, it is necessary to explore the operating arena basic to the concept of "curriculum"--the location of the action.
Fig. 1.--Model: Learning Event Sequence
The Curriculum Arena: The Macro- to Micro-Perspective

To develop, or to plan and implement, a "Curriculum" implies at least two concepts: (1) there is some common understanding of the term "curriculum," and (2) there is some common understanding of the domain or arena in which the developmental processes will take place. Even a casual thumbing through reference materials will reveal the definition of "curriculum" to be as limited as "a sequence of potential experiences set up in school for the purpose of disciplining children and youth in group ways of thinking and acting" to as all-encompassing as the idea that curriculum includes not only the "program of intended learnings devised by the school. . . but what goes on in the school that is more or less intentional. . . ." As a result of the ambiguity fostered by many such definitions, little precise meaning seems to be associated with the term, the basic concepts, or even the arena of action.

In an attempt to define it more precisely, Huebner has considered curriculum as "an aggregate of environmental conditions which educate. . . a reality which has substance


and durability."\textsuperscript{33} The realities are identified in economic, historical, and political terms.\textsuperscript{34} Another approach has been taken by Duncan and Frymier who have posited an analytic system which further explicates the complexity of the concept and identifies essential elements and dimensions.\textsuperscript{35} In this case curriculum is seen as a "set of events, either proposed, occurring, or having occurred, which has the potential for reconstructing human experience... (having) structural, process, and value dimensions."\textsuperscript{36}

Relying on the more tangible characteristics of the latter two definitions, the economic, historical, and political reality found in environmental conditions, and the identified elements and dimensions of the curricular event, it is now possible to relate the concept of curriculum to a field of action.

When Goodlad speaks of "greatly significant changes that have occurred in the curriculum and of a massive reformulation of what is to be taught and learned in our

\textsuperscript{33} Huebner, in Strategies for Planning Curricular Innovation, p. 136.

\textsuperscript{34} Ibid., pp. 136-40.


\textsuperscript{36} Ibid., p. 183.
schools,\footnote{37}{John I. Goodlad, \textit{The Changing School Curriculum}, Report from the Fund for the Advancement of Education, New York, 1966, p. 11.} it is obvious that he refers to curriculum reform efforts lying outside the local and state systems, efforts influenced by federal and foundation funding and expertise. It is well known that most national projects of the 1960's were "discipline centered rather than child or society centered."ootnote{38}{Ibid., p. 9.}

When Lawler specifies the components of curriculum to be "areas of pupil encounter" and the teacher to be the "ultimate developer of the curriculum,"\footnote{39}{Marcella R. Lawler, "Guidelines for Developing Strategies for Introducing Planned Curricular Innovations," in \textit{Strategies for Planned Curricular Innovation} (New York: Teachers College Press, Columbia University, 1970), p. 18.} it is equally obvious that she refers to the personal or one-to-one interactive operational level of curriculum development. A series of selected illustrative models collected from current curricular literature might help to clarify the macro- to micro-perspectives which can be taken when viewing the curricular scene.

To assist in setting the frame of reference, the broadest perspective would consider the entire system of
education in its relationship to the "suprasystem" of society. The larger context, society (the environment) is a source of much input into the school system, and functions to impose both constraints and limitations upon the system. The system, in turn, should be sensitive to the changing needs and purposes of the environment, the contextual suprasystem of society. (See Figure 2.)

In keeping with a broad definition of curriculum, such as "all the learning opportunities provided by the school," it is useful to examine a broadly applicable model. (See Figure 3.) Within the square representing the concept of "school" are the component subsystems that interact to influence the transition of entering students to "educated" students. It is obvious that only normative student data are appropriate at this general level, data that could easily be adapted to any district, regional, state, or federal operational level.

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Fig. 2.—Banathy Model: Macro-System

Fig. 3.—Trzebiatowski Model: School as a System
As one's definition of curriculum becomes more specific, it is more appropriate to examine the subsystems within the "school." For example, in using the definition of curriculum that includes "all the learning experiences provided the learner under the guidance and direction of the school through which it expects to achieve its objectives," a model would probably provide an opportunity for closer examination of particular subsystems: curriculum, instruction, and evaluation for the comparison of achievement and objective. (See Figure 4.) This graphic representation makes it possible to conceptualize the areas in which each subsystem is discrete and the areas in which they interact or overlap. An interesting dimension to Figure 4 is added in Figure 5 when the two subsystems of teaching and learning are added to the subsystems of curriculum and instruction. At this level of specificity, it is theoretically


Fig. 4.—Beauchamp Model: Selected Subsystems

Fig. 5.—Macdonald Model: Interaction of Subsystems
possible to separate curriculum (producing plans for further action) from instruction (putting plans into action).  

The area of congruence can be treated in many ways, but perhaps most realistically by leaving the generalized levels of operation and examining specific components of an individual-environment encounter. It is at the personal level illustrated in Figure 6 that the educational participants in their learning and facilitating roles interact in diagnostic and prescriptive processes. Figure 7 illustrates the process at the internalizing stage where the person as a unique individual reacts to input "knowledge" in the form of output "behavior."

Knowledge internalized by the person, the learner, comes from a number of sources, including his physical environment, societal institutions, parent-peer relationships, and ecological relationships. This internalized knowledge may be in many forms; for example, generalizations, concepts, isolated facts, data bits, perceptions, societal expectations, or "other person" values. The forms are nearly limitless, as are the resultant behaviors, which may be in one or more of the domains--cognitive, affective, or psychomotor. The form of these behaviors may be as

46Ibid., p. 5.

47Lawler, in Strategies for Planned Curricular Innovation, p. 19.
Fig. 6.—Lawler Model: Teacher-Learner Subsystem

Fig. 7.—Model: Selected Personal-Environmental Transactions
varied as personal values, attitudes, interests, or recognized needs. It is also possible that there are undiscovered and unidentified behaviors which result from such personal-environmental transactions.

The critical concept to be derived from an examination of this selected sequence of models is that curricular experiences are "developed" at various operational levels. The particular models chosen are meant to be neither inclusive nor exclusive, but illustrative. To add awareness of the operational level of curriculum development to the already identified realities, elements, and dimensions should provide potentially productive input for later analysis.

The Problem Under Study

The processes associated with formal schooling have varied through the years, sometimes exemplifying the advice of Dewey in the manipulation of the environment, and sometimes following the advice of the behavioral psychologists in the manipulation of the student. Obviously no one position is going to be acceptable to all people at all times.


times. The problem is to find the optimum balance of perspectives to integrate all appropriate conditions into significant patterns designed to meet stated educational goals.

The finding of balance is essentially a design problem which, according to Huebner, is "best considered with an aesthetic rationality."\textsuperscript{50} If one is concerned only with rationality, it is easy to assume that curriculum development is basically a technological operation with linear relationships between objectives, experiences, and outcomes. An awareness of the aesthetic quality of design helps one recognize that a viable design for today and tomorrow must reflect the "life of the people responsible for it and the life in the surrounding communities of knowledge, social action, and technology. . . . The student must be able to see in the structure of the design what he is and promises of what he might become."\textsuperscript{51} A challenge faced in this study is to produce a functional paradigm that will capitalize on the strengths of both rationality and aesthetics.

\textsuperscript{50}Huebner, in \textit{Strategies for Planning Curricular Innovation}, p. 142.

\textsuperscript{51}Ibid., p. 150.
From the work of Kuhn it is apparent that anomalous situations can result from reliance on incomplete or inadequate paradigms; these anomalies open the way for the development of new paradigms. Such reformulations or "master plans" reflect basic changes in viewpoints, and serve to direct the activities of their adherents. Any appropriate balance of rationality and aesthetics would represent just such a basic change.

Heinich's analysis of Kuhn's work emphasizes that anomalous situations which lead to new paradigms are the result of "confirmed inadequacies." From contemporary examinations of educational efforts in today's social-cultural context, it is possible to find sufficient evidence to confirm the inadequacy of schooling as it is typically practiced. Among the many problems, concerns, and


54 Ibid., p. 57.

inadequacies calling for reform and reconceptualization are two major areas relating to curriculum development which will serve as the basis for this proposal: the priority ordering of the determining referents that are used as sources of data in defining goals and objectives, and the mending of the fragmentation between and among the components of the curricular phenomenon itself.

In order to fulfill one of the primary goals of this study, to facilitate the utilization of theoretical formulations as viable bases for decision-making and action in curriculum development, two points of view will be explored. One view will be abstract, leaning heavily on a conceptualization of three dimensions of the curriculum development phenomenon. The paradigm proposed to assist in this theoretical exploration will allow consideration of three dimensions: (1) the temporality of process, represented in the operations of planning, implementing, and evaluating, which are critical to intended action; (2) the spatial or distance relationships between the primary educational participant and the person assuming the function of curriculum development; and (3) the conceptual dimension expressing degree of generality, whether theoretical and generalizable or applicable and specific.

The second perspective will be problem-oriented, serving as a viable framework for the utilization of theoretical formulations in the decision-making processes
associated with curriculum development in actual educational environments. To serve as a pattern for any new design, specific information relating to the individual situation under consideration will be substituted for each of the generalized components of the paradigm. The results should make possible a unique design specifically tailored to the individual situation.

Overview

Returning to aesthetic design, it is helpful to re-emphasize Huebner's comment on the need to reflect "the surrounding communities of knowledge, social action, and technology. . . ."\(^{56}\) For the purpose of incorporating such aesthetic design qualities in the rational-technical development, the following organization has been employed in this study.

Chapter II reflects an attempt to explore significant "Prior Questions" which curricularists need to consider if the products of their efforts are to be appropriate for the coming decades. Soltis views prior questions as those helping to clarify "thought before commitment."\(^{57}\) The

\(^{56}\) Huebner, in *Strategies for Planning Curricular Innovation*, p. 142.

process of asking such prior questions necessitates taking an analytical look at the "ballpark" within which one is operating, and identifying elements of each question which require clarification before one is able to make optimum decisions regarding alternatives for action.

It is all too easy to say, "Of course, we consider 'the needs of society' as well as the nature of knowledge and the needs of people when we design curriculum." But, in this era of technological change almost beyond comprehension, and of social and psychological change simultaneously evolving, emerging, and erupting, it is possible that one is not easily able to identify, much less consider, the "needs of society," for example. Less obvious perhaps but of equal importance to the curricularist, are the emerging reconceptualizations regarding the nature and utilization of knowledge, and the philosophical positions regarding personhood.

Figure 8 graphically represents the relationship of the universe encompassed under the generalized rubric of Social-Cultural Environment to other components of the educational enterprise. If this representation is viable, it emphasizes the need to consider each element of the enterprise with integrity, and to acknowledge that each element in turn has a forceful relationship to each other element within the system. No longer is it appropriate to have individuals and groups sit in isolated work-settings,
Fig. 8.--Elements and Relationships within the Educational Enterprise
rewriting their traditional courses of study, oblivious to the changing needs of the individual participants and of the changing social context in which they function. Granted, much work is needed in the reworking of course guidelines, but consider first the nature of the course offering, the desired role of the educational participants in the restructuring of courses, and the need for micro-segments of curricular input rather than for semester-long or year-long predetermined sequences.

Having given some attention to prior questions in Chapter II, Chapter III moves the study toward two specific objectives: (1) the development of a paradigm to serve as a guide to the selection and utilization of theoretical constructs, which in turn will serve as guides to internally consistent decision-making; and (2) the development of an ordered paradigm to serve as an action-oriented configuration to guide curriculum design in actual educational environments.

Chapter IV contains criteria for action in the curricular field. Acknowledging the reality of a variety of operational levels and the interface between them, it is possible to identify ways of work, types of products, and roles of participants that will increase the opportunity to optimize the achievement of desired goals. A summary of this work and recommendations for further investigation and validation are found in Chapter V.
Propositions

In the light of the paradigm development proposed in this study, the following propositions are submitted:

1. Theoretical formulations can be identified that will support each of the generally accepted components of the curricular phenomenon.

2. Using these theoretical formulations, it will be possible to specify practical applications for each formulation at each of the designated operational levels.

3. Using any one of the specified theory-based applications, a practitioner will be able to provide evidence relating to one or more of the following tasks:
   a. that he has an increased understanding on the theory-practice relationship;
   b. that he can generate additional applications of theory relevant to his own situation;
   c. that he can use the proposed paradigm to generate a specific curriculum design relevant to his own situation;
   d. that he can apply the paradigm as a rational basis for decision-making in the process of curriculum design.

The assessment of significance and utility of the syntactic paradigms will be based on the criteria of: (1) understandability, (2) generality, and (3) applicability. The work should be understandable to educators working in the field; it should be general enough to assist in curriculum decision-making throughout the total scope of curriculum development; and it should be applicable to individual curriculum design problems unique to specific educational environments.
Limitation

The major limitation of this study is its theoretical, developmental nature. It is a study based on a synthesis of research studies, current literature, and practical experience in a variety of participant roles in the educational enterprise; it is not to be subjected to empirical validation at this time. At a later date, and under other circumstances, it will be amenable both to longitudinal study and to operations research techniques, either or both of which would constitute another complete research endeavor.
Several major assumptions need to be made explicit before examining a variety of prior questions which are of critical importance to the contemporary curricularist:

- It is assumed that an acceptable goal of education is the facilitation of the development of each individual as a fully functioning person.

- To become a fully functioning person an individual must be able to cope with, and to operate within, his cultural milieu.

- As a fully functioning person an individual will be able to give direction to the emerging society, rather than be molded to fit predetermined societal patterns.

- All fully functioning persons exist in a state of continuing interaction with their own total environment.

If these assumptions are valid, it is important to unify them so that they become mutually supportive concepts. For example, the curricularist must be sure that the cultural milieu in which he assumes the learner is
operating is in fact the real world of that learner. One person's frame of reference does not necessarily provide an adequate frame of reference for another, especially since the "total environment" of one is not completely congruent with that of the other. It is the learner's own contemporary world with which he must learn to cope and to which he must learn to give direction.

At whatever operational level chosen by the curriculum worker, each curriculum development project requires current realistic data about the environmental context within which the learner functions. For this reason it is appropriate to explore different points of view on a number of topics--sociological, psychological, and academic--to which a curricularist should address himself prior to making commitments and related decisions.

Most academic documents rely heavily on scholarly literature for their foundation and support. In a study such as this, however, with a dual emphasis on abstract, theoretical constructs and on concrete, practical applications, relying on any one source or type of data seems inconsistent. The approach taken here, therefore, includes citation of both traditional sources and current periodical literature easily available to the practitioner.

Nine topics will be developed in this chapter, each of which should open up ideas, concepts, and controversies for the curricularist. The purpose is not to provide
answers, or even expert opinion, but rather to raise the level of awareness of the variety of concerns that must be considered prior to "developing" curriculum, at whatever operational level.

The Question of Contemporary Culture: Its Nature and Characteristics

If it is agreed that contemporary culture is the context within which the educational enterprise of any generation functions, it is appropriate that the first question pertain to this context.

Such terms as pluralistic, transitory, dynamic, and synergistic might well typify much of contemporary culture. An emerging holistic concept is replacing the mechanical fragmented view of the world held by many twentieth century adults. The holographic, multidimensional image made possible by the laser technology, coupled with the increasing demand for internally congruent values and the call to honor diversity, exemplify critical components of our contemporary culture in a stage of transition.

Transition is only one facet of society, however. There are still other concerns. Two of them, which relate to the communication of awareness and understanding, are not easily dismissed. First, it seems incongruous to even try to describe this transitional, emerging culture using a linear language. There is an all-encompassing totality about life that the linear language, with its enforced
sequencing, cannot communicate. However, a sequenced language is the accepted communicative tool of the present.

In addition to the problem of arranging a total experience into a linear format, there is the task of grasping a split moment of reality to analyze. Life is so dynamic, each moment modifying all succeeding moments, that real analysis is inconceivable. At best, it is possible to "hold" a moment much as one might in a motion picture frame, thus enabling the viewer to look at a segment of the experience. This look is necessarily fleeting, almost subliminal. The segment must fly past to join all the other "held" moments in a dynamic race toward tomorrow.

Rather than declare such a difficult task futile, however, this exploration will attempt to face reality, select several segments of daily life with which adults are familiar, and proceed in a traditional linear fashion to communicate some ideas concerning the nature of contemporary culture. This will be attempted in anticipation that some idea, thought, or responsive disagreement will influence the reader's perception in some way that will enable him to relate to his dynamic world, and as a curricularist find an added dimension of relevance to his own sphere of endeavor.

For the first time in recorded history man is assumed to have the technical capacity to achieve almost any predetermined goal upon which consensus can be reached. The
task of exploring the moon is a case in point. As a whole, society seems to possess both technical capacity and social energy, but as an aggregate of individuals, society does not act to adequately solve its problems. Part of the problem may lie in the realization that the "production model," which developed following the industrial revolution, is not adequate to solve the dilemmas of contemporary society.

The automated era has provided its full share of statistical facts and political leaders. But neither facts nor leaders have been sufficient, for all too often events and circumstances have been without precedent and pattern. History gives the background and context, but not the model. No longer is it appropriate to approach life through McLuhan's "rear-view mirror" of the past.

In keeping with the popular inclination to identify by acronym, it seems appropriate to label the pattern of society during recent decades as a SET society. Not only has our society been molded by Scientific, Economic, and Technological skills and techniques, but many attitudes and accompanying behaviors were and are "set" in seemingly unchangeable patterns: processes are phrased in input-output terms; interaction between an individual and his mechanical aids is considered a man-machine interface; and a major orientation is toward cost effectiveness and maximized efficiency. These characteristics need not be
judged as "good" or "bad" in and of themselves, but rather in the manner in which man has allowed them to influence him and his society.

Our SET society has been variously described, almost to the point of redundancy. Yet such an exercise seems valid if it encourages the overt or public acknowledgment of awareness. Awareness can lead to concern, and concern to commitment and action.

Of the many characteristics associated with this view of society, four have been identified for comment: (a) concerns for the common good, (b) the past-present gap, (c) personal isolation and psychological alienation, and (d) the emerging culture of youth.

The Common Good

In one of the many recent analyses of society, Reich defines our social fabric as that of a corporate state, an immensely powerful machine, ordered, legalistic, and rational, yet utterly out of human control and indifferent to human values.¹ This could be considered a pessimistic point of view. He continues to point out that in the interests of the common good we have turned everything from production to decision-making over to this vast complex,

which is characterized by a new concept of property, by the blurring of the distinctions between public and private domains, and by the autonomy of bureaucratic power.  

Mumford refers to this new concept of power as a "megamachine," a technological compulsiveness to utilize without question every new product, to submit to every new demand, and to succumb to automation as an obsession. Such power purports to favor the "best interests" of those involved. Promotion of the common good demands many things of many people, not the least of which is a reduction in conflict and discrepancy between the goals of an organization and the individual, and between the demands of his role and his own personality needs. While students of society have long been concerned about the problem of status and role, it has taken on a new importance in our SET society. If an organization is to function at maximum productivity and minimum cost, there must be a clear integration between the worker and the organization. His role and his personality should be congruous, and his role

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expectancies and his need dispositions should be similar.  

The emphasis on common good has often been employed to promote corporate well-being. The individual worker, who often finds himself in a meaningless role as an anonymous element in a production sequence, is hard put to believe the good is his. His reward is more apt to be insecurity and eventual incompetency. Laurence Peter has made light of this phenomenon--his "principle of incompetence"--but perhaps in its closeness to reality it makes its point.

As Gouldner points out, universalism, or "for the common good," focuses public interest on the usefulness of the individual not in his personal uniqueness but in his comparability, in his inferior or superior usefulness to others. It follows, then, that a utilitarian culture stresses success or failure. In large sectors of our society it is not the man who is wanted. "It is, rather, the function he can perform and the skill with which he can perform it for which he is paid."  

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7 Ibid., p. 73.
How did contemporary man become susceptible to this less-than-autonomous role in the SET society? One of the foundations for this dilemma was the decrease in opportunities for self-sufficiency and independence to which the early settlers, farmers, and craftsmen had grown accustomed. Another factor was the heavy migration to the urban centers, which continued to increase man's dependence on others for goods and services. The depression of the late 1920's was a critical point in this changing role of man in his society. With the New Deal and all of its related governmental programs, the majority of people seemed to agree with the political leaders that, for the common good, individual man must become part of the system. The system became larger and more complex. The complexity of the system made it difficult for the individual to try to participate in decision-making, for only "experts" could know enough to make appropriate decisions.

The Past-Present Gap

A second characteristic of the SET society is the lack of understanding and communication between the values, people, and events representing the past and those representing the present. Fads in the popular press are commonplace, and the term "generation gap" has become a household cliche. The anthropological perspective of Margaret Mead may be helpful in examining this contemporary phenomenon.
She has identified three kinds of culture, all to be found simultaneously in modern America: (1) the postfigurative culture, in which children are socialized and culture transmitted primarily by elders, as was traditional in the early days of our history; (2) the cofigurative culture, in which both children and adults learn from their respective peer groups, as in our nuclear two-generation families found in both urban and suburban settings; and (3) the prefigurative culture, in which adults learn from their children.  

Gouldner objectively acknowledges this "era of fluid transition" when a younger generation emerges with a sharply different structure of sentiments seen either as indifferent or antagonistic to "older" ideas. He states:

"... there is, in short, a gap between the newly emerging structure of sentiments among young radicals and the older "languages" or theories, a gap that has not yet been bridged by the development of new theoretical language in which the young radicals might more fully express themselves and their own conception of reality."

In considering the materials of the popular press, there is evidence that the emerging prefigurative or youth-oriented culture is unique to this historical period,

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8 Margaret Mead, Culture and Commitment (Garden City, N.Y.: Natural History Press, 1970).

9 Gouldner, The Coming Crisis of Western Sociology, p. 7.
and is a worldwide phenomenon. No longer can adults dismiss it with statements such as "but I was young once, therefore I know." Having been young in the past is not sufficient for understanding the present, for never before has there been a culture so torn by the discrepancy between the possible and the actual; never before has instantaneous communication made a world community an emotional, if not a political, reality. For the first time the young have no adequate models, for now, no one has the answers. As Mead says, "all men are equally immigrants into the new era... lacking all knowledge of what demands new conditions of life make upon them." 10

Alienation

A characteristic of the SET society with which many identify is a feeling of personal hopelessness, loss of identity, and aloneness. The educational establishment has not yet been able to adequately prepare all its participants to cope with change in identity patterns, and to find increased options in the expanding technological environment, rather than being overwhelmed with the "depersonalized-computerized" syndrome so popularized by the critics.

Concern with alienation is not a new phenomenon. Sociologists of such reknown and of such differing points of view as Marx, Weber, and Sombart have all addressed themselves to the topic, and have all acknowledged that alienation has been and is a "central social problem" of modern society.

In earlier days when people migrated from the farms to the cities, many did so with a feeling of emancipation--freedom from family supervision, ties, and restrictive mores. However, instead of experiencing the joy of freedom, they felt alone, isolated, and exposed to the "cold cruel world." Today many individuals apparently experience a similar aloneness. Henry reminds us that secure and enduring interpersonal relations are difficult to establish in an industrialized culture in which members "move from job to job, up and down the social ladder, from neighborhood to neighborhood, from suburb to country. . . ."

Reisman, Glazer, and Denney focused on this type of isolation in The Lonely Crowd. They focused attention on the shift from inner-directedness to other-directedness that

11 Gouldner, The Coming Crisis of Western Sociology, p. 183.


occurs within people who are simultaneously pressured by cultural abundance and psychological deprivation.

Within the contemporary SET society one can readily identify many possible reasons for such a sense of personal isolation and alienation, for example:

1. The mechanical role in the establishment in which people are computer-coded for identity, credit rating, and billing, and are considered as interchangeable parts in a production-oriented environment

2. A person's fear of involvement which renders him insensitive to the needs of others; exemplified by the dozens of citizens in New York who watched a killer stalk and stab a woman in three separate attempts without trying to assist

3. The disenchantment of many with the dream of a democratic society where men really do have equal opportunity; the incongruity between dream and reality seems to increase rather than decrease as evidenced by the reported "credibility gap" between the White House and the citizens

4. A fear of the predicted future with its polluted, poisoned environment and its congested megalopolis in which both food and water may be rationed and hepatitis and dysentery are prevalent

5. A fear of the unknown future, and an intensification of the fear due to its unpredictability, with
scientists tending to agree that they cannot give sure guidance about what is really going to happen because many future developments will come from insights and discoveries yet to be made having implications yet to be foreseen or imagined.

6. Alteration of personal habits caused by involvement in an electronic environment which not only surrounds people, but "shapes" them.

7. Extreme discontent as consumers resulting from the planned obsolescence of material goods and the "Madison-Avenue" advertising that causes people to confuse desires with needs.

8. A common lack of knowledge about, but awareness of, many advanced developments in new areas, such as genetic manipulation, nuclear electric power, and laser technology.

Toffler calls attention to an "adaptive range" below and above which an individual tends to have difficulty coping, or in extreme cases complete inability to cope with or adapt to life. Above the limits of adaptability one succumbs to "future shock," Toffler's term for the response to overstimulation. He states that, without knowing the consequences,

We are accelerating the generalized rate of change in society. We are forcing people to adapt to a new life pace, to confront novel situations and master them in even shorter intervals. We are forcing them to choose among
fast multiplying options. We are, in other words, forcing them to process information at a far more rapid pace than was necessary in slowly-evolving societies. There can be little doubt that we are subjecting at least some of them to cognitive overstimulation. What consequences this may have for mental health in the technosocieties have yet to be determined.\textsuperscript{14}

For all practical purposes, no one can be immune to the societal forces that have the potential to cause psychological alienation. To succumb to such pressures and feel a sense of separation from one's self or from others can keep a person from being an integrated whole, from being capable of deep commitment to, or involvement with, other individuals in his environment.\textsuperscript{15}

In order to combat the feeling of isolation in this industrialized, impersonal society, some people embark on a rugged program of ceaseless activity, the pursuit of the "mind-destroying drug of constant action."\textsuperscript{16} Once involved in this cycle of perpetual motion, it is difficult to change the pattern, for confidence and self-worth become involved. As Hoffer tells us, these are perishable attributes with "an achievement today /being/ a challenge


for tomorrow. And since it is mainly by work that the
majority of individuals prove their worth and regain their
balance, they must keep at it continuously... Interaction... breeds discontent and disaffection.\textsuperscript{17}

Some people combat isolation with group membership,
yet such memberships today tend to have different characteris­
cistics from those of previous generations. They tend
to be shallow, for in the search for stability and
security man has become more susceptible to "the messages
of new subcults, to the claims and counterclaims that rend
the air... a powerful new friend, a new fad or idea, a
new political movement, some new hero rising from the
depths of the mass media\textsuperscript{18} strike with force. People
tend to adopt and discard life styles at an unprecedented
rate, maintaining group affiliation in a "posture of non-
commitment.\textsuperscript{19}

Still another segment of the population that is often
considered alienated consists of those who have "resigned"
from a society in which they see no hope, and which they
feel powerless to change. For such a person, his rejec­
tion of contemporary culture has freed him to create almost

\textsuperscript{17} Eric Hoffer, The Ordeal of Change (New York:

\textsuperscript{18} Toffler, Future Shock, p. 280.

\textsuperscript{19} Ibid., p. 281.
anything, and at the same time has deprived him of the support and opportunity—the ability to do it. It would be a practical impossibility to estimate the number of alienated individuals who are convinced of the hopelessness and the hypocrisy they identify with the Establishment as they see it trying to superimpose its values on its members. Polanyi coped with this phenomenon of alienation, and tried to partially explain it in relation to hypocrisy:

At all points where men in authority are seen to impose on the intellectual values which on reflection may come to appear adventitious, the justification of this authority may be called in question. The exercise of authority will tend to appear bigoted or as hypocritical, if it asserts as universal what is actually parochial.

Many young people tend to expand this concept from public authority to their private lives and are equally convinced of the hypocrisy of their parents and elders who try to enforce adult values on them as if such values were universal when they are seen by the young person as parochial.

**The Culture of Youth**

Many of the perspectives of contemporary society are inspired by, or demanded by, the active youth of today.

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Older people often ask, "Why is it that it is the young people who question and search?" But has it not always been the young who have questioned? What are some of the circumstances that have made this generation unlike preceding ones? This is the first generation to face simultaneous conditions of such potential magnitude that any one alone would be critical:

1. Life is spent in a predominantly synthetic, prefabricated, managed environment.
2. Life is spent under the threat of momentary world annihilation.
3. Life styles and value structures are reacting to an automated, cybernated society.
4. The pill, as well as changing values is having an impact on sexual relations.
5. Reporting of disaster, discontent, and protest is both worldwide and instantaneous.

Roszak adds several other suggestions as to why this particular generation is involved in the formation of a new and unique culture:

(a) the youth stand out because they act against a background of typical adult apathy,
(b) the society itself is getting statistically younger,
(c) the young feel the potential power of their numbers linked together as they are through communications media
(d) the commercial advertising and merchandising of their artifacts and the accompanying
commercialization of the 'ethos' of dissent,
(e) the expansion of higher education, in terms of both numbers of students and in the increasing age of the student body.\textsuperscript{22}

These many factors have undoubtedly combined into a dynamic mix that has crystallized the group identity into what Roszak has labeled the "Counter Culture." He characterized that group of young people as "something in the nature of a medieval crusade: a variegated procession constantly in flux,"\textsuperscript{23} rather than as a disciplined movement. It is distinct from previous youth movements, however, in that it is neither social nor political, but it "strikes beyond ideology to the level of consciousness, seeking to transform the deepest sense of self, the other, the environment."\textsuperscript{24}

Reich labels this level of consciousness as "Consciousness III" and describes it as:

(a) seeking to restore the non-material elements of man's existence,
(b) transcending science and technology, seeking to return them to the status of tools rather than determinants,
(c) seeking new ways to live in the light of what is now both possible and desirable,
(d) developing new independence and personal responsibility,


\textsuperscript{23}Ibid., p. 48.

\textsuperscript{24}Ibid., p. 49.
(e) creating a system of ecological and human ethics to control the amoral field of science.²⁵

It is easy to do injustice to this counter culture or to newly conscious young people by merely dismissing them with the stereotype of "alienated youth." Granted they may be "alienated from their intellectual work, from sensibility of the tradition, from the moral climate of the time, and from parents and themselves, but not as random individuals isolated by one or another personal aberration; they are, in fact, participants in a 'counterculture' which is challenging fundamentally the Western cultural tradition. The traditional ways of discussing alienation are simply not commensurate with this larger, more complex phenomenon."²⁶

As soon as they are classified or labeled, the total group tends to be associated with the lowest common denominator. The 1970 President's Commission on Campus Unrest explored the campus-related division that threatens society, and acknowledged a crisis having two distinct dimensions: one of violence and one of understanding. Destruction and violence, even as a result of unsufferable frustration, is not congruent with love and concern for

²⁵Reich, The Greening of America, p. 111.
one's fellow man. The ends cannot justify the means, if to reach the goal necessitates an infringement on the integrity of the goal itself. Some young people violate this premise of humane behavior. The radical, criminal element should not be excused; neither should the majority of young people be categorized with those who burn, bomb, and riot.

Peaceful protest is not synonymous with violence. Understanding, however, is needed on both sides. "For some, distinctive dress alone is enough to draw insult and abuse. Increasing numbers of citizens believe that students who dissent or protest peacefully deserve to be treated harshly."^27 On the other hand, many members of the new culture are impatient. Their impatience is most evident when relating to major social issues, such as war, social injustice, and university reform. In addition to impatience, the more active, but not necessarily criminal, elements of the group are characterized by a "growing lack of tolerance, a growing insistence that their own views must govern, an impatience with the slow procedures of liberal democracy, a growing denial of the humanity and goodwill of those who urge patience and restraint, and particularly of those whose duty it is to enforce the law."^28


^28 As quoted from the Commission Report in Cass, ibid., p. 53.
For young people who reject the revolutionary model, the search for a viable model is difficult. The present society has few options to offer. Some look to the Asian religions, to the American Indians, or to such men as Thoreau for their models. Others have looked specifically to Existentialism. One noted existentialist describes the doctrine as one which "makes human life possible and, in addition, declares that every truth and every action implies a human setting and a human subjectivity." If the young are sincere in their desire for a new culture based on love—love of self, of other, and of environment—the era of conflict within the great national culture of "unlove" will be "painful, because it demands such fundamental change." This would be a fundamental change so great that many members of society cannot conceive of the magnitude of the undertaking. "It is not simply conflict over institutional power which a little political reorganization will solve... but a much deeper conflict of opposing cultural assumptions which takes a great effort of imagination even to grasp."  


31 Bloy, "Culture and Counter Culture," p. 496.
Contemporary society is seen, then, as an amalgamation of those forces still pressured by the SET dimensions of the production model; by the demands for stability, security, and transmission of wisdom; and by the needs to honor diversity and personhood. The implications for the curricularist are of a magnitude that cannot be ignored. The challenge is not only how to extend one's imagination to grasp the boundaries of the problem, but how to extend understanding of the interrelated components of the problem; to depart from obsolete traditions, systems, and short-term ineffectual expediencies without ignoring valid attitudes and conceptualizations; and to use the knowledge and energy of all participants in the educative process to work together toward viable solutions.

The Question of Relevance: The Discrepancy Between Goals and Practices

Since the historic day of the 1957 Sputnik, the schools have been under almost continual attack for incompetencies and failures from parents, students, educators, taxpayers, citizen-vigilantes, and the new romantic critics. It is obvious that change in the schools did not start with this wave of criticism. The schools have been changing at varying rates and with varying degrees of success ever since their inception as formal institutions. Since the
passing of the mid-century mark, however, much of the more recent change has been described as sporadic, and at best as only "layers of minor revisions... pasted upon previous layers of minor revisions until school subjects have lost much of the coherence and identity they once possessed."\(^{32}\)

The significance of Sputnik for school reform was that it signaled a renewed call for a complete rethinking of the educational process. Social crises in the intervening years have added urgency to the challenge, as has the fundamental nature of knowledge, its rate of "accumulation," and its newly recognized quality of impermanence.

Once the demand for change is recognized, the question becomes one of kind. The value of such a worn-out word as "relevance" is dubious. However, if it can be taken to mean having some relation to or bearing upon the matter at hand, it can serve the needed purpose. At this point the question of the relevance of educational practices to educational goals, and of educational goals to the needs and capabilities of the learner, becomes a critical issue. One needs to ask, "Who decides what is relevant to whom, and when?"

Bruner makes an interesting differentiation between social relevance, meaning that which has some bearing on contemporary social problems, and personal relevance, which represents those things having individual meaning and reality. Within the areas of both social and personal relevance, the critics of education highlight many of the problems, the students confirm some of the same problems and add others, while obvious inconsistencies between goals and practices make up a third source of information usable in attempting to identify "the problem."

The Role of the Critics

The rhetoric of criticism is certainly not new in education. Within the lifetime of most college students the pendulum has swung from the intellectually rigorous commentary of proponents of the disciplines and "fundamentals," represented by Rickover, Bestor, and Conant, to the proponents of universal education represented by Clark, Pettigrew, Keppel, and Gardner. The latter group believed in equal educational opportunities and were critical of any endeavor that did not give to the "disadvantaged" what the "advantaged" were supposed to be getting.  

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Rather suddenly the tone of the criticism changed. No longer was there just a "disaffection of the intellectuals." A new breed of critic, represented by Friedenberg, Goodman, Holt, and Kozol, began to hit hard at the inadequacies of the educational enterprise. They demanded an end to the injustices, inhumanities, drudgery, and boredom. They made their points well: "education is irrelevant; nonsense abounds; learning has been forgotten in favor of processing students." Educator and layman alike took a second look at the need for renewed attention to individual freedom and social and emotional growth. Instead of finding opportunities for freedom and growth, the development of critical thinking, and individual instruction to which they had been paying lip service, they found that most schools discouraged independence, taught acquiescence, and killed curiosity and creativity.

Silberman has summed up many of the concerns of the critics. Jennings quotes him as stating that the schools are in a state of failure; the schools had promised

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"magic" and instead provide a "dull routine that leads to emotional and intellectual life at the subsistence level. . . . Our schools are mindless, dull and drab whether they are moldering in slums or shining bright on suburban hillsides."  

At the 108th annual convention of the National Education Association in San Francisco, Silberman criticized the schools' preoccupation with "order and control" and the "slavish adherence to the lesson plan. The obsession with routine for the sake of routine, the lack of interest in creativity and originality, the prohibition on noise and movement, the joylessness and repression, the inability of students to work on their own, the dichotomy between work and play. . . ."  

In a less popularized style, but certainly with greater precision and documentation than the earlier romantic critics, Silberman continued his assessment by underscoring the "task-oriented, job-specific" nature of schooling; schools train students to hold jobs and to provide services; "rarely if ever are schools concerned about the quality of the students' minds."  

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39 Jennings, review of Crisis in the Classroom, in Saturday Review, p. 66.
indictments are numerous, but Jennings tells us that the "single most telling indictment of 'mass education' is that educators have allowed it to remain mass education long after its smothering wastefulness has been discovered for what it is. Its inertia is enormous."  

All is not pessimistic, however, for Silberman's research lead him to the conclusion that "what is mostly wrong with the public schools is due not to venality or indifference or stupidity, but to mindlessness. . . . by and large, teachers, principals, and superintendents are decent, intelligent, and caring people who try to do their best."  

Even though the inertia is serious, there is hope for a lessening of some internal resistance to change. For example, the entire June 1970 issue of the *National Elementary Principal* was devoted to the theme, "Dehumanizing our society through education with the active support of the public"--an issue filled with hard-hitting satire. The voice of the Establishment is beginning to speak up on such issues as curriculum planning, democratic spirit, instructions to parents, bureaucratic

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41 Silberman, *Crisis in the Classroom*, pp. 10-11.  
organization, and the individual as the norm. Some of the comments are in keeping with the tone set by Illich when he states that "schooling has vulgarized education, that the school has become anti-educational and anti-social. Youth wants educational institutions that provide them with education. They neither want nor need to be mothered, to be certified, or to be indoctrinated." 43

The Role of the Students

There is increasing evidence that the formal verbal criticism of the recent past is insufficient for many of the youth, as well as for the militant adult. Smith reminds us

the past decade is strewn with the debris of young people's unsuccessful attempts to revitalize the political and institutional life of this nation, beginning with efforts to desegregate the schools, public facilities, and local governments in the South. Efforts to stop the Vietnam war and to penetrate the two major political parties have also failed for now. 44

If indeed the frustrated youth are convinced that this is a sterile, unemotional, hypocritical society, the very violence of some of their activities may be interpreted as an attempt to break through the automatic insulation of the modern

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megamachine, with its tendency to cover up its errors by falsification, to refuse unwelcome messages or to transmit information damaging to the system. Smashed windows, burning buildings, broken heads are means of making humanly important messages take possession of this medium of exchange and so resume, though in the crudest form possible, two-way communication and reciprocal intercourse.45

This is not meant to condone violence, or to excuse the overt exhibition of frustration, but rather to encourage an examination of the causes of such behavior. As Sobel so firmly states, "we should spend less time deploring student disobedience and more time analyzing the society which tolerates situations that make violence inevitable."46

Atkins brings the problem right to the door of education when he states that "the root of the problem is that education, as it is presented today, is largely meaningless to the great majority of students."47 For the student who desires to change the meaninglessness of school, there are not many alternatives. Marin notes it is not merely the system that is at fault, but that "social reality" seems to have vanished, leaving many of the young


with a "profound and befuddled sense of loss." They know they are a minority group within the society, and as such are virtually powerless. "Students trying to make it and trying to be heard in a power-oriented society can only meet power with power. Student power today manifests itself in terms of students' crying out for a sincere open ear, to be involved, and to possess the right to have a say in determining their own educational destiny." The need for students to participate in their own destiny is no doubt a critical factor in the current antagonism toward the schools. It is indeed a small step from the completely submissive role of the pupil as recipient of information to the abuse of student rights in school as a whole. House cites that during 1969 more than 2,000 high schools in the United States experienced "walkouts, sit-ins, boycotts or other means of student expression in an attempt to prove that they are important and want to participate." Participation involves the interaction of responsibility and


freedom. As students are trusted and encouraged they can test what they really believe, they can find out who they are and how they fit into the rest of society. Freedom allows the growth of responsibility. An increased sense of responsibility permits others to give increased freedom and autonomy.

If adults can get past the unconventional attitudes, vocabulary, and appearance of many student spokesmen, they can then begin to hear a rather consistent message. Students are trying to help identify the problem. From reviewing much of the literature as well as listening to innumerable student groups, it is possible to identify the critical overarching need, the need that is now so largely frustrated and denied: the right of whole human beings to react with other whole human beings in ways that are mutually significant.

Within the context of this overall need it is possible to identify at least four subareas of concern that relate to the process of schooling itself: content, personnel, and methodology of schooling, and the opportunities afforded the student in the school.

In looking more closely at these four subareas, one can isolate the following major ideas:

1. The content of the school is not "real"; many students feel that it is no longer a valid source of information for them, but instead it is the adult linear
world of the past forced on nuclear students of the present and future.

2. Many adults associated with the schools are not "available," but those who are often are unable to help even when needed; there is no mutual understanding, no shared goals and aspirations, no guidance in making personal decisions.

3. The methods of schooling encourage passiveness; such methods are dull and boring, whereas life itself is alive, active, and on-the-move.

4. The students have little opportunity to express their individuality and creativity; to be themselves; or to participate in the planning of their own educational experiences.

Many youth instinctively feel, even when they cannot verbalize, that there is a vacuum-like quality to their lives: "empty affluence, empty idleness, empty excitement, empty sexuality." In reacting to this sterility, they resist the "overorganized, overmechanized, over-directed, overpredictable" nature of approved activity. In a frustrated, sometimes frantic attempt to restore their identity as important human beings they defiantly grow

51 Mumford, "The Megamachine," Part IV, p. 76.

52 Ibid.
long hair, wear symbolic attire, and reject the rewards standardized by those who conform to the Establishment. Those who are sufficiently influenced by the restraints of family or societal norms often find their release in the use of drugs. Wherever the young live, however they dress, they are influenced by the artificiality of daily life. The very life style of the awakened youth cries out, "I am me--pay attention--I am a human being, and human beings are important!"

**Obvious Inconsistencies**

Obviously the critics and the students have identified many elements of the problem facing education in general, and schooling in particular. To these elements, a few more inconsistencies between stated objectives and actual practices need to be specified in order to more fully define the boundaries of the problem.

One of the most common inconsistencies in education is the confusion of ends and means. Methods or ways of achieving goals are often transformed into goals or ends in themselves. The educational process is greatly preoccupied with instructional method, and often treats the method as if it were the end to be achieved. Popham lists several examples of this confusion between ends and means as he explains the point: teachers are judged according to the methods they use; innovation is lauded for its own sake; teachers design instructional sequences on the basis of
what they should do rather than what should happen to the student. 53

Those who write educational goals profess to be concerned about "the individual." In the bureaucracy of schooling, however, the student is at the bottom of the hierarchical structure. Such a structure demands organization, conformity, and standardization—the bigger the organization, the greater the need for such standardization. For some students this organizational structure is sufficiently restrictive to limit their learning to function as autonomous individuals working toward self-actualization.

The majority of educational values espoused as "good" are related to dominant middle class standards. This alienates not only those who do not feel they "belong" but also many of those who are so classified, but resist a system that "assigns" people to segments of society on any basis other than personal worth.

Another problem is that which Goldman identifies as "repressive localism." 54 This constraint is imposed on people geographically located within circumscribed areas.


Communities and districts deal with problems as though they were unique to their situation within the school boundary lines. In reality, few social problems can be limited to boundaries drawn in former years. "Circumstances have changed so much that current school district boundary lines are not only irrelevant, they are inhibitive to imaginative planning, thinking, and innovative design for education."55

The mood of public opinion is another important variable to consider; especially in assessing any new method, policy, or material. On a concrete level, Thelen uses the example of the teaching machine. They are currently out of favor "because they do not teach the 'higher mental processes'--but the public is willing to buy them. At the same time 'self-directed study' which can be valuable for the child's education has been driven underground by the national drive toward standardization, automatic and routine-teaching procedures applicable to everyone."56

Nearly every community can cite recent examples of the influence and power that can be exerted by public opinion on decisions made by boards, administrators, and classroom teachers.

55 Ibid., p. 153.

Further consideration of the topic of decision-making raises another issue: is the student really the central figure in the educational process? Adults make more and more decisions concerning the educational program of students. Their decision-making techniques are supposedly more sophisticated and their data base more reliable.

Rickner likens the results to a common myth shared with the "olden days"; the analogy is that of a McGuffy reader and a modern text: "they both share the same myth... The older generation knows what the younger generation needs to know." He sees a fallacy here in that we neither know "what questions our children should be asking, nor know the answers to them if they were asked."57

The new nature of the societal structure must be considered in probing topics related to both the source of key questions and the inquirer. In this emerging society it is the young who can lead their elders in the direction of the unknown. Mead tells us that we "must learn together with the young how to take the next steps. Out of their knowledge--new to the world and new to us--must come the questions to those who are already equipped by education and experience to search for answers. The children, the young, must ask these questions that we would never

think to ask, but enough trust must be reestablished so that the elders will be permitted to work with them on the answers."\textsuperscript{58} On this basis perhaps more information can be arranged by the students rather than by the adults for the students.

Two other discrepancies, obvious in the classroom, are worthy of note. Each day children repeat a pledge which unequivocally states the nation's belief in equality, yet throughout the remainder of the day, they witness innumerable examples of inequality: "the obedient bright get the best grades; the rich get the school offices; passive girls do better than boys with initiative and inventiveness. . . ."\textsuperscript{59} The classroom, as a subunit of a system that advocates democracy, is the antithesis, for few other groups within our society operate under such "despotic conditions." Upon analysis, it is obvious that students have "no control over the selection of their leader, no recourse from his leadership, no influence on his method of leadership beyond that granted by him, and no power

\textsuperscript{58}Mead, "Youth Revolt," p. 113.

over the tenure of his leadership."60

In addition to the lack of consistency in the areas of equality and democracy, one must consider the effect of the classroom elements of "repetition, redundancy, and ritualistic action."61 Jackson elaborates on these points as well as on the pressure of involuntary attendance and the "crowds, praise and power" factors that "collectively form a hidden curriculum which each student (and teacher) must master if he is to make his way satisfactorily through the school."62 Jackson continues by raising the question of whether the same personal strengths contribute to intellectual achievement as contribute to success in coping with institutional expectations as expressed in the "hidden curriculum." Are we creating an unintentional inner conflict? Each of these ideas increases our level of concern about the internal consistency of any student's school experiences.

Having looked at a wide variety of loosely related items concerning the problem of improving the quality of educational experience, we face the challenge of producing viable guidelines for action. This will not be an easy


62 Ibid., pp. 33-35.
task, but one to which each of us must return. The Eight-State Project for Designing Education for the Future has reached the conclusion that "education is not prepared to meet emerging needs--and cannot meet them realistically--unless significant changes are made within the next few years." This is reported here not to sound a pessimistic note, but to signal the urgent need for "significant changes" not just for new "layers of minor revisions."

The Question of Priorities: Adjustment of Priorities for the Individual

Many authors of current publications have attempted to identify areas of needed change that have been brought to a level of awareness as a result of recognized inadequacies in the educational enterprise. The work of two authors, Haskew and Flanders, will illustrate the types of concerns being considered.

Haskew identifies four major areas in which there are both the need and the potential for significant change: the nature of the knowledge and understanding to be transmitted; the adjustment of instruction to the learning styles and potentials of highly-variant students; attribute

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development; and the methods, instruments, and materials of instruction.\textsuperscript{64} Recent research, development, and application activities have demonstrated that some of these areas are more readily approachable than others. For example, much more work has been done in the area of "methods, instruments, and materials," than in the less measurable area of "attribute development." Seldom does one find a printed listing of educational goals without finding a reference to the development of some individual attribute or attributes deemed valuable by society; yet it is rare to find accompanying evidence of the implementation of such goals.

At the classroom level Flanders has identified four other areas in which he sees both need and potential for major change: personal incentive; reinforcement free from threat of failure; skills for analyzing teaching behavior; and increased time, space, and equipment that the task demands.\textsuperscript{65} For heuristic purposes the critical areas identified by either Haskew or Flanders can be separated, but in actual practice they are all interrelated, interdependent parts of the whole system. Engler refers to the


"ecology of education." Perhaps this phrase will emphasize the needed "web of relationships" between and among the learners, the teachers, and the environment in which each student operates. As one considers needed change in the total system--the ecology of education--it is appropriate to consider not only the identified major areas of concern, but also the balance of each within the system--all while maintaining the central position of the learner. Keeping in mind the obvious centrality of the learner allows one to consider the priority given to attribute development. Reaction to the industrialization of society demands a renewed emphasis on the re-humanization of education, with "greater stress on individuality rather than individualization." An emphasis on individuality requires many and varied personalized learning experiences. Such a program would be psychologically supportive. The learner would begin to find answers to three basic questions:

Who am I? (self-identity)
What am I doing? (self-orientation)
Where am I going? (self-direction)

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To make this type of personalized program a reality, a shift in priorities is needed. The temptation to polarize must be resisted, however. Some educators have learned to refrain from creating artificial divisions, but now everyone must try. The point is not "knowledge" OR "method"--the "person" OR the "discipline"--but the optimal balance, the relative priority.

This is certainly not a new thought. Through the years, as the pendulum of curriculum emphasis has swung between the "whole child" and the disciplines, balance has been considered. More than half a century ago Dewey was well known for his emphasis on the need to develop both the potential and the purpose of the student. More recently terms such as capacity, potential, needs, desire, and interest are used, but whatever the choice of word, the emphasis is clear.

In returning to the question of priorities, Frazier directs our attention to a major area of decision-making: the need to define new ends and concerns as the basis for curriculum reconceptualization. In providing direction


for the Association for Supervision and Curriculum Development, its Executive Board defined seven points of critical concern for priority attention: immediacy, austerity, authenticity, openness, autonomy, responsibility, and reverence. These identified values or attributes are under study as central elements in content, with the definition of content extending beyond facts and skills.

If a valid goal of education is to enable each learner to "pursue his personal purpose, and, in the pursuit, to exercise and develop the human powers he was born with. . .", a concerted effort to alter the curriculum priority from the traditional 3 R's to the new 3 A's: authenticity, autonomy, and actualization. This latter attribute, actualization, would subsume other attributes such as openness, responsibility, and reverence. Of obvious importance is the need to recognize that in reversing the priority rating of subject matter and attribute development, one must not commit the error of negating the value of subject matter. The disciplines and their related supporting skills are still of vital importance, but as tools for growth rather than as determiners of learning experiences. "With knowledge in such a constant transition and with academic and opera-

71 Ibid., p. 37.
72 Ibid., p. 39.
tional skills so quickly subject to obsolescence, the influence of education seems destined to depend increasingly upon its success in producing personal attributes which transcend ingestion of subject matter, . . . allowing for adherences to well chosen scales of values." 73

Authenticity

As the individual is aware of the discrepancies between the perceived self and his picture of adequacy, he formulates goals, that is, things which he could do in the world to decrease the discrepancies. 74

There is an obvious concern among many people today for personal congruence, integrity of public and private value structures, and the "squaring" of those values with the observable "facts." The new concern for authenticity can be readily identified for evidence abounds. For example, there is an increased public awareness of the inconsistencies in political and economic areas of life. The "credibility gap" has become an accepted--if not approved--concept, descriptive of the lack of communication and trust between one agency or group and another.

Manipulation of public opinion has become an accomplished reality; no longer is it just a "Madison Avenue"  

73 Haskew, "What Lies Ahead?" p. 28.
approach to salesmanship, but a pervasive constant to the periodical reader, the newspaper scanner, and the television viewer. Half-truths, exaggerations, and incomplete information are "rules of the game" for such manipulation. To keep the economy running smoothly, "every member of the community must acquire, use, devour, waste, and finally destroy a sufficient quantity of goods to keep its increasingly productive mechanism in operation." The new concern is for straight reporting, for the clarification of data, for unbiased analyses, and most of all for honesty.

The rationalization for some adult behavior based on "double-standards" is no longer acceptable to many young people. They question how an authentic person can be humane at home and inhumane or impersonal in his business dealings; how he can be honest in his personal, family, and neighborhood relations, and dishonest in his manipulation of governmental tax debts. Whether adults are really hypocritical in their dealings and attitudes, as they sometimes seem to young people, or whether they are really trying to lead two distinctly different lives, is a question to consider. Whatever the diagnosis of the cause of the dual value system, however, the diagnosis itself is immaterial compared to the demand for congruence, for authenticity, for wholeness.

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Wholesness is needed in processes as well as in values. Thinking and feeling have a cohesive quality. No matter how accustomed one becomes to separating the cognitive from the affective domain for purposes of study and analysis, "in actuality thinking and feeling are usually transpiring simultaneously."\textsuperscript{76} Perhaps part of the concern for authenticity relates to attempts to reintegrate the intellectual and the emotional realms of man's being. Pilder suggests that these two dimensions can be integrated by concentrating on new environmental designs that "seek to honor the affective aspects of the knowledge situation."\textsuperscript{77}

The need for increased freedom, which will allow personal self-expression and encourage social acceptance of overt emotional reactions, is critically apparent. "The open expression of doubt and fears and even animosities is also needed if man is to know others and himself as well. The willingness to express fully what we really think and feel is often the first step to inner or self-authenticity as well as to relating authentically with those


who seem to differ most from ourselves." Many programs have been designed to increase human awareness and sensitivity. Institutes are crowded with people who desire to know themselves and others less superficially than prescribed by their cultural norms. Private individuals are experimenting with communal living, with heretofore untried degrees of sharing intended to heighten their involvement with other human beings and therefore with life itself.

Thelen states that the quest for congruence, for "wholeness," is the total universe of our concern. To recognize wholeness and to pursue its development necessitates taking into account

a great many more of the facets of the child and of the society than has been customary. The notion that the quest for "intellectual excellence" is for the school whereas "character training" is for the Boy Scouts and other agencies must be recognized as an arrogant fraud. . . . Let the child, in all the years of growing up, live compassionately and with enlightenment, and let the quest for these qualities be given the priority to which human dignity is entitled.

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78 Frazier, Here and Now," p. 69.

79 For example, see the materials of the National Training Laboratory, Esalen Institute; Look (January 13, 1970), pp. 34-35.

80 Herbert A. Thelen, "Comments on 'What It Means to Become Humane'" in To Nurture Humaneness, pp. 31-32.
Autonomy

A second attribute, equally critical in the development of each human being, is autonomy—the quality characterized by "universal emancipation" from institutional, social, or political pressures and by the ability to make decisions for oneself. Leading toward such a state of emancipation, Nelson and Besag identify several typical reactions to institutional pressure:

- A person may psychologically withdraw from the situation, thus a student may literally negate the power of the school by refusing to recognize that for him nothing the school does or can do has any personal significance.

- He may become belligerent, displaying hostility, openly flaunting rules, and defying authority figures to take action.

- He may become apathetic, complying to the desire of the institution only because at the moment he does not see any more interesting option.

- He may become "converted" to the goals of the institution.

If there is evidence of congruence between the goals of the institution and those of the individual, there is no open conflict. But what of the student who finds too great a disjuncture? Frymier is quite clear in the options he sees for this student: he can "give in, get out, or


As the system now functions, these are realistic options for the student. An additional course of action, not open to the individual student, but important in the considerations of those who hold power, is to alter the system. If this were possible, then a viable goal would be to provide the opportunity for the development of autonomy by every student. Appropriate means for implementation must be stipulated to make this effective.

More than two decades ago, Bayles suggested the promotion of both learning and learnings: the goal is to help each student develop the ability to think and to learn as well as to acquire substantive results of such a learning process. Over the years many educators have been concerned with the development of cognitive processes and decision-making skills. The new emphasis, then, is not on the mere acquisition of cognitive and decision-making skills but on the use of these skills in the development of autonomy. This is compatible with the area defined by Rogers as "significant learning." He describes the conditions necessary for such acquisition and utilization:

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the issues must be "real"; there must be teacher congruence, understanding, and acceptance of student; and resources must be provided in such a way as to allow voluntary acceptance on the part of the learner.  

To implement these conditions, responsible adults will need to make several major decisions: Can they allow students to face "real" problems? Can they permit information to be arranged by the student instead of for the student? Can they oppose the trend to educate for factual knowledge? If affirmative answers are given to these key questions, and the appropriate decisions made to implement the action, students would have many more opportunities to develop both decision-making skills and autonomy. Once a student is on the way to freedom of self-expression, coupled with an awareness of consequences implicit in wise decision-making, he is in a much more secure position to evaluate himself—to decide what he is, and what he wishes to become.

Actualization

A person is both actuality and potentiality: what he is and what he could be. Bridging the gap between these two—the "ongoing actualization of the potentials,

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86 Ibid., pp. 236-38.
87 Ibid., p. 241.
capacities, and talents"—has been defined and studied by Maslow.\textsuperscript{88} Other psychologists use related terms such as individuation, self-development, productiveness, and self-realization, but whatever the term it seems to be the motivating factor for some whose basic needs are gratified. Actualization represents the "... fully growing and self-fulfilling human being, the one in whom all his potentials are coming to full development, and the one whose inner nature expresses itself freely..."\textsuperscript{89}

If a priority of education is to provide the opportunity and guidance to allow each student to "become everything that \textsuperscript{90}is capable of becoming," then more must be done than merely accepting the idea as a worthy goal. It is similar to the condition in Combs' discussion in which he likened humanism to motherhood: "everybody is in favor of it, but not everyone is committed to it... There is a vast difference between intellectual acceptance of an idea and the belief that it is truly important enough to warrant acting upon it."\textsuperscript{91} Combs continues with rather

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\textsuperscript{89} Ibid., p. 4.
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\textsuperscript{90} Ibid., p. 92.
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\textsuperscript{91} Arthur W. Combs, \textit{"An Educational Imperative: The Human Dimension,"} in \textit{To Nurture Humaneness}, p. 175.
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specific suggestions for increasing the humane quality of the educative process. These suggestions seem equally potent when considering the opportunities for self-actualization on the part of both the learner and the teacher. In condensed form, his suggestions include the following:

- de-emphasize both information and objectivity
- value the meaning of information
- develop sensitivity to the personal meanings of others
- accept people "where they are"
- encourage personal exploration
- test, evaluate, and reward meaning
- evaluate and reward humanism

In listed form, such suggestions seem idealistic and abstract. However, it is possible to discover that when people in leadership roles are intensely committed to such ideals, the abstract becomes concrete and realistic. One actual case is that of the Berkeley (California) School District. In 1965 their Board of Education activated a Master Plan Committee made up of 138 community and district members, each committed to the improvement of education in their schools. Blacks and whites, liberals and conservatives all worked together for more than two years to develop common trust and to recognize common needs and concerns.

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92 Ibid., p. 177-78.

Their plan called for more than the obvious mixing of races within a school plant. Through busing, genuine community action, and extensive teacher training, an interactive climate was encouraged. There was a "conscious attempt to create a microcosm of the community as a whole, a social organism integrated heterogenously on the bases of race, sex, academic achievement, and economic status. . . . The curriculum attends to real cultural, as well as individual, differences—in life style, language, home background, music, humor. . . ." 94 This was a real chance to bridge the gap between actuality and potential.

Even after the formal adoption of the plan—a time when many people sit back and relax—the Berkeley group continues to involve as many as possible in the ongoing implementation of the program. Committee members continue to get together in workshops under the direction of the Human Relations staff; members work to design continuing ways to make their school more human; they use students from the third through twelfth grades as consultants and planners in many activities within the total program. 95 In referring to one of the developing "open schools," Superintendent Foster says, "the beginning of positive change happened when the students finally realized that the

94 Ibid., p. 48.

teachers weren't copouts, that the school could be an educational forum, that the kids mattered, and that adults cared!"  

To encourage the actualization of individuals as important people is not easy, but it is possible. When one gets discouraged, it is helpful to turn to the philosophers and the visionaries for revitalization. Leonard is convinced that learning can be and should be an ecstatic experience. Deep in the heart of one's concern for each student and his need to have opportunities to develop fully is one's own personal conviction that learning is indeed sheer ecstasy. If Leonard's concept is discounted because of his role as a critic, the point can be reinforced by Polanyi in his discussion of "intellectual passions." There is the overwhelming elation of personal discovery, and the continual pleasure to be gained from "intellectual passions perpetuating themselves by their fulfillment." Once having experienced the joy of intellectual pursuit, it is imperative to find ways to


99 Ibid., p. 173.
share the opportunity for such truly integrated cognitive-affective experience with all one's students. Self-fulfillment, ecstasy, and actualization can at times be so integrated as to be considered synonyms.

Referring to the attributes of concern to the ASCD Executive Board in relation to the present discussion of actualization, it can be seen that such characteristics as austerity, openness, responsibility, and reverence are implied. Let us make the connection more obvious. As one decreases the gap between his potential and his capabilities, he shows the quality of austerity, for he is concerned with the "essentials"—investing himself and his energies in those things that "really matter." The actualizing person is open, showing concern for new possibilities, new options, new ways of intensifying his relationship with life. As this person deepens his involvement with other human beings and thus with life, responsibility and reverence become additional key qualities.

Significance in human experience and concern for human emotion are inseparable. Perhaps it would be appropriate to reactivate Luft's call for a writ of Habeas Emotus. Just as the writ of habeas corpus was a


significant step that "marked man's advance out of the Dark Ages" so could such a metaphorical writ imply the right of each individual to have his own feelings, and to express these feelings freely (unless by so doing he would limit the freedom of others) and thus free society to advance toward a new concern for others.

In light of the changes taking place in contemporary society, it is evident that the development of attributes associated with authenticity, autonomy, and actualization will become critical to the person wishing to function optimally in society or, more appropriately, wishing to be his "best-self."

The realistic facts of life, however, must be considered. The system to which the task of education has been assigned resists change. Critical changes must take place. What are the options?

The Question of Future Direction:
Options for Action

There can be no doubt that most critics of education and at least some educational participants are calling for reform of the educational structure. Boulding cautions us that when the technological rate of change is swift—and

102 Ibid., p. 31.
it surely has been in the past decade—the cultural responses can easily disrupt society's rational pursuit of the "good life." If education's societal function is to prepare each member of society to function optimally for his own and society's benefit, it is important that there be consensus on what is meant by the "good life" as well as awareness of the implications of the disruptive responses to change. To gain consensus is not an easy task, and the dilemma becomes compounded for "at the same time change is imposing new demands... it is rendering obsolete the methodology and capabilities of institutional personnel to cope with those demands." 104

Ignoring for the time being those who resist change by supporting the pattern-maintenance dimension of education, and assuming that we must make the system less resistant to reconstruction of its elements, what options are open? The three clearest alternatives are: (1) reform the institution—change the structure of the system; (2) abandon the system in favor of some other; or (3) adapt the existing system from within so that it more nearly meets the desired goals.


Institutional Reform

To the reformers, the system is either obsolete or deficient. Most would agree with Fantini when he notes that

we are expecting an educational system rooted in the nineteenth century to solve twentieth and twenty-first century problems. This irreconcilable discrepancy has resulted in disconnectedness, alienation, loss of confidence, and the inevitable retaliation of students, parents, business, and industry. . . . [we are] confronted with institutional obsolescence.105

To rectify this problem, Fantini calls for institutional reform. He sees the direction of such reform to be toward local community control, redevelopment of curriculum content, and both horizontal and vertical diversity of staffing.106

While some of the more widely read romantic critics see only the shortcomings of the system, others go beyond the faults and make positive suggestions to implement remedies and redesign. Glasser is one who has looked beyond the social, environmental, and cultural factors affecting the student to the specific function of schooling itself. He expresses concern over the main obstacle to improvement, which he sees to be the current operating


106 Ibid., pp. 60-61.
philosophy of noninvolvement, nonrelevance, and limited emphasis on thinking. He makes definite suggestions as to an appropriate methodology for moving to the opposite philosophy— one dependent on involvement, relevance, and thinking. He in no way suggests the abandonment of subject matter, but rather emphasizes the use of such content as the vehicle for learning.

Santee summarizes some of Glasser's key suggestions for changing failure-promoting schools to schools without failure: problem solving, peer-group control of behavior, development of accepting attitudes toward all others, positive approaches by teachers, open-ended discussions, and greater opportunities for decision-making by students. None of these suggestions sounds unique or revolutionary in and of itself, and yet Santee is convinced that if they were implemented as a total program, schooling would no longer be a failure-prone institution as it now is.

To change the perspective from viewing parts of the system to considering the viability of the system itself,


108 Harold T. Santee, "Foreword," in Glasser, Schools Without Failure, p. xi.
one can turn to the work of Frymier. He calls for an accountability dimension to handle the evaluative function. As the system is presently conceived, it is incapable of adequate self-renewal and rational change, due to the lack of a formally established, external assessment component. Evaluation provides information that enables a system to maintain, modify, and correct itself. Policy should not be judged by those who make policy; teaching effectiveness should not be assessed by those who teach; to be complete and adequate, a system needs to be accountable to the larger system within which it functions.

Levin proposes two additional reforms which he terms the political approach and the market model. The political approach advances the community control theme, with political decentralization enabling schools to reflect more closely the educational needs of their constituents. The market approach or economic model is based on the concept of consumer satisfaction. Students and their parents would be given a choice of schools, thus requiring the schools to compete for their student populations. Such competition for clientele would, by implication, increase


the schools' responsiveness to the needs, desires, and interests of the consumers of its product. Some aspects of this suggestion are similar to the Friedman proposal of tuition grants and to the Jencks plan for entitlements or the voucher system. These plans allow the student to select an appropriate learning institution or experience. A modification of the economic model is proposed by Downs\textsuperscript{111} who recommends the extension of attendance areas to allow the student free choice within an enlarged, merged area. Again since schools would have to compete for enrollment, they should be more responsive to the student. Within the district, resources (including teachers) could be shifted from low attendance schools to those attracting the increased enrollments.

The single most unanimous area of agreement among reformers has been the call for changes in basic attitudes rather than for a mere shuffling of "things." Holt sums up his ideas on the problem of needed attitudinal change with the challenge to get rid of the concept that education and life are different and separate. He suggests that "to answer the question, 'What makes a good education?' one must consider, 'What makes a good life?'" To operationalize this point of view, Holt gives several specific suggestions centering around these key ideas:

\textsuperscript{111}Ibid., p. 81.
- Teachers must have professional freedom.
- Only the student should have more to say than the teacher about his education.
- People should be free to find or make their own experiences.
- Compulsory attendance should be abolished.
- Certification requirements should be eliminated.
- School requirements, such as compulsory testing, required curriculum, and entrance examinations, should be abolished.
- The emphasis should be on "letting the learner direct his own learning."[^12]

Self-directed learning seems to be a major issue of many of the critics who want to restructure the schools. Shane suggests that new comprehensive Self-realization Centers be designed.[^113] To administer these he thinks that the school administrator of the future should be a combination scholar-scientist-senior administrator. One of the unique features of such a Center would be the CYBORG unit, a "cybernetic and organic" unit designed as a balanced combination of man, media, and machine to serve man's needs.

Goodlad emphasizes that in addition to all the other elements, our total look at the reform of schooling must include preservice and inservice teacher education, for "nothing short of simultaneous reconstruction... will suffice if the change process is to be adequate."[^114]

[^113]: Shane, "Future Shock and the Curriculum," p. 69.
conviction that the school system needs fundamental alter-
ation is reemphasized by Fischer who advocates changes in
the underlying assumptions that serve as foundations for
both policy and practice. To substantiate his point, he uses several examples of needed change: (a) the current view that the schools' principal function is to screen and classify students; (b) the need to recognize the misconception that uniform treatment promotes equality; (c) the necessity to get beyond the conventional platitudes in praise of individuality; (d) the need to set up policies and supportive administrative schemes to facilitate originality, inventiveness, and initiative; and (e) the need to come to grips with essential questions such as: "What kinds of difference should the school be expected to make in the learning, growth, and development of children? What factors in school induce such differences? How can they be discovered? and How are they best introduced, cultivated, recognized, and rewarded?"

Because of the democratic commitment to "equal educational opportunities for all," Jennings predicts that successful restructuring of the system will need to be based on the accommodation of two formal subsystems: one

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116 Ibid.
for universal education and a second for specialized education. The universal subsystem will be based on the need for every person to have at least minimum skills and competencies to be a functioning individual in a societal situation. He proposes that the results of such education will be validated in terms of efficacy in providing citizens with the ability to achieve and maintain economic, emotional, and social security, which can be defined and redefined operationally. The second formal subsystem will be open to all who wish to apply, but will be accessible only to the qualified who wish advanced or specialized education.

If this present composite of comments and examples is to be more than a listing of possible directions for change through reform, one central thrust must be apparent: Now is the time to act, and to act implies the need "to break out of molds, to get beyond immediate preoccupations. . . . to deal with the whole." 118

Institutional Abandonment

For those who feel that even comprehensive reform is an inadequate or ineffective means of coping with the immensity of the problem, a number of operating alternatives have been recently reported.


One of the fastest growing alternatives to school as we presently know it is a "new kind of education" variously known as new schools, free schools, third world schools, or community schools. While no two are alike, two major declarations are incorporated in most of their rationalizations for existence: they believe in "freedom for youngsters" and in a "human education." The physical facilities operated by these various groups vary as widely as do their programs. Some operate in city storefronts, others in deserted barracks, unused church buildings, and private homes. By and large, parents and individual teachers are the founders of these "schools." They tend to look toward the guiding principles of A. S. Neill, Marie Montessori, or the Leicestershire model of the British Primary Plan for their program and structure. While each is idiosyncratic in nature, there is the need for some intergroup communication, and thus one finds such items and events as an interschool Exchange Newsletter, a teacher "drop-out" placement center, and conference series for those with mutual concerns.\footnote{For example: Santa Barbara Exchange Newsletter; Teachers' Drop-out Center, Amherst, Mass.; and conferences at Santa Barbara, Cuernavaca, Mexico, and Toronto, Canada.} Another group of alternatives to traditional education was anticipated by the 1967 SCOPE report. The writing
committee saw "big education" sponsored by private entrepreneurs, publishers, and private and semi-private institutions pushing to conduct the public schools for profit. They cited the operation of the Job Corps by private firms as the forerunner of this trend. One section of the report concludes that "the possibility stands that if the public school system does not revitalize itself, forward looking communities will seek to turn to industry, which presumably will be able to design, install, and operate a complete educational system for a fee."\(^{120}\)

Within two years of this prediction, the private firm of Dorsett Educational Systems of Norman, Oklahoma, had taken over part of the Texarkana School District's educational program on a contract basis. Payment for services was to be contingent upon success in improving academic skills. A year later, the Office of Economic Opportunity contracted with six private firms to work with 27,000 students in eighteen school districts across the country. At the same time this OEO contract was being negotiated, a local school district--Gary, Indiana--signed a four-year contract with the Behavioral Research Laboratories of Palo Alto to "operate and run one of its elementary schools on a

Another business related alternative for schooling as skill training was pioneered by the MIND Project, a profit-motivated company set up as a wholly-owned subsidiary of a "blue-chip" corporation. Its goal was training for employable skills, and it relied on techniques of abolishing classrooms and teachers. Trainees sat at conference tables for discussion, and used self-pacing tapes and workbooks for instruction. The results were equivocal.

It is obvious that these various pioneering efforts will experience different degrees of success. Where either the results or the profit do not meet expected standards, the effort will nonetheless have added to our information base, and so will not have been entirely futile. Writing on this point, Cass says, "Fortunately we have promise... laboratories in which to test the hypothesis that private educational agencies can succeed where the schools have failed. If they cannot, their disappearance is written into their contracts. If they can, the sooner we know it, the better."


Additional alternatives are based on the use of information retrieval devices for completely independent study; on the payment of cash to motivate learning, as is being tried in the Institute for Behavior Research in Silver Springs, Maryland; or on tutorial plans. An interesting example of the latter is the Travellers Directory Program, under which a student is matched with a person working at what he himself would like to learn. High school credits are recorded, and transcripts and diplomas are offered through Pacific High School in Palo Alto, California.124

In contrast to the previously mentioned alternatives to schooling, but critical to one's thinking about the reconstruction of education, is the view of Ivan Illich. He defines obligatory schooling as a "form of child care and a rite de passage" which we take for granted, much as we do the "full-time attendance of age-specific groups at graded curriculum."125 In view of this definition, Illich calls for the abolishment of schooling, for the disestablishment of the monopoly of the school. To make such a disestablishment effective, he says we must have an institutional revolution aimed at the transformation of both public and personal reality. Every citizen should be


125Illich, Celebration of Awareness, pp. 110, 181.
guaranteed "an equal share of public education resources, the right to his share of these resources, and the right to sue for them if they are denied." Thus Illich calls for a "generalized G.I. Bill, or an edu-credit card in the hand of every citizen. In all areas of social involvement laws must be passed that would make it illegal to discriminate in the hiring of employees or in voting. It should be equally illegal to discriminate regarding admission to centers of learning based on previous attendance at some curriculum. In the process of this deschooling of society, liberal education must be disassociated from obligatory attendance. Interested individuals should be matched with others according to unresolved questions. Illich suggests that creative exploratory learning requires peers currently puzzled about the same problems.

For those who are not yet ready to abandon the present system of schooling in favor of generalized and guaranteed education, but who are still not satisfied with the rigidity of the present ineffective system, there is still a third option—adaptation of the system.

126 Ibid., pp. 180-88.
Institutional Adaptation

Working within the present system in an effort at adaptation may not seem to be a great enough step in this time of "demand for immediacy!" But for some it may be the most realistic or feasible alternative in view of their present local pressures and circumstances. These less radical forms of change are often called "innovations." The Grosses differentiate radicalism from innovation in that the former challenges the basic premises of the structure while the latter makes changes within the system. 127

In some respects the Pennsylvania Advancement School (PAS) differs from the traditional view of schooling as radically as many of the previously described plans. However, the leadership attitude and the reorganization goal are both consistent with the commitment to work within the system to bring about needed transformation. In one of his writings Resnik reminds us that real change such as that desired at PAS is not for "radicals" because in order to have real reform one must work slowly and modestly. Most lasting changes come from attitudinal modification. At PAS the traditional curriculum is not just "warmed over." As Resnik says, "there really is no curriculum in the usual

sense, for the school's structure is in a state of constant evolution." 128

PAS is not the only outstanding experimental adaptation in Pennsylvania. One of the most widely known is the Parkway Program--known to many as the School Without Walls. This is a year-round program that acknowledges school as an activity rather than as a place; students and staff are therefore free to meet wherever a particular activity requires. Faculty members still teach, students still study, and performance is still evaluated, but all within the context of what is best for the optimal development of the individual student. Silberman quotes Parkway's director Bremer as emphasizing that "the spatial boundaries of the educational process... are co-terminous with the life-space of the student himself" and that Parkway's students "have to learn to be responsible for their own education, to make choices, and to face the consequences of those choices." 129

While running the risk of becoming a "recipe-booklet" for successful "how-to's" of innovation, it seems appropriate to pursue several other approaches to adaptation. It


is rather like the primary teacher who found that if she gave her children one example, they followed it; if she gave them two, they chose one of them; but if she gave them three, they began to think—and came up with their own original contributions.

Thelen proposes a group strategy by which students are assigned to classes on the basis of "teachability"—on the premise that each teacher finds some students more teachable than others. Loughary anticipates the extension of the structure to include a person's total life span, and in so doing emphasizes that individualization is a necessity, not a luxury. In this case instruction will be dependent on large support systems, increments of which will be so directed that the entire process will "make sense" to the learner.

The Metropolitan School of Columbus, Ohio sees itself as an alternative to both the public and the private schools, functioning as an ungraded, coeducational day school. In planning the use of available materials as parts of constantly evolving programs, the staff is guided by the underlying concept of the school operation: "the entire

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130 Thelen, Classroom Grouping for Teachability.

educational program will revolve around the specific needs of the individual students enrolled."  

Another interesting program to watch develop is at the John Adams High School in Portland, Oregon. A comprehensive high school, it was designed as a center for curriculum innovation. The Oregon State University, Northwestern Regional Educational Laboratory, and the Teaching Research Division of the Oregon State System of Higher Education are involved in its developmental program, which is an attempt to combine the instruction of adolescents, teacher education, research on pedagogy, and the development of new curricula. A number of tensions and conflicts were purposely built into the system to help keep it dynamic and viable. The expectation is that the conflicts will be fruitful—that the university will keep the school intellectual and serious, and that the community will insist on relevance and integrity.

Part of the concern in the development of new programs is, of course, the definition of "intellectual." Hentoff believes that the test of intelligence is not "how much we know how to do, but how we behave when we have a problem

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133 Silberman, Crisis in the Classroom, pp. 364-69.
for which there is no solution in the back of the book."\textsuperscript{134}

To implement the educational program to develop this type of "intelligence," he acknowledges the importance of principals who see teachers as well as students as disparate individuals, who look for teachers who are chronic learners, and who avoid any situation which relies on the "vaccination theory" of education—the theory that a subject is something you 'take' and, when you have taken it, you have 'had' it, and if you have 'had' it, you are immune and need not take it again. One of Hentoff's examples expands the idea of learning mathematics beyond the textbook and the walls of the classroom. He believes learning must not be separate from life, and should not be taught as though it were. His examples include consideration of the mathematics of electric sound, the mathematics involved in the throwing of a forward pass, in the study of population control, or in unemployment statistics.\textsuperscript{135}

No matter how noble the goal, or how successful the results, not all adaptations survive the pressures of the present society. When one reads a magazine headline such as "Why Must Lincoln Die? A Remarkable Experimental School is Being Killed in Kentucky,"\textsuperscript{136} it is obvious that not all


\textsuperscript{135} \textit{Ibid.}, p. 77.

\textsuperscript{136} \textit{Look}, August 11, 1970, pp. 64-68.
people responsible for educational policy agree that change is needed. Nearly four decades after Counts challenged society with his call, *Dare the Schools Build a New Social Order?*, one still hears answers of both YES and NO with equal vigor and commitment. Perhaps the question needs to be rephrased: Should the schools build a new social order? or Dare the schools make the student their primary priority? Considering the present structure of the school as an institution, it is not in a position either to build a new social order or to make each student an important person. The question to which this examination has addressed itself then has been: Can the school transform itself (or be transformed), so that it may be more personal, so that learning may become an ecstatic experience, so that life itself may become more fulfilling, so that education (through some change or modification of schooling) may be truly able to meet the needs of each person in the emerging culture?

This hope is supported as more than an idle dream by such studies as Silberman's four-year analysis of education in which he looked not only at education, but at the related tensions between the larger society and the schools within that society. He concludes that

schools can be humane and still educate well. They can be genuinely concerned with gaiety and joy and individual growth and fulfillment without sacrificing concern for intellectual disciplines
and development. They can be simultaneously child-centered and subject- or knowledge-centered. They can stress aesthetic and moral education without weakening the 3 R's. They can do all these things if—but only if—their structure, content, and objectives are transformed.\textsuperscript{137}

As we build guidelines for action, we must not be trapped into the dilemma of deciding between the better of alternatives, but rather we must be freed of restraint to search for the conditions which will optimize the realization of the central objective—the growth of the learner.

\section*{The Question of Structure: Formal Schooling as a Social System}

Another perspective from which to view education is to look at its structure as a social system. A social system has been variously described as a structure, institution, or organization having the "capacity for self-preservation in the face of change-inducing forces that impinge upon it from the environment";\textsuperscript{138} as an aggregate of "diverse groups bound together in working relationships to further particular ends";\textsuperscript{139} and as a "bounded collection of interdependent parts (persons, groups, or organi-


\textsuperscript{139}Frymier, \textit{Fostering Educational Change}, p. 27.
zations) devoted to the accomplishment of some goal or goals, with the parts maintained in a steady state in relation to each other and the environment.140

This consideration of various descriptions of a social system indicates that the educational system can be regarded in several ways. For example, it may be regarded as "not a system at all, but a vast sprawling, complex semi-chaos, . . . or7 as a connected network of subsystems of various size, operating in a more or less coherent way."141 Another option would be to view the educational enterprise as an incomplete system, lacking one or more of the necessary components, as for example the component allowing for self-correction.142 Each of these possibilities takes some note of the developing concepts related to general systems theory. One inherent advantage of analyzing the institution of education using the insights gained from systems theory is that one views a system as "a continuous, boundary-maintaining, variously related assembly of parts,"143 and does not confuse the


141 Ibid., p. 29.

142 Frymier, Fostering Educational Change, pp. 63-83.

total system with the structure its various components may take on at any particular time. In other words, one can study the system as a totality, and try to understand the interrelationships among the parts, without becoming involved in the specific development within each part. As an example, one could ask how the adoption of a new national curriculum project would influence the operation and organization of the instructional staff, the grouping of students, the availability of instructional materials, the allocations of financial resources, the inservice experience of teachers, the evaluation of pupil learning experiences, and the like, without analyzing only the content of the proposed project irrespective of its obvious influence on other subsystems within the institution.

Once one determines to consider education as a system, one usually chooses a model or pattern to aid in analysis. The particular model chosen to aid in the study of a system has considerable influence on the final decision as to whether the system is a valid, integrated one. For example, in using the Parson's model, referred to as an equilibrium-functional model, it is taken for granted that the maintenance of an established state of a social system is non-problematic; it is predeterminable, much like the mechanical law of inertia. In order to maintain this
constant state new members coming into the system must acquire through learning their "conforming role-orientations." However, since learning is not always adequate or complete within any system are members who exhibit "tendencies to deviance, to depart from conformity with the normative standards which come to be set up as the common culture."\textsuperscript{145} The system meets such problems of deviance through control mechanisms thus bringing the system back to the "normal" state to maintain its initial equilibrium. If the control strategies or processes do not function adequately, the system either changes or collapses.

Another popular model for the study of social systems is the one developed by Homans who conceives of a system as "determinate, reciprocal interrelationships of all its parts, regardless of the particular structure in which these interrelationships are manifest."\textsuperscript{146} Deviance, then, can be tolerated as an appropriate component of the system. The maintenance of a system based on this model is problematic or unpredictable, compared to the static predictability of the Parson's model. Here it is critical to remember that maintenance of the system lies in the


\textsuperscript{146}Buckley, \textit{Sociology and Modern Systems Theory}, p. 31.
interrelationship of the parts; a change in one element results in a change in others that counteract it and bring it back to a position of modified equilibrium. Homans recognized that his system was an open one, and in a state of interaction with the environment, in that "later events in the cycle may modify the conditions assumed at the beginning... allowing scope for emergent evolution."\textsuperscript{147} Thus Homans' model is closer to the "spirit of modern systems theory than to that of the traditional equilibrium model from which it was presumably derived."\textsuperscript{148}

A third type of useful model is identified as a process or adaptive model. With this model as a pattern, society is viewed as complex and dynamic, constantly in a state of flux, adapting to environmental changes. This system is characterized "more by experiences that have come to it than by its state initially."\textsuperscript{149}

This identification of types of social systems should now allow one to take a more objective look at the educational system within our contemporary culture. Knowing that some educators are prone to rely on mechanisms of control--of enforcement of uniformity and stability--it is

\textsuperscript{147}Ibid., p. 35. \\
\textsuperscript{148}Ibid., p. 23. \\
\textsuperscript{149}Ibid., p. 39.
easier to understand their view of the purposes of education and of the optimal operational strategies to accomplish such goals. Their desire for evaluative information or data on the operation of the system is based on their need to measure the discrepancy between reality and the desired norm, in order to engage in the appropriate activities to maintain the uniform and stable nature of the system as they see it. This function of reported information is entirely different from that served in the adaptive system. Corrective feedback is a term often employed in reference to the type of evaluative information needed by the adaptive system. Such information from the environment or from the system itself will be used to modify the initial system. This characteristic of adaptation or self-correction of the system is the key to the continued life of the system itself. Corrective feedback is therefore recognized as an essential element in a viable system.

Our present educational system cannot validly claim to have integrity as an adaptive, viable, social system, for it does not have the necessary and appropriate built-in mechanisms to provide adequate information for the self-correction process. Frymier develops this concept in supporting the position that "as a social system, education seems unable to process pertinent data so that appropriate
and effective changes can be assured."\textsuperscript{150} He bases this position on a logical analysis of five theoretical dimensions of a system: Goal, Domain, Function, Confidence, and Record.\textsuperscript{151}

The educational enterprise is particularly lacking in the confidence dimension. When educators receive criticism or other forms of corrective feedback, they tend to react in one of two ways: they either deal with the feedback or ignore it. A viable system provides a mechanism for testing the validity of criticism. If found valid, the system is required to pay attention to that feedback; only if found invalid can the system reject the criticism. In other words, those systems that have purposeful mechanisms to gather, process, and validate feedback, and that guarantee the use of valid feedback for correction of the system, can function with optimal integrity as viable systems.\textsuperscript{152}

If the educational institution within our society is unable to process self-corrective data, and if consensus cannot be reached as to the central purposes and goals of

\begin{footnotesize}

\textsuperscript{150}Frymier, Fostering Educational Change, p. 46.

\textsuperscript{151}\textit{Ibid.}, pp. 47-53.

\textsuperscript{152}\textit{Ibid.}, pp. 62-83.
\end{footnotesize}
either society or the educative process, education as a whole indeed faces a formidable barrier.

The Question of Educational Theory: The Nature of Theory and Its Relationship to Practice

The literature of education and related fields contains a vast number of references to the nature of theory and to the relationship of theory and application or practice. In order to try to understand what is implied in the concept of theory and its relation to the "real" world, it is necessary to organize the tremendous amount of data in some manner. In this case, three particular generalizations will provide a useful framework: (1) theory can be defined; (2) theory does serve a purpose; and (3) most educators agree that there is some relationship between theory and practice. In order to try to optimize this relationship, each of the three generalizations will be examined.

Theory Defined

From a synthesis of the appropriate literature, it is possible to state that the central characteristics or traits of a theory are these:

153 For example, see: George A. Beauchamp, Curriculum Theory (2nd ed.; Wilmette, Ill.: Kagg Press, 1968), pp. 16-29; N. L. Gage, Handbook of Research on Teaching (Chicago: Rand McNally and Co., 1963), pp. 67-72; Fred N. Kerlinger,
1. It is a unifying phenomenon.
2. It is a set of related statements or assumptions.
3. The assumptions are supported in some manner, as by philosophical assumptions or scientific principles.
4. The assumptions usually deal with abstract elements of concrete situations.
5. Because of this abstract quality, a theory differs from a law in that it is not directly testable.

Since nearly all serious writers on theory have defined theory in one form or another, it would be reasonable to expect to find nearly as many idiosyncratic definitions as there are serious works. Obviously these definitions would vary greatly in degree of complexity and inclusiveness. Some are more applicable to educational interpretation than others. For the reader interested in an exhaustive inventory of meanings for the term "theory," Boring has develop a schema based on the degree to which theory can be operationally interpreted. As a result of such a study, various theoretical forms can be placed on a continuum ranging from a totally rational or mystically

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154 Beauchamp, Curriculum Theory, p. 10.

base construct to an operational definition stated in terms of related syntax and structure.

From a more pragmatic study in the form of a country-wide survey of urban superintendents, Griffiths also found wide variation in the meaning given to the concept of theory. He reports that "some thought theory was the opposite of practical, thereby equating theory with impractical. Others had the interesting notion that if a source was poor it was theoretical... The most common use of the concept 'theory' was a synonym for speculation, supposition, or the ideal." 156

The problem of utility enters the picture when many definitions, especially from educators, associate theory with the unnecessary and the impractical, and therefore with the irrelevant. Perhaps Bruner's distinction between social relevance and personal relevance 157 would be appropriate for students of education and practitioners who are concerned about this question in the pursuit of their educational activities. When an activity or idea seems to have little immediate application, too often it is dis-


carded without further consideration. Although the concept, idea, or theory might have little to do with one's personal life at the moment, and therefore lack personal relevance, that same item might have significant social relevance, which would more than outweigh the immediate lack of personal meaning. It is just such an idea that makes people jokingly caution one another to "not throw out the baby with the bathwater!" Too often crucial concepts are eliminated merely because the general context seems meaningless at the time.

The Purpose of Theory

As in the search for generalizable traits that are characteristic of theory, there is an equal degree of diversity concerning stated purposes of theory. One reason may be that many definitions of theory are made in terms of function. Among the recognized purposes are the following:

1. To assist in the understanding of the phenomenon being considered
2. To generate a heuristic frame of reference for further inquiry regarding the phenomenon
3. To assist in the investigation of previously recognized problems
4. To increase the opportunity to become aware of new problems and areas of concern
5. To describe, explain, predict, and control the phenomenon under consideration
6. To serve as a basis for hypotheses that can be tested
Griffiths sums up a number of the variations when he identifies a useful theory as one which serves as a guide to action, to the collection of facts, or to new knowledge, and as an explanation of the nature of the phenomenon.\textsuperscript{158} With a different emphasis Beauchamp says that the "primary functions of theories are description, prediction, and explanation."\textsuperscript{159}

For more than half a century there has been confusion regarding theories that apply to education; many seem to be "running at cross-purposes." The diversity and contrariness of opinion lead many to the conclusion that "there are few settled standards in education, no real pedagogical science, and that our well meant efforts... are not founded on broad based principles."\textsuperscript{160} This long-term lack of consensus regarding theoretical statements continues to plague both theoreticians, as designers of theory, and practitioners, as potential users of theory. In essence, however, this is more a relational problem than a functional concern.

Returning to the consideration of the function of theory, it is helpful to distinguish between scientific and


\textsuperscript{159}Beauchamp, Curriculum Theory, p. 28.

\textsuperscript{160}Charles A. McMurry, Conflicting Principles in Teaching (Boston: Houghton Mifflin Co., 1914), pp. 4-7.
educational theory. Many of the techniques and methodolo-
gies for testing theory-based hypotheses can be similar for
both types. The critical distinction is in the nature of
the referent. In one type of theory, the referent is a
"person-being-educated" while in the other it is a "thing-
being-studied or manipulated."\(^{161}\)

Within the realm of educational theory, Black has
attempted to clarify function and decrease contradiction
by developing a four-fold classification scheme.\(^{162}\) The
identification of categories eliminates the extreme paradox
of radically conflicting theories; the various theories are
viewed as subsets within a context framed by a particular
philosophical stance. Black's major categories range
from "extreme traditionalism" at one pole through "learning-
product" theory and "learning-process" theory to "extreme
progressivism" at the other pole.\(^{163}\)

Relationship of Theory to Practice

The theoretician has long been known as one who
extends his quest for fundamental, comprehensive, and

\(^{161}\) D. B. Gowan, "Can Educational Theory Guide Prac-
tice?" Educational Leadership, Vol. 13 (January, 1963),

\(^{162}\) Hugh C. Black, "A Four-fold Classification of
Educational Theories," Educational Leadership, Vol. 16

\(^{163}\) Ibid., p. 286.
unifying principles beyond the range of either common sense or specific experimental data. Once he has so extended himself, has generated hypotheses that have been tested with positive results, and has thus added to man's body of knowledge, the question of his obligation to translate the meaning of his new knowledge into practice becomes very real. Kelley is outspoken in his belief that the philosopher has as a specific function the task of sharing his knowledge.\textsuperscript{164} The greatest problems occur when people practice in disregard of data, or when people have data but do not project them in action. Not all people agree with Kelley, of course.

In the educational research field this dilemma has been intensified by the generous infusion of federal and foundation monies. For example during the decade 1955 to 1965 there was a considerable increase in research activity, much of it a direct result of increased funding. In many areas this was accompanied by a general assumption that such increased funding would mean increased applicability of research findings; that research would be translated into improved practice. Rather than finding a proportional increase in application of research, however, an increased hostility developed between the scholar and

the scientist on the one hand and the practitioner on the other. The major effect was to accentuate "the deplorable lack of communications between the two camps." 165

Different scholars and researchers attach varying degrees of importance to this lack of communication and resulting lack of application. Reactions can be roughly categorized under four headings: (1) theory and practice are very similar; (2) theory is a guide to practice; (3) theory and practice have a reciprocal relationship; and (4) theory is so different that there is virtually no relationship.

Hansen reacts to the question of relationship so as to imply that it is artificial and unnecessary. He feels that the theoretical and the practical are not really different in kind or in quality; they are simply different in scope. "The practical, the short-range, the small-scale, daily problems. . . . are really a part of the larger, theoretical, long-range educational aims." 166 This view is supportive of Bayles who also reacts to the dichotomizing of theory and practice. It is his "conviction that neither


good theory nor good practice can long be achieved by itself, without essentially simultaneous consideration of the other... they become one."  

A variation of this view of similarity is provided by Soltis in his analysis of the role of the teacher. He submits that theory and practice merge, that theoretical considerations become practical, in the heads of teachers as they prepare lessons, laying out objectives and planning activities.  

A second perspective is taken by those who propose that theory functions as a guide to practice. At the turn of the century Dewey advocated a strong theoretical base for educators, for by so internalizing "scholarship" it later becomes the guide to practice as "method." Brubacher recalls the view of Aristotle as he advocates "what we need is not more practical remedies but some theory to guide practice." More recently Rigge  

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spoke out strongly on the guiding function of theory:

Everything a teacher does is colored by the psychological theory he holds. Consequently a teacher who does not make use of a systematic body of theory in his day-by-day decisions is behaving blindly. No long-range purpose or plan, no rationale is observable in his teaching. A teacher without a strong theoretical orientation inescapably makes little more than busywork assignments.171

From a practical point of view Newsome states that what is theoretically possible is not always practical, useful, or desirable. Theory can provide useful criteria or conceptual frames of reference, but should always be tempered carefully with judgment.172 To reinforce this need for reliance on judgment in using theory, Maccia states the need for adjustment of a generalizable theory before making an application to a unique case. She states, "theory has application with adjustment to all instances of a kind, instead of application without adjustment to a given instance."173 Thus theory is viewed as the broad heuristic conceptualization to guide, not to


prescribe, the specific actions of the educational participant.

The reciprocal nature of the relationship is the key to the third perspective. The two previous views were one-way, or linear, in nature. The reciprocal view implies a two-way transaction: theory functions to direct practice or to explain the nature of practice, while conversely, the needed data for theory are derived from practice. Parker and his associates also advance the transactional relationship. They state that the test of adequate theory is whether or not it can be put into practice, while the test of practice is whether or not it is based on sound theory. 174 This position is so well accepted by many educators that it was used as promotional material for Bruner's Toward A Theory of Instruction; the publishers printed on the jacket that "the theories presented are anchored in practice, in the empirical research from which they are derived, and in the practical application to which they can be put." 175 This view of a reciprocal relationship between theory and practice is well summarized in Getzels' paraphrased version of the Kantian statement:


"theories without practices like maps without routes may be empty, but practices without theories like routes without maps are blind."\(^{176}\)

The fourth group of reactions are either neutral or negative in terms of relationship, reciprocal or otherwise. Adler's view is that the function of theory is to describe and explain facts whereas the function of practice is to decide what to do as a result of the facts.\(^{177}\) Newsome says that theory has neither direct reference to nor formal implications for practice. "Reference to practice must be made by way of directions or prescriptions for practitioners. Such references relate to behavior and manner of action, and, hence are moral references."\(^{178}\)

Reports of opinion from the field show that practitioners often hold a negative view of theory, not seeing any valid connection between theory and practice. Brubacher tells us that many educators "rail against theory

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\(^{178}\) Newsome, "In What Sense is Theory a Guide to Practice in Education?" p. 38.
as remote, vague, and idealistic."\(^{179}\) Pellegrin notes that for many practitioners the term "theory" is a synonym for "wild speculation" and an antonym for "practicality."\(^{180}\)

Schwab comments on the attitude of the typical school administrator who "takes the position that practical and theoretical knowledge are noncommunicating species and that only the practical matters; 'theoretical' becomes an epithet."\(^{181}\) When not declared completely useless, theory is seen as at least confusing. Such confusion is the reason given by Skinner for his well-known antitheoretical position. Gowan elaborates on this point when he comments on Skinner's assertion that the science of behavior needs no theories, that theories of learning are not necessary; "it is enough to note that there is a problem concerning the nature of theory, the functions of theory and, in general, what we mean by theory. So long as there is a general


confusion about the meaning of the term 'theory' there will be confusion about theories as a guide to educational practice. As a reply, observation on the topic is made by Gage. He thinks that it isn't a question of whether or not a person uses theory, but a question as to the degree of his awareness of the theory he uses.

Theory can be considered a symbolic representation of reality. It can be said to be conceived of by the theoretician and developed through cognitive processes. In contrast, practice can be equated with reality, for it is action or behavior in an actual situation. The nature and domain of theory can therefore be separated from that of practice. This separation, however, does not need to imply a lack of relationship. Theory can provide the foundation and rationale for practice. Practice based on a theoretical rationale tends to be consistent. Practice can provide the empirical and experimental data from which concepts, generalizations, and eventually theoretical constructs are generated.

Critical need for sound educational theorizing is becoming increasingly acknowledged. In just three years (1965-1968), many dozens of publications were addressed to

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183 Gage, *Handbook of Research on Teaching*, p. 94.
this issue. In addition to conceptualization of a general nature, specific work regarding the phenomena of curriculum, instruction, and teaching is needed, as are greater understandings, predictability, and controls. Variables need to be identified and relationships established; new knowledge must be derived from the testing of hypotheses. In addition to the acquisition of new theoretically based knowledge, ways are needed to negate outmoded or ineffective theory, to smooth the transition when altering theoretical bases, and to decrease the popularity of changing just to add to one's numerical count of current innovations.

Operational horizons must be expanded and explained by new theory in order to increase the options open to the practitioner. Only in this manner will he be likely to achieve the goals to which he aspires. Once theory expands the options, it behooves educators to take action. Administrators and teachers alike should identify the theoretical stance upon which they operate in daily activities and decision-making tasks. Specific methods should be

184 For example, see: James B. Macdonald, ed., Theories of Instruction (Washington, D.C.: Association for Supervision and Curriculum Development, 1965); Elizabeth S. Maccia and the work of the Educational Theory Center, 1965; Jerome Bruner, Toward a Theory of Instruction; George A. Beauchamp, Curriculum Theory.
adopted for continual access to and explication of newly developed theoretical propositions. Procedures should be formulated to facilitate systematic consideration of such new propositions prior to deliberate utilization or rejection.

The need is clear. The raw data are available. The impact is negligible.

The Question of Values: The Shift from Public to Private Value Structure

The whole domain known as "values" is tightly interwoven with concepts regarding contemporary culture. Even a casual observer can see evidence that a fundamental revision of value structures and moral standards is in process. Historians find evidence of such change dating back through the centuries. The early twentieth century had its share of evidence symbolized by such images as speakeasies, raccoon coats, "Bonnie and Clyde" and the "Teapot Dome."

By the 1970's, something different began to happen. There was a shift not only in external moral structures, but in an increased awareness of the need for inner personal values. Further examination of this shift from public to private values may be of assistance to the curricularist as he works in a society functioning in a process world.
Public Values

The history of mankind has evidenced many changes in allegiance to philosophical commitments toward life and knowledge. Rationalism was based on the abstract, the cognitive approach to problems; the empirical approach, from the time of Bacon, has relied on sense experiences, the actual knowing by trying, feeling, and sensing; whereas pragmatism has tended to be concerned with the social and moral consequences of one's actions. All of these points of view lead to public or "outside one's self" value positions. In the historical context these perspectives are seen in such terms as the democratic tradition, the liberal tradition, or the scientific tradition. The experiences one had relative to these philosophical views were common among men, hence public. 185

Prior to the mid-century mark, the dominant public values in American culture have been identified by Getzels as either sacred or secular. 186 The sacred are the "state-occasion" variety of abstract values such as democracy, individualism, equality, and human perfectability. 187

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185 Conversation with James K. Duncan, June, 1970.


secular values are the ones people lived by in their daily lives. Analysis of the everyday values termed secular indicates two subgroupings; the traditional values associated with the work-success ethic, personal autonomy, and Puritan morality; 188 and the transition values, studied by Reisman and Spindler, 189 which are characterized by present-time orientation, conformity, and moral relativity. 190

Getzels recognizes that both traditional and emerging values are not exclusively characteristic of any one segment of the population for youth and adults alike differ sharply along the traditional-emerging continuum. 191 The resulting discord continues to cause conflict between people who differ in perspective.

Private Values

Add to this picture of differing views a new set of values—one that is not just emerging from, or in transition from the previously held ones, but a set built on an

188 Ibid., pp. 27-28.


191 Ibid., p. 31.
entirely new frame of reference, a new concept of the nature of man and man's relationship to his world.

It would be difficult to determine exactly when an awareness of this reconceptualization of values began, but certainly it was heightened by the tempo of national involvement in Southeast Asia and by the Apollo 11 epic moon landing. The discrepancy between public professed values and what actually happens in the real world is, to some, an unbridgeable and unforgivable chasm. For these persons, the public values of the present are neither sufficient nor appropriate if one truly believes in the personal worth of man.

This position should not be construed to mean that public values do not, or should not, hold a very important place in the societal framework. The disjuncture comes when public values are not congruent with what "ought" to be from a humanitarian point of view or from the emerging frame of reference.

It is recognized that professions need their codes of ethics, just as religions need their great laws, and political parties need their platforms—their shared common commitments. It is important to note, however, that because they are shared and public in the sense of being common to many, they are also impersonal. In an era known for its mechanization of people as components in the system, there is a critical need for values that are personal—
are one's very own. No longer is it altogether satisfying, or even possible perhaps, to look only to the public or shared structure for value definitions and for the prescriptions of approved behaviors to coincide with those definitions. The affective domain is taking precedence over the cognitive domain for many who are discontent with the discrepancies and the signs they interpret as hypocrisies that they see around them.

For those who criticize personal values as being subjective at a time when they feel at least a degree of objectivity is needed, it is helpful to make a distinction between personal and subjective, and between that which is fact and therefore assumed objective. A search of the literature provides several clues to assist in the clarification of these distinctions. For example, from Polanyi's work related to the personal domain of knowledge, it can be determined that a commitment can be both personal and objective when its elements are joined from "within," as when a personal passion becomes a confident utterance based on accredited facts. Only when it is not a commitment, when it is analyzed from the outside, does it become subjective; only then it is a belief, stated as a declaratory sentence, based on alleged facts.\footnote{Polanyi, \textit{Personal Knowledge}, p. 303.}
Other clues can be gained from the field of perceptual awareness. With the magnitude of evidence available on the topic of perception, there seems little doubt that even the most "objective" fact is screened by personal perception. For examples of this point of view, one might follow the development of thought pertaining to the physical organism as a vehicle of perception, or to the manner in which time and opportunity change perception, as examined by Combs and Snygg.193

One of man's unique characteristics is his capacity for organizing information in large and complex images as a result of his perceptions. According to Boulding, man's image has ten dimensions plus the dynamic processes by which the various dimensions are maintained and integrated. His composite image (subjective knowledge) influences his behavior.194 As individuals, "we do not perceive our sense data raw, they are mediated through a highly learned process of interpretation and acceptance."195 Through this process the data become internalized as a part of the image. Thus perceptions become the bases for "facts."


This finding certainly tends to blur the often artificial distinction between subjectivity and objectivity.

Few who reject public values because of their inconsistency with inner personal values spend time trying to justify their new perspective. For those who have not yet experienced the need for a private, affective set of values, perhaps these observations may cause at least a momentary delay in denouncement of those who profess a new awareness, perhaps even encouraging a new effort at communication.

**The Question of Substantive Content: The Utilization of Knowledge**

The nature of knowledge and the nature of knowing have long been of prime interest to the educator concerned with curriculum. In addition to the learner and society, knowledge has traditionally been accepted as one of the major referents for curricularists.

From the turn of the century the domain of knowledge has influenced thinking about curriculum. The American Herbartians assumed knowledge to be essentially external and structured by universal ideals. Thus they said it was static and stable, just waiting to be actively perceived and assimilated by the learner. Also assuming the static quality of knowledge were Bobbitt and Charters, who considered the universal source of knowledge to be social
utility rather than a universal framework of ideals. Dewey's view of knowledge differed radically, for he considered it to be dynamic, based on its serving man's purposes. He conceived of knowledge as continually evolving; experimentation and thought were ways of arriving at new knowledge.196

Debates, arguments, and conflicts are not new to this area of the curricular phenomenon. The psychologists who supported the mental discipline theory of learning gave additional impetus to those who felt that learning required cultivation of mental faculties. This view differed from the natural unfoldment theories proposed by Rousseau, Froebel, and others of the progressivist school of thought. Still another psychological view that has influenced the knowledge-knowing domain has been that of the behaviorists who have relied on conditioning to elicit desired response.

Recognizing that the concern encompassed by the term "knowledge" continues to be of importance to the curricularist, selected aspects in the form of prior questions will be examined. Sheffler poses several types of questions appropriate to an analysis of knowledge;197 three are particularly useful to the development of curriculum:

196 For further details on historical perspective, see Mary Louise Seguel, The Curriculum Field: Its Formative Years (New York: Teachers College Press, 1966), pp. 177-84.

197 Israel Scheffler, Conditions of Knowledge (Glenview, Ill.: Scott, Foresman and Co., 1965), p. 5.
1. What is knowledge? (the epistemological question)
2. How is it valued? (the evaluative question)
3. How is it used? (the pedagogical question)

An Epistemological Question: What Is Knowledge?

The complexity of this question should not be underestimated, for it covers a range of considerations from everyday familiarity with persons, places, and things to the philosophical positions of rationalism, empiricism, and pragmatism. In addition, it could also include the whole range of considerations embodied by the questions and concepts related to Universal Truth, truth, facts, and matters of faith.

In the educational context, the term "knowledge" often incorporates the ideas of accumulated skills and lore related to environmental elements. Intellectual arts and experiences have intrinsic values in and of themselves; in other words, knowledge is the content of our intellectual heritage. Another perspective identifies knowledge as a product of learning; a "residue" remaining in the form of memory (mixed with attitudes, habits, and feelings) after an experience is over.

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198 Ibid., p. 2.

199 Kelley and Rasey, Education and the Nature of Man, p. 37.
Polanyi's identification of three dimensions of the knowledge domain can help in the consideration of this epistemological question. From a scientist-philosopher's point of view, he has acknowledged the three dimensions to be (1) scientific knowledge, the result of the traditional pursuit of scientific inquiry; (2) personal knowledge, that which dwells "within" and leads to declarations of belief and personal commitment; and (3) tacit knowledge, the particulars that one cannot itemize and to which one attends only for their meaning in some other sphere.200

Many educators continue to pursue questions relating to knowledge; however, because of the applied nature of the educative field, much of the most relevant work is done in the areas of evaluative and pedagogical inquiry rather than epistemological scholarship.

An Evaluative Question:
What knowledge is of most worth?

In addressing oneself to the question of "most worth," several subquestions need prior considerations:
- What is an accepted concept of an "educated" person?
- Is all knowledge of the same worth to all learners?
- What will be the key problems associated with un-learning, for what is of most worth today could be invalid tomorrow?

- Is what is not yet known of worth?

- How is worth related to the service or utility of knowledge?

- How does worth relate to attitudes and skills required by the emerging society or needed by persons in order to cope with such a society?

- How does worth relate to the learner's own personal need and satisfaction?

Evaluation of worth implies a hierarchy or priority rating. Over the years a number of different organizational formats have been employed by curriculum developers. Some are based on the priorities of objectives or goals of education, others on the hierarchy of types and levels of knowledge components.

One of the well-known early statements of priorities was formulated by a Commission in 1918 and published as the "Seven Cardinal Principles of Secondary Education." This statement broadened the scope of education beyond the acquisition of factual information to include the physical, emotional, vocational, and social development of the student. In 1938, the Educational Policies Commission of the National Education Association drew up a document stating the objectives of self-realization, economic efficiency, and

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civic responsibility.  

In the next several decades much curriculum activity centered around the development of lists of identified personal and social problems which could serve to guide the assignment of priorities to educative content. Core programs were seen by some as a possible solution to the dilemma. A contrasting view was held by those educators who saw their role as that of maintaining the integrity of knowledge. They saw the responsibility of the school to be the development of the intellect, and believed that the school "cannot shirk without disaster, and may not sacrifice to any other aim however worthy, its responsibility for providing intellectual training." Intellectual training, of course, can be defined in many ways. Dewey considered any subject as being intellectual if it had the "power to start and direct significant inquiry and reflection." Disciplined inquiry is an important priority in many lists of responsibilities. To the requirement that content be from fields amenable to disciplined inquiry,

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204 John Dewey, How We Think (Boston: D. C. Heath, 1933), pp. 46-47.
Phenix adds the requirement that six realms of meaning be emphasized within the knowledge domains: symbolics, empirics, esthetics, synnoetics, ethics, and synoptics.  

Broudy, Smith, and Burnett note that in the past the "worth" of instructional content was often assessed on the basis of its social significance and its practical utility (the frequency and immediacy of its use). They suggest that it is more appropriate to have the logical scope of ideas as the primary consideration for selection. This leads to the notion that "there is in a rough sense a hierarchy of knowledge such that some concepts and principles explain far more than other concepts and principles, and, in some cases, the less powerful concepts and principles can be derived from the more powerful ones."

The general concepts of a field and the logical relations within the field enable an individual to handle a wide range of data. This powerful notion has been basic to many of the curriculum programs of the 1960's which stressed the structure of the disciplines as being of "most worth."

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207 Ibid., pp. 82-83.
The questions and answers related to the selection of areas of disciplined inquiry and specific methods of transmission of knowledge have resulted in little agreement within the ranks of either the theoreticians or the practitioners. Chase summarizes a discussion of this general topic with the statement that "in a sense the question of what knowledge is of most worth is unanswerable except with reference to specified individuals under specified conditions, which itself is a position pointing to individualized instruction or to a range of educational alternatives open to individual choice." The use of educational alternatives is certainly a pedagogical topic, as are other concerns related to the ways and means of utilizing knowledge in the educative process.

A Pedagogical Question: What is the Function of Knowledge?

In the educational arena, the primary function of knowledge is in direct relation to responses given to the evaluative question of "most worth." In Broudy's analysis of the views of Plato and Socrates, he concludes that they both realized with utmost clarity that (a) without a base of conditioned disposition (what to hate and what to love) verbal approaches to value

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education were useless, (b) that one had better be sure of one's rationale for a value pattern before imposing it on the unsuspecting young, and (c) that without the control of all the value-forming factors in the environment, formal training in value education was bound to limp.

Contemporary educators are still struggling with this value problem in relation to the function of knowledge. In spite of the fact that there is little agreement as to exactly what knowledge should be transmitted, it is possible to submit a variety of possible uses for knowledge: for example, knowledge provides explanation, gives guidance, develops feelings, speeds adjustment, and assists in problem solving. Tyler speaks to the first of these when he says:

Knowledge can be used in several ways. Some knowledge helps in developing understanding so that we can now explain things we could not explain before. Some is useful for guiding action, such as knowledge of technology that tells how to do things. Some knowledge is useful in developing feelings so that we are aided in getting new satisfactions and meanings out of various kinds of esthetic experiences.

Kelley and Rasey develop the points related to adjustment and problem solving:

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While knowledge remains subjective, experiences which acquaint the young with the developments to date give them an advantage over those who have gone before. By using the educative process it is possible that man may short-cut the slow process of adjustment... Such education calls for the use of that which is usable and the rejection of that which does not serve... It will hold that knowledge is not power until it can be brought to bear upon the solution of the problem of the future.211

In addressing themselves to the reassessment of the uses of schooling Broudy, Smith, and Burnett describe four typical uses of knowledge: replicative, associative, applicative, and interpretive.212

The point of making such distinctions is not to multiply terms or to make the obvious seem esoteric and learned. The justification for distinctions among concepts and terms is that they denote processes that are more or less independent of each other or that cannot be substituted for each other. If such differences exist, the curriculum designer should be alerted, lest his efforts produce effects he did not anticipate and fail to produce those he had a right to expect.213

For example, the associative use of knowledge assists in recalling information from memory by means of cues. The replicative use of knowledge allows for the factual storage-retrieval component required for concept development

211 Kelley and Rasey, Education and the Nature of Man, p. 15.

212 Broudy, Smith, and Burnett, Democracy and Excellence, pp. 45-55.

213 Ibid., p. 45.
and problem solving. With greater flexibility than either the associative or replicative use, the applicative use of knowledge allows one to solve problems by seeking some resemblance to familiar problems and applying the known to the unknown. The fourth use of knowledge is related to the applicative use, but is less specific, for interpretation is the basis for perceiving, understanding, and feeling, "primarily for orientation and perspective rather than for action and problem solving." 214

Each of the functions described represents a use of knowledge seen as a means to an end, rather than the acquisition of knowledge itself seen as the ultimate goal. Few today still take the approach that the acquisition of knowledge rather than the use of knowledge is foremost.

Whatever the primary referent—the discipline, the social context, or the individual—nearly all educational designs "profess to achieve the same over-all general objectives; all involve also a content, a process, and children." 215

A preoccupation with subject matter, however, can lead directly to specific problems related to generalizing, cognitive processes, logical structures, transfer of

214 Ibid., p. 55.

training, mental discipline, readiness, repetition, motivation, reinforcement, retention, and the ability of the individual to learn.  

To integrate the acquisition of knowledge with the use of knowledge, Cassidy has developed three sets of operations designed to encourage the utilization of acquired knowledge:

- analysis -- accumulating data, making distinctions, dividing, identifying variables, classifying, making collections

- synthesis -- seeking connections between data and among theories; deriving trends, hypotheses, generalizations; deducing, inducing; producing something new

- reduction to practice--using what has been learned on a particular occasion in a specific setting, testing the validity of the results of analysis and synthesis

Parker distinguishes between content learning (acquisition) and process learning (utilization).

Where primary emphasis is upon content, the learner ordinarily functions in a passive mode. He conditions himself to submit to authority--he accepts the proffered gospel--and he neither selects his conclusions nor assesses their validity. . . .

Where the stress is upon process, the assimilation of knowledge is not derogated, but greater importance is attached to the methods of its acquisition and to its subsequent utilization. A discrimination must therefore be made between knowing something and

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216 Ibid., p. 6.

knowing what it is good for. Knowledge becomes the vehicle rather than the destination.\(^{218}\)

The Question of the Participant: The Changing Role

For what purpose was I born? I don't see, To speak words that no one will listen to No matter how loud I shout them? To throw up dates, and events just as I recorded them and be pronounced a genius? To sit through school day after day and be referred to as a "Good child"? To hear things that I shouldn't and then be instructed to forget?

For what reason am I living? to see man destroy each other, and we listen to them preach godliness and good-will? To take things as they are and never question? To live a clean life, only to rot away in your grave? To have things your soul desires, prohibited? To be told God is good, but disregard the fact that the world--his so-called "creation" is bad.

But these are thoughts I must not think if I am to survive.\(^{219}\)

Tradition has taught this fourteen-year old author that survival within the system limits, even prohibits, the freedom to question. Such tradition is reinforced by such conventional hierarchies as are implicit in the terms


"teacher" and "student." Even the dictionary definition reinforces the dilemma; to teach is to instruct, to impart knowledge and skill, to cause to know, or to seek to make known and accepted. All of these are indicative of the superimposition of one person's set of goals and values on those of another.

Our history has been filled with views of man that have perpetuated the need for one person to determine what another person should know. If survival was only for the fittest, how could each man be prepared to fit? If competition was the method to win, how could each person become a successful competitor?

It is only as philosophers, psychologists, and educators have begun to reconceptualize the view of man and reevaluate his personal worth that such concerns have permeated the educational arena and literally demanded a reassessment of the roles and functions of educational participants. The need for this reassessment and the operationalization of its implications has been hastened by the increasing rate of societal change. In order to meet the changing conditions of an emerging society, new patterns leading to new uses of new freedoms must also emerge.

Kelley and Rasey identify several new conceptual elements needed for new patterning by contemporary man as he prepares for the future, as he prepares for "a way of life which will be tenable and more free from anxiety than
the one he now knows." These new conceptualizations relate to time, distance, philosophy as the growing edge of creativity, personal relationships to others in a world fast limiting the possibility of isolation, positive attitudes toward the unknown, wholeness, and freedom. Other authors reinforce these ideas with similar concepts and principles which seem to be required for people to live adequately within our rapidly changing world: spatial transcendence, temporal transcendence, integrity of selfhood, and thinking-feeling cohesion.

Few would question the rapidity of change in the technological sphere of human activity, or even in the social-cultural realm. In defending the need for new conceptual elements and patterning of human behavior, Kelley and Rasey observe that change is universal, and yet people continue to act as if it were not. Stability and permanence are often equated with security, but if our era is recognized as one of transcendence, a reexamination of fact and foundation is required; security must be found in the

220 Kelley and Rasey, Education and the Nature of Man, p. 9.

221 Ibid., pp. 9-15.

222 For example, see Louise M. Berman, New Priorities in the Curriculum (Columbus, Ohio: Charles E. Merrill Publishing Co., 1968), pp. 2-8.
confident coping with process and movement.\textsuperscript{223}

There seems to be general acceptance of the concept of the mutual relationship between a person and his environment; man both influences and is influenced by his surroundings. His experiences are unique because of the individual nature of his perceptions. Perceptions influence behaviors; people behave not according to the facts as others see them or as they are expected to see them, but according to the facts as they themselves see them.\textsuperscript{224} All schools of thought might not agree with these ideas, which are strongly supported by phenomenological psychologists. However, these views are certainly supportive of emerging subcultural demands for personal involvement as human beings seek a share in determining their own destiny.

The Association for Supervision and Curriculum Development Yearbook Committee of 1962 solicited papers from four psychologists representative of this phenomenological or interactive school of thought. Combs, Kelley, Maslow, and Rogers addressed themselves to the topic of the relationships between perceiving, behaving, and becoming.\textsuperscript{225} Four

\textsuperscript{223} Kelley and Rasey, \textit{Education and the Nature of Man}, pp. 17-21.

\textsuperscript{224} Combs and Snygg, \textit{Individual Behavior}, pp. 16-21.

basic principles, which underlie their work and support the view of man as purposive and dynamic, are implicit in the reconceptualization of roles for educational participants who function in a mutually supportive manner:

- behaving and learning are products of perceiving
- behavior exists in and can therefore be dealt with in the present
- all people everywhere have a basic drive toward health and actualization
- much of a person's behavior is the result of his conception of himself.226

If these principles are accepted, it is evident that an effective educational system must deal actively with the area of personal meaning; "personal meanings become the stuff of learning, the material with which we must work. . . . meanings lie inside people and cannot be directly manipulated and controlled."227

The works of Piaget, Bruner, Hunt, Gordon, and others have approached the development of man from a different but complementary point of view. They replaced the notions of predetermined development with the concept of environmentally modifiable development. Man is seen as an open-energy, self-organizing system characterized by development modifiable in both rate and sequence and by potential and uniqueness created from organism-environment transactions.228

226Ibid., p. 67.
227Ibid., pp. 68-69.
From a review of many recent studies and investigations into the nature of man, it is reasonable to assume that man is purposeful, dynamic, in search of adequacy, and in need of actualization. These generalizations would apply to all persons; relative to this study, they apply particularly to participants in the educational enterprise.

The "Student" as Participant

Those persons traditionally in the student role are often perceived as powerless and passive recipients of another person's wisdom. Many of these students have begun to sense a new awareness of their self-perceived dilemma. Student sit-ins, boycotts, and strikes are noticeable ways of calling attention to their problem. Educators, concerned with the need to help these students attain sufficient status and recognition to become worthy participants in the determination of their education, are developing and testing options that will allow the learner to be involved in planning procedures, in identifying problem areas, in generating innovative ideas, and in

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evaluating methods, materials, and substantive content.\textsuperscript{230} This type of involvement implies a process of psychological participation through which the person feels that he is active and important, as contrasted with objective participation which can be measured by the social scientist or statistician but may not be felt by the person himself.\textsuperscript{231}

It is considered ironic that

American educators have long extolled the virtues of educating the free man in ways addressed to his unique, individual needs. There is no lack of desire or will here. A generation ago . . . the child study movement exemplified an approach to truly informed diagnosis of the individual's specific abilities, needs, and readiness. . . . Yet, to date, the effect of teaching practices has been so minimal as to be almost untraceable, it appears.\textsuperscript{232}

Crary suggests that part of the traditional dilemma may be a semantic problem:

The treasures of knowledge have been customarily called 'the subjects.' This miscalling is not a simple error in nomenclature. It imposes a conceptual distortion that renders education, human learning, next to impossible. Its first derivative is the notion that 'the

\textsuperscript{230}John W. Loughary, "Educating for Humaneness in the Technological Society," in To Nurture Humaneness, p. 85.


subjects' are to be taught. . . . The subjects of education are the students. If attempts at education are addressed in any other direction, they are focused toward futility.233

If students are to be honestly considered as worthy persons, entitled to a voice in their present life as well as in their preparation for the future, a reconceptualization of their role is necessary. Rhetoric and philosophy are not enough, the reconceptualization must be operationalized. The new role must be characterized by the development of coping behaviors, planning and evaluational skills, heuristic thinking, and affective awareness, as well as the acquisition of cognitive data and communicative skills with which to function effectively.

The "Teacher" as Participant

Much is also being written about the changing role of the teacher. Teachers, as representatives of a social institution resistant to change, are often slow to want to alter their traditional role, status, or function. Yet they are continually faced with the knowledge that contemporary society is in a state of transition, and that change itself is inevitable for survival. As the goals of education become the facilitation of change and learning234


the teacher will need new pedagogical skills. Rather than the ability to dispense information, he will need the ability to facilitate the learning event through providing an atmosphere of freedom, resources for inquiry and knowledge utilization, and guidance in diagnostic and prescriptive processes. Essential to the facilitating role will be the acknowledgment of the essential humanity of learners; a sensitivity to the fears, anxieties, and joys experienced in the learning process; and a reawakening of those aspects of self which were carefully conditioned into unawareness during the maturing process.235

As a responsible decision maker, the "teacher" will need to work with other educational participants in the adaptation of curriculum designs and packages. Diagnostic skills will be needed in order that he

become thoroughly acquainted with individuals, their cognitive styles, needs, interests, and potential. The teacher surveys, analyzes, diagnoses, communicates, arranges learning experiences, monitors, and evaluates in the case of each student. He observes dysfunctions in the implementation components and calls attention to them in the form of feedback to system control for correction. He raises problems pertaining to both maintenance and dynamic aspects of curriculum.236


Known answers, the traditional teacher's stock-in-trade, are useful to further knowing, but are certainly the smaller part of life; the potential of the unknown is far greater. As learners leave the formal school setting they will live in a changing environment rather than a static, predictable environment. Models of the past can serve a historical function, but are inadequate as patterns for action. The labels of "teacher" and "student" become less appropriate as one looks to the needs of future generations of learners, for each role designation should imply a learning situation, with each participant assumed to be a growing, dynamic learner in interaction with other growing, dynamic learners and with their environment.
Syntactic paradigms, viewed from an operational perspective, are "master plans" or guides that are rule-governed in such a way as to assist in the task of bringing "order from chaos."

In looking at the magnitude of theory-related literature that might be useful to the educational planner, it is nearly inevitable that one feel overwhelmed by both its massive and its disorganized characteristics. For the purpose of assisting the curricularist in planning for the educational enterprise, two syntactic paradigms are herein proposed.

The first is a conceptual abstraction to aid in the selection and organization of generalizable theoretical formulations which can serve the curricularist as a functional base for decision-making. The tri-dimensional characteristic of this paradigm will facilitate the consideration of the conceptual, spatial, and temporal dimensions of selected constructs, thus establishing their utility to the general curriculum development task.

The universe of potential constructs usable within the framework of this first paradigm is so large and
diverse that those selected will merely be illustrative. In the selection of such constructs, the procedure should be sufficiently explicated that it serves as a model for the individual curriculum worker who wishes to broaden the sample of theoretical statements herein examined to include specific areas unique to his own situation.

The second paradigm is action-oriented, designed to serve as an organizing framework for the actual task of developing curricular components or learning experiences at a variety of operational levels. Elements of the curricular enterprise will be identified and relationships among the elements proposed. The generalizable paradigm will thus serve a utilitarian function. It will be possible for the individual curricularist to generate specific curriculum designs by substituting information unique to the particular situation for each generalized component.

**Toward the Utilization of Theoretical Formulations**

The development of a conceptualized or problem-oriented paradigm or "master plan" is subjective, at best. While obviously incorporating the work of previous scholarship and research, it is the product of idiosyncratic synthesizing by the paradigm designer. In order to operationalize the concept, four specific tasks are in order:
(1) to identify the dimensions of the curriculum development process, (2) to establish the relationship of the identified dimensions to the generalizability of the paradigm, (3) to specify the areas of concern to be sampled for appropriate theoretical statements, and (4) to select theoretical formulations which lend themselves, through translation and/or adaption, to operational procedures. When such formulations are accepted and internalized by the curricularist, they should function as components of his foundation for decision-making and action.

**Dimensions of the Curriculum Development Process**

Three dimensions have been identified as appropriate to the curriculum development process: the conceptual, the temporal, and the spatial. The choice of these dimensions may be seen as arbitrary; however, following a clarification of intent, the dimensions should lose any quality of randomness that would be detrimental to their utility.

The conceptual dimension implies statements upon which curriculum decisions are made vary in implied degree of abstractness-concreteness. If a statement is generalizable to a whole "class" of situations and broad enough to include most possible variations within that class, it is considered to be of a different conceptual
order than a statement that is specific and applicable to a unique set of circumstances within a particular context. As they deal with the utility of "theory" in relation to "practice," curricularists find that the adaptation of the abstract to the specific relates to the degree of that utility.

It is possible to diagram the conceptual dimension as the relationship between the abstract continuum and the concrete or specific continuum:

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<table>
<thead>
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<tbody>
<tr>
<td>abstract</td>
<td>concrete</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>applicable to &quot;all&quot; education</td>
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<td></td>
<td>applicable to formal education</td>
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<td></td>
<td>applicable to similar events</td>
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<tr>
<td></td>
<td>applicable only to specific instances</td>
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The **temporal dimension** is implicit in all human activity. Things are planned, they happen, and they are judged over varying periods of non-recurring time. The systems view of human endeavor, which incorporates the judgment-evaluative component as input for the problem identification-design function, is seen as having a cycling or spiral nature. In terms of temporal reality, each event or sequence has its own identity.

Duncan and Frymier interpret the elements of the temporal dimension to be the pre-active or planning stage,
the active or action stage, and the post-active or evaluative stage.\(^1\) Rather than portraying a cycling phenomenon, they maintain a linear concept and clarify the function of evaluation as planning input as it relates to the next in a series of events. (See Figure 9).\(^2\)

In this manner, the temporal dimension is allowed to maintain its chronological sequence, while the function of evaluation as diagnostic input is not lost.

Fig. 9.--Duncan-Frymier Model: Temporal Dimension

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\(^2\)Ibid., p. 193.
The current ambiguity associated with the term "curriculum" gives the temporal dimension an increased importance. Activity that may be considered pre-active at one operational level may depend upon products resulting from efforts in the active or post-active stage at a different operational level. An example would be the case where specific curricular components produced by the development team allow a particular variation in the pre-active prescription process as undertaken by the educational participants.

If one has progressed beyond the concept of universal education for all to the idea of optimal education for each, the spatial dimension is an obvious necessity, for the individual educational participant then can become the focus of and purpose for all educational activity. The "space" between the curriculum developer and the educational participant is negligible in a one-to-one interaction. However, when curriculum is considered as a "place-oriented" or "group" operation, the space between the developer and the participant increases, the individual is no longer unique, but is considered as a group member functioning within a classroom, museum, laboratory, or other place-situation. The greater the spatial distance from the student (to the building, district, state, regional, or federal level) the greater
the necessity to consider the educational participants as "bits" of normative data.

The educational participant is not perceived as "closer" in any relationship other than a one-to-one interaction. This is the case even though a great deal is written about selected "pieces" of the individual person, such as attitudes, values and behaviors, which are of obvious interest to the curricularist. It is assumed that

the person is the critical unit for the human species. It is the person who knows or does not know, who seeks God or does not seek God, who produces or does not produce, who communicates or does not communicate, who solves problems or does not solve problems, who learns or does not learn, who perceives or does not perceive, who grows or does not grow, who exists or does not exist. The human race exists, packaged in its persons.3

The human organism is a synergistic entity producing and reacting to physical, mental, and social forces. Each individual is thus seen as a unique and unified participant, involved holistically in the educational enterprise.

Using the traditional three-dimensional cube, it is possible to illustrate these three key dimensions in the curriculum development process. (See Figure 10.)

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Fig. 10.--Selected Dimensions Critical to Curriculum Development Process
Paradigm Generalizability

If curriculum is developed on micro- to macro-levels, and in interpersonal to nationwide arenas, it is obvious that not all theoretical constructs in all substantive domains will be useful. In order to optimize the generalizability and thus the utility of the paradigm, it is appropriate to include only those theoretical statements and constructs that are equally applicable to each dimensional continuum.

For example, if the concept of "personhood" has positive value to the curriculum designer, it is important to consider ways to enhance the worth of each person at all temporal levels, whether planning, doing, or evaluating. It is equally important to provide for each person's optimization at each spatial level, even though it may seem more difficult with each step away from the person as primary focus.

At a later time any curriculum worker active in a particular "spatial domain" could add to the theoretically based data as a means of broadening the foundation for decision-making in that particular setting.

Areas of Concern

There are many ways to "slice the proverbial pie" of concern; classifications abound whereby similar elements can be grouped using a variety of criteria. In 1960, Downey synthesized "pronouncements from Horace Mann
to 1960" and suggested four dimensions of educational concern: the intellectual, the social, the personal, and the productive.4

In the past decade other perspectives have been utilized. Crary's concerns are identified in his four substantive dimensions: (1) the humanistic-ethical, (2) the creative-aesthetic, (3) the scientific-quantitative, and (4) the vocational-utilitarian.5 Frymier and Hawn posit fourteen principles grouped in three general areas: the philosophical, the psychological, and the operational.6 An approach taken by Feyereisen and associates includes an examination of the substantive, the instrumental, and the organizational dimensions.7

For the purpose of this study, the theoretical considerations will be grouped into three major areas of

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concern: (1) the environmental context in which the educational enterprise functions and which provides input to and forces constraints on the enterprise; (2) the participants who function within the educational system, the way they are grouped, and the processes they undertake; and (3) the support areas which facilitate the educational process, such as the disciplines of knowledge, the media of communication, and the aggregate of potential artifacts.

Selected Examples of Generalizable Statements and Constructs

As previously noted, a multi-dimensional perspective increases the generalizability of data. In the following examples, the graphic representation of a cube will serve as a data gathering and organizing device. It is helpful to remember that because theory pertains to "classes" of things or events rather than to unique particulars, theory is applicable to normative data, and must be "adjusted" to apply to individual persons, things, or events.

Due to the magnitude of potential input available to the curriculum worker, and the subjective nature of such selection, the writer has limited the examples to those in the three major areas of concern: (1) the context in which the educational enterprise functions, (2) the educational participant, and (3) the support areas avail-
able to the participant. Within each area of concern, only statements and constructs meeting the criteria of understandability, generalizability, and applicability will be considered. The work should be understandable to educators working in the field; it should be general enough to assist in decision-making throughout the total scope of curriculum development; and it should be applicable to curriculum design problems unique to specific educational environments.

At an abstract level, the paradigm for the Utilization of Theoretical Constructs would encourage the examination of a theoretical formulation from three points of view: (1) general applicability--the conceptual dimension; (2) specific application--the temporal dimension; and (3) specific application--the spatial dimension. (See Figure 11.)

**Constructs Pertaining to the Educational Context.** The two constructs chosen for examination are illustrative of those which would apply to the total field of curriculum development from the personal one-to-one level to the generalized state-regional-federal levels, and which would be of significance to the developers of curriculum components or the prescribers of learning event sequences.
Fig. 11.--Selected Dimensions in Branching Format
In Figure 12, the theoretical proposition that "Education is a social system" is analyzed. In terms of practical application, it is possible to look at education as an institution of society, as an organized aggregate of people bound in predetermined relationships functioning toward goals perceived to be congruent. Nelson and Besag have identified seven characteristics of institutions that are applicable to the educational system:

1. they have functions (both latent and manifest),
2. they have actors who carry out these functions,
3. they share in the society of which they are a part,
4. they are structural,
5. they are sanction-bearing,
6. they resist change, and
7. they impart status.

Frymier adds another useful characteristic by identifying the three phases of operations used by social systems to accomplish their functions: (1) the planning, policy-making, hypothesizing phase; (2) the doing, accomplishing, effecting phase; and (3) the evaluating, assessing, judgmental phase.

When the practical implications of the construct of "Education is a social system" are further analyzed in relation to the temporal and spatial dimensions, a number

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of examples are possible. The following illustrations are representative of the possible kinds of supportive and interpretive data.

The temporal dimension includes (a) the pre-active phase during which the development of awareness and the acknowledgment of individual beliefs facilitate consideration of the human situation, the goals of the group, and the anticipated means to achieve the goals; (b) the active phase during which consideration is given to the grouping of participants for their involvement in learning events, the patterns of communication utilized, the nature of the decision-making processes employed, the types of problem-solving experienced, and the expectations and limitations developed and imposed;\(^{10}\) and (c) the post-active phase during which corrective feedback is utilized for rational change leading to system improvement. The Getzels-Guba construct of institutional mode of operation (nomothetic, transactional and idiographic)\(^ {11}\) and the Frymier concepts relating to the assessment of

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system viability are useful to the practitioner operating at the post-active phase.

The spatial dimension includes (a) the one-to-one interactions in which individual belief and value systems are recognized as perceptions of what exist; (b) small group interactions in which normative structure (group expectations of what ought to exist) are shaped and practiced; (c) the building district level at which policy-making, implementation, and assessment activities are undertaken in the context of local normative data; and (d) the state-regional-federal level at which the formal study of traditional and classical organization theory provides a useful foundation for the empirical examination of such components of the educational enterprise as the viability of the social system, the selection and training of employed and volunteer personnel, and the programmatic activities offered as means to accomplish desired goals in the broadest normative terms applicable to a mobile, transitional society.


In Figure 13, the theoretical proposition that "The school as a social institution exerts the power of culturization" is considered. Generally "culture" is taken to mean the sum of a people's learned behavior patterns, attitudes, and artifacts. In practical application, the term "power" of culturization is not restricted to political power, but refers to the power of a societal institution to influence an individual's behavior and attitudes. Jackson brought this concept to popular attention with his idea of the "hidden curriculum" of crowds, praise, and power. The pattern analysis of E. T. Hall is helpful to the curricularist for it increases his awareness of the diversity of levels of experience, of methods of communication, and of types of emotional overtones associated with man's activity. Hall refers to this "crucial trio" as the formal, the informal, and the technical. The changes brought about are represented as a "complex circular process" proceeding from formal to informal to technical to new formal, with the emphasis shifting rather rapidly at certain junctures; the rapid shifts are explained by the fact that people cannot tolerate existing in two systems at the same time.


time; they have to approach life at any given
moment from one of these three levels of inte­
gration but not more than one.16

The temporal dimension of this construct begins with
gaining awareness of and providing for the optimum utili­
zation of the value aspects of the culture; proceeds to
the transactions between people and between people and
institutions; and culminates in the evaluation of the
effectiveness of culturization and the consequent coping
abilities of people in an era of rapid change.

The spatial dimension ranges from personal reactions
to such factors as crowding, territoriality, and sensual
stimulations;17 to peer pressure groups,18 leader domin­
ance or facilitation;19 to team activities, ceremonies,
and local-norm values; to such generalizable elements as
the influence of language, mass media communications,
governmental functions, and societal pressures for toler­
ance and conformity.20

16 Ibid., p. 90.
Constructs Pertaining to the Processes Undertaken by the Participant. Of the many areas of scholarship and pedagogy applicable to the participant, the process area is easily understandable and frequently encountered. Both of the illustrative constructs have been chosen from the area of participant process: decision-making and goal-setting.

Figure 14 graphically portrays the application of the construct that "Participatory decision-making is critical to the democratic process." Not only is it critical to the democratic process, it is antithetical to authoritarianism: "It is the stuff of freedom."²¹ In application this means that in a democratic society genuine opportunities should be provided for decision-making activities that will directly and purposefully make a difference to the decision-making body.

To operationalize this construct, it is first necessary to fully explore the area of decision-making as a conceptual, as well as an applied, technique. Only after this exploration will the curricularist be able to maximally utilize the decision-making process to enhance the broader concept of democracy. Even without empirical data, however, conventional wisdom tells one that participation in decision-making heightens psychological

Participatory decision-making is critical to the democratic process.

In a democratic society, everyone should be involved in the decision-making process. This involves identifying the problem, analyzing the data, and implementing a solution.

**Pre-Active:**
Analysis of input data related to problem/task/option

**Active:**
Synthesis of input and output data as basis for determination of optimum solution to be implemented

**Post-Active:**
Analysis of output data related to problem/task/option

**One-to-One:**
Prescriptive decision, based on diagnostic and value data, using curricular components to optimize the learning event

**Small Group:**
Prescriptive decision made on basis of group data, using various curricular components to optimize the learning event

**Building/District:**
Decision-making by team or committee, based on local normative data, using the process of technical rationality, evaluating majority/minority views and considering both in arriving at modified decision

**State/Regional/Federal:**
Decision-making by project staff, based on generalizable normative data, and using effective and efficient design, production, and evaluational techniques

Fig. 14: Participants: Decision-Making
involvement, perceptions of freedom, feelings of worth, and other such aspects related to being part of a democratic system.

Few decisions are simple, even those of the "yes"-"no" variety. As the degree of complexity increases, decisions of a comparative-modification nature are necessary in which one analyzes the system's actual output, compares it to the expected output, and then makes modification decisions. Still more complex activities are those in which values and predictions become critical subsystems of the decision-making process.

In 1953, Bross developed a "decision-tree" model still found to be readily adaptable to complex decision-making tasks. The prediction subsystem leads to the identification of alternatives, to the specification of manifest and latent consequences of each alternative, and to the assessment of the probability of each alternative to meet the desired goal. The value subsystem accounts for the desires, wishes, and philosophical framework which function as context for the problem to be solved. Combining the prediction subsystem and the value subsystem becomes a task of balancing the probability for success with the desirability of the outcome. Combining this concept of balance with

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the systematic gathering of data from "new" problem areas and from previously used solutions results in an examination of the decision-making process from both the conceptual and the technical perspectives. (See Figure 15.)

The greatest differences in curricular decision-making are found not in the process itself but in the substantive content, the type of data, and the nature of rationality. At the one-to-one level, the educational participant needs to perceive that he has a genuine role to play in making decisions that, in reality, make a difference to himself and to his world. In small groups, each member needs to be considered in arriving at a consensus. At the building/district level, and at the state/regional/federal level, the curricular decisions made generally concern a range to "typical" learners, with those who plan to implement the decision being involved in the decision-making process. If their results are to be congruent with the needs of the individual learners, much "grass-roots" data should be fed into the system, and components designed that can be utilized by the individual participants as they become involved in their own prescriptive decisions. Decision-making, as a process, is a component of most other activities undertaken by the educational participant; for example, the process of goal-setting. (See Figure 16.)
Fig. 15.—Detail of Decision-Making Process
Ottermint desirability and utility of possible goals and objectives; determine hierarchy of selected goals and objectives; check clarity and appropriateness of general expectations and each successive sublevel of specific performance criteria and desired behavior.

Compare actual results of goal achievement with expectations; assess appropriateness of level of specificity; congruence between intent and action; needs for redesign and modification.

Consensus of both individual and group needs and goals.

Building and developing expectations and criteria for clear individual and group needs and goals.

Clarify general expectations and each successive sublevel of specific performance criteria and desired behavior.

Determine desirability and utility of possible goals and objectives; determine hierarchy of selected goals and objectives; check clarity and appropriateness of general expectations and each successive sublevel of specific performance criteria and desired behavior.

Fig. 16 - Participation: Goal Setting
A construct that would improve the utility of educational goals is the proposition that "Goals should exemplify clarity and appropriateness." Clarity is improved if the level of generality is specified and if the wording is unambiguous. Appropriateness assumes a degree of personal meaning and timely significance to the participant for whom the goal is set. Ambiguity, a quality often evident in statements of goals and objectives, seems to come from a confusion in terms and from a lack of discreteness expressed in levels of generality. The assumption will be made that goals, or level 1 objectives, are broad generalizations which are seldom stated in operational terms or susceptible to direct measure. Level 2 objectives provide explanation and methodology for goal achievement, but still may not be expressed in operational terms. Depending on the complexity of the project, one may find a need for any number of additional levels of objectives. Level 3 through level n objectives would be increasingly more specific, each stated in operational terms itemizing performance criteria and behavioral expectations.

Illustrative of the temporal dimension of goal-setting would be:
pre-active - to determine the desirability and social utility of possible goals and objectives and to determine the hierarchy of selected goals and objectives

active - to clarify general expectations and each successive sublevel of specific performance criteria and desired behaviors

post-active - to compare actual results of goal achievement with expectations; to ask such questions as: Was the degree of specificity appropriate for the situation? What was the congruence between intention and action? Did plans include only that which was measurable? What are the needs for redesign and modification?

Goals are useful at all operational levels. At the one-to-one level the individual diagnosis and synthesis of the participant's personal needs and the "other-person" expectations can form the basis for clear and appropriate goal-setting. Within small groups both individual and group needs should be considered. At the building/district level, those who set goals should "pay attention" to local needs and expectations. At the broadest level of state/regional/federal operation, goals should be set to consider general academic-social issues and expectations.

Support Areas. In addition to studying the educational context and the participant, the curricularist needs to explore various support areas such as symbolic communication or language, technological communication or media,
tangible artifacts, and heuristic models for inquiry. Illustrative of these "support" constructs are Bruner's three modes of representation and selected items from general communication theory. (See Figures 17 and 18.)

In 1964, Bruner advanced the idea of three modes of representation of the environment which depend on techniques that amplify one's motor acts, one's perceptions, and one's ratiocinative or deductive capabilities: enactive representation, iconic representation, and symbolic representation.23 Developing these ideas, Bruner views human beings as having "developed three parallel systems for processing information and for representing it; one through manipulation and action, one through perceptual organization and imagery, and one through symbolic apparatus."24 To assist in demonstrating the utility of such a construct, possible examples of application are expanded in table form. (See Figure 17.) At each operational level the three temporal dimensions are isolated and expanded with examples illustrative of each of the three modes of representation.

Progressing from the task of representing the world to communicating those representations, it is logical to


PREACTIVE
1. previewing audio-visual materials
(s) designing an experiment

ACTIVE
5. manipulating laboratory equipment
(s) retrieving data from library sources

POSTACTIVE
9. (e) cleaning up from art experience
(i) transferring concepts from one experience to another
(s) integrating, expanding, and synthesizing concepts

PREACTIVE
2. using audio tapes to assist in group planning
(s) discussing examples and personal experiences

ACTIVE
6. reviewing of videotape examples, simulation segments
(s) reporting of activities to board, parents' groups

POSTACTIVE
10. (e) using products made by team efforts
(s) re-organizing effort by team based on feedback

PREACTIVE
3. previewing prototype of new type of lesson materials
(s) interpretation of print materials - book selection

ACTIVE
7. producing TV program, filmstrips, or 8mm film story
(s) rewriting course outline, or IPI sequence

POSTACTIVE
11. (e) participating in use of artifact kits before redesign
(i) evaluating results of audio tape vs. video tape
(s) participating in summative evaluation of project

PREACTIVE
4. previewing available nationally produced materials
(s) planning production of curricular "packages"

ACTIVE
8. gathering AV data for eco-learning center
(s) preparing teacher's support materials

POSTACTIVE
12. (e) redesigning learning center based on learner feedback
(s) implementing wide-scale summative evaluation

Fig. 17.—Support Factors: Modes of Representation
DEWEY: Communication is the process of sharing experience until it becomes a common possession.

PIAGET: Influence of developmental stages on communication.

MONTESSORI: Take cues from child and environment; child in position of authority whenever feasible in attempts to master his environment.

ONE-TO-ONE PREACTIVE: Examine attitudes toward standard/nonstandard language usage.

INTERACTIVE: Encourage "freewheeling" chatter; facilitate "leap" to social and intellectual conversations.

POSTACTIVE: Focus on individual learning (vs. competition rank within the group); is learner ready to proceed? Is review needed? To what extent is concept or skill mastered?

Evaluation of media presentations (prints, TAT, TDO, etc. developed for "new"). Communicative quality of social conversations. Influence of "Silent Language" (E.F. Hall) on group.

Fig. 18.--Support Factors: Communication Constructs.
examine selected items from the general area of communication theory. (See Figure 18.) Smith and Smith define communication as the transmission of knowledge or information from sender to receiver either directly or by a device. If education is a societal institution charged with the transmission of previous "learnings" to contemporary learners, indeed education cannot function without communication. In order to analyze the transmission of knowledge and information, Lasswell's construct is useful: "who says what in which channel to whom with what effect." This construct suggests an examination of the areas of perception, reaction, and consequence. The temporal dimension can be approached in at least two ways: (a) as the processes of encoding, transmission, and decoding found in models of the type developed by Shannon-Weaver, Schramm, and Berlo; or (b) as typical planning activities such as setting goals and examining attitudes toward standard/non-standard language; implementation activities as evident in both oral and written exercises; and evaluation activities such as assessing the degree of individual learning and judging the degree of mastery.


As the curricularist examines such constructs, he may prefer to concentrate on a single temporal or spatial dimension representing his greatest area of concern. For this reason, the representation of the Lasswell construct in Figure 17 is shown by operational level. The works of Dewey, Piaget, and Montessori are particularly useful in dealing with the expansion of the one-to-one level. Dewey had much to say about communication, believing it to be the process of sharing experience until it became a common possession.\textsuperscript{27} Piaget studied the influence of the developmental stages on the process of communication.\textsuperscript{28} Montessori encouraged educators to take their cues from the child and the environment,\textsuperscript{29} suggesting that the learner be put in a position of authority whenever feasible in his attempts to master his environment. Should the curricularist desire to make an in-depth study of the way communication theory could assist the design of the learning event, the ten basic aspects of communication identified by Gerbner would be helpful:

\begin{itemize}
\item \textsuperscript{29}Maria Montessori, \textit{The Montessori Method} (New York: Schocken Books, Inc., 1964).
\end{itemize}
(1) someone (2) perceives an event (3) and reacts (4) in a situation (5) through some means (6) to make available materials (7) in some form (8) and context (9) conveying content (10) of some consequence. 30

In order to proceed from the consideration of isolated constructs to a unified approach to curricular design, it is necessary to acknowledge the philosophical rationale on which the design is based. This step is necessary to prevent the fragmentation of elements or inconsistency between elements, to determine linear and holistic relationships, and to emphasize the feedback network that must be implemented in order to maintain the viability of the system.

**Evolution of a Rationale**

Two basic concepts underlie the evolution of the rationale underlying the proposed paradigms of this study: the Tyler-Taba linear rationale, and the systems-analytic perspective toward non-linear systems. For several decades curricularists have considered the Tyler and Taba models as primary sources of guidance for the curriculum development process. 31


31 See Ralph Tyler, Basic Principles of Curriculum Development (Chicago: University of Chicago Press, 1950); Hilda Taba, "General Techniques of Curriculum Planning" in 44th Yearbook, Part I, of the National Society for the
In recent years considerable interest has been shown in adapting certain systematic and analytic techniques from the management field to the field of education. A major challenge has been to benefit from the techniques of the economic-production model without suffering from the associated problems. In its simplest form, the production model considers the following sequence:

\[
\text{INPUT} \rightarrow \text{PROCESS} \rightarrow \text{OUTPUT}
\]

Tyler's basic model considers this sequence:

\[
\text{OBJECTIVES} \rightarrow \text{SELECTING CONTENT} \rightarrow \text{ORGANIZING CONTENT} \rightarrow \text{EVALUATION}
\]

Taba adds the area of diagnosis, and divides the selecting and organizing of content into both substantive content and instructional process.

A synthesis of the above concepts results in a reconsideration of the input into the system (identification of referents, ordering of priorities, specification of resources, and acknowledgment of context). Only after an analysis of the input does it become appropriate to analyze the process phase. The evaluation of the process, both

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during and after the action, provides data for two types of judgments: (a) the success of the process as compared to the predetermined goals at the predetermined level of specificity, and (b) the need for modification or redesign necessary to improve the likelihood of success of later cycles of the process. As this present study has followed the above steps, it has become evident that several elements in addition to those stated by Tyler and Taba need to be made explicit: the educational participant, educational context, process climate, and value structures. Many curricularists have assumed that these elements have been included in the traditional models; however, if specific relationships between elements are to be operationalized, the explicit identification of each necessary element in the curriculum development process is imperative. Having identified the curriculum development elements, it is possible to establish relationships which, because of the interactive nature of the person and his environment, can no longer be considered in a strict linear cause-effect sequence. (See Figure 19.)

Once a consistent rationale has been developed as a foundation for all subsequent decisions, it is possible to consider the role of the translation agent, for the adjustment between theory and application is neither automatic nor instantaneous.
Fig. 19. Evolution of a Rationale
The Translation Process

A degree of translation or adjustment is needed in order to operationalize theoretical constructs and philosophical rationales. The very definition of "theory" implies generalizability to a class of ideas, things, or events whereas application relates to a unique or specific instance within a class. The process of translation or adjustment changes the level of abstraction. (See Figure 20.) This process does not just "happen," some person or persons are instrumental in its occurrence.

With regard to the translation process, Havelock considers a person in a linking role, charged with the responsibility of retrieving basic or applied knowledge, deriving practical applications from it, and distributing it to people who need it and can use it.

This concept of the linking agent is not new, for as early as 1899 William James was quoted as having said, "... you make a great mistake if you think that [a science] is

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Fig. 20. -- Translation from Theory to Application

**Fig. 20.** -- Translation from Theory to Application
something from which you can deduce definite programmes and schemes and methods of instruction for immediate schoolroom use... sciences never generate arts directly out of themselves. An intermediary inventive mind must make the application, by using its originality." The intermediary inventive mind is thus seen as playing a central role in the translation process.

In the one-to-one and small group settings any of the educational participants can share the inventiveness and creativity of the linking agent as he evolves ways to apply the results of works of others. This is compatible with the emphasis on aesthetic rationality at the personal level of curriculum development. As the distance from the learner to the curricularist increases, the curriculum developer works more specifically with normative data rather than with unique persons, and follows strategies implied in the concept of technical rationality rather than that of aesthetic rationality.

One of the critical areas of the linking process is the two-way communication between the linking agent and the

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practitioner. Linkage is seen as a series of two-way interaction processes connecting a client system with various resource systems (i.e., basic research, applied research, the socio-cultural environment, the educational system, and the practitioners themselves). For optimum effectiveness, each system (client and resource) tries to simulate the other’s problem-solving behavior in order to better grasp the other’s contribution, and to build a relationship of understanding and trust, as well as to develop channels for rapid, effective communication. The resource system needs to know the user’s internal needs and typical problem-solving processes. The client system, as user, needs to understand the invention-solution-formulation-evaluation processes of the resource system.  

Translation seldom occurs in isolation, without the intervention of a linking agent, one who specializes in the process of "bridging the gap." School systems typically have a number of people in a position to serve in this role should they have the interest and skills: the consultant-supervisor, the trainer or teacher, the leader-administrator, or the applied researcher-developer.  

As implied in Figure 21, the linking agent, or translator, is in a unique position to consolidate the

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Fig. 21.--The "Products" Utilized by the Linking Agent
findings from empirical studies by researchers, the constructs proposed by theoreticians, and the data gathered by statisticians and evaluators. As the responsible initiator of curriculum development, he can use the synthesis of such information in the design of such tangible elements as instructional materials, communication networks, organizational patterns, sender-receiver strategies, and goal-setting activities; in fact, in the design of any of the "products" needed by those involved in the prescriptive process for the optimum learning event.

In his study of the translation role Havelock has identified a number of skills needed for the effective functioning of such personnel. Of those identified, some skills are particularly adaptable to the educative arena, for example:

- a familiarity with the total knowledge dissemination and utilization process including viable models of planned change, empirical data from current studies, and appropriate research methods for additional study;

- skills in the domain of human relations needed in working with client systems related to group process, problem and solution diagnosis, and self-evaluation techniques;

- ability to utilize resource systems including storage and retrieval methods and tools;

- practical knowledge regarding the selection and administration of evaluative devices
to be used in the assessment of the agent's own success in his translation role.

To summarize the translation process one can easily use the components of a "typical" system: input, process, output, and feedback. Input has been identified as the various resource systems, and output as the translation of various theoretical constructs and tested data into usable form to serve the practitioner as a basis for applied decision-making. The processes required to proceed from input to output are: assessment of needs of the client system; identification of potentially useful theoretical formulations, propositions, and empirical data; modification of the resource data into usable form within the designated spatial and temporal dimensions; and assessment of previous processes to check on validity and reliability of the product in relationship to the designated operational dimension. (See Figure 22).

Model of Intent: Action-Oriented Paradigm

The development of curriculum at any level is a complex activity. To the practicing curricularist that is probably an understatement, and yet one often finds guidebooks, guidelines, outlines, and models of such simplicity

36 Havelock, "Dissemination and Translation Roles," Adapted from pp. 111-12.
Fig. 22.--Selected Process Engaged in by the Linking Agent
as to be almost valueless. In counteracting the danger of oversimplification, however, it is possible to make the task so complex as to lose the potential for utilization; the design becomes so complicated that it is useless.

The challenge is to provide for the identification of components related to the curriculum development process and to clearly state the relationships between such components. To be effective, the resulting paradigm must provide adequate options using a wide variety of environmental stimuli, material and human resources, and organizational patterns which will meet the needs of persons who are influenced by factors such as personal learning styles, physiological and psychological developmental stages, personal satisfactions, and social pressures, to name only a few.

Siegel points out that a paradigm that oversimplifies reality may seriously interfere with validity and generalizability. 37 While addressing the question of teaching-learning paradigms in particular, his point is well taken in regard to curricular paradigms as well: "What is required is a paradigm sufficiently broad in concept to embrace the full multiplicity and patterning of factors... (it) must include, but not be limited to, the variables

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comprising the... environment... (and) allow for the likelihood that the factors comprising the instructional complex interact differently in different kinds of classroom environments. 38

To fulfill the objective desired for the development of the action-oriented paradigm, several specific characteristics must be built into it. It must be multivariant, multidimensional, adaptive, and comprehensive. Each of these characteristics is worthy of note.

Critical Characteristics

Multivariance. This characteristic is perhaps the most obvious, and yet one of the most difficult to handle from a practical point of view. With little effort it is possible to list literally dozens of dependent and independent variables that are important in the curricular process. The number of possible variables is so great as to be unmanageable without a plan. Siegel has suggested handling the problem of large numbers of variables and critical interactions by considering clusters or classes of variables. 39 Within each cluster fundamental specific variables are identified. By clustering a number of learner variables (for example, intelligence, ability, aptitude,

38 Ibid.
39 Ibid., pp. 264-86.
prior knowledge, motivation, educational set, and the like), all interact to form the idiosyncratic drive pattern of the student in question. Knowledge of the characteristics and responses associated with particular drive patterns can generate predictions about the role of the learner characteristics, especially as determinants of the impact of instructional circumstances represented by variables in the areas of learning environments, instructor's attributes, and substantive materials.

**Multidimensionality.** Whether one considers curriculum to be the plan of intended learning opportunities provided for students, a set of events with the potential for restructuring human experience, or a way of preparing young people to participate as productive members of our culture, it is important to recognize that curriculum development is a multidimensional process. Just as it has been generally acknowledged that a single discipline does

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40 Ibid., p. 285.


not provide an adequate structure for a total curriculum, so it is now recognized that no one developmental dimension or operational level is sufficient.\textsuperscript{44} Even decision-making is recognized as a multidimensional process. Goodlad points out that decision-making goes on at three distinct levels: societal, institutional and instructional.\textsuperscript{45} Thus the multidimensional approach becomes both a theoretical and an operational necessity. Upon consideration, it is obvious that the curriculum development process has a temporal dimension, for the process is modified through time. This dimension can be identified in three stages: the pre-active phase (planning), the active phase (implementation), and the post-active phase (evaluation and redesign). It is equally apparent that there is a spatial dimension representing the "distance" between the curricularist and the student (the classroom, building, district office, state department, regional enterprise, or U. S. Office of Education).

Other dimensions related to structure, organization, process, instructional interactions, and values are


important to consider as subcategories within the larger context of general curriculum development. Gideonse's work in expanding the common linear-arrangement model of educational change to a multiplanned heuristic model has made a valuable contribution to the type of conceptualization herein proposed.\textsuperscript{46} In this model each plane symbolizes a different orientation to activities conducted under the rubrics of research, development, and operations. In the paradigm for curriculum development proposed in this study, the spatial dimension can be separated in a similar manner allowing for initiation of activity at a number of different points of entry, and for improved interface between the components. (See Figure 23.)

Adaptiveness. It is essential that any viable system have the power of self-renewal and self-improvement: it must include specific design elements that will provide evaluative feedback to allow modification and adaptation to keep the system functioning optimally. A basic principle underlying purposive, goal-seeking mechanisms is embodied in the concept of "feedback." True feedback, as it applies to open information-processing systems, is more than a simple reciprocal interaction between variables. It must include a "sensing apparatus" that distinguishes

During assessment, district team finds need for research in instructional materials, requests design from state team, implementation done by district; materials used by teacher; field tested; returned to district for evaluation.

Regional curriculum materials field tested for "norm" use at building level and returned for redesign.

Class members need special materials, requests district design and production, returned to class for use.

Regional center designs, produces, and redesigns without benefit of local field testing.

Fig. 23.—Characteristics of Model: Multidimensionality
any deviations on the internal system from the predetermined goal, and signals for needed adjustment in the appropriate direction to correct the identified deviation. This comparison of actual output or results with the expected or preplanned results in an element of the whole evaluative procedure. (See Figure 24.)

**Comprehensiveness.** A consideration of all components of curriculum, or curricular events, is essential for comprehensiveness. Relative to viewing such events, Duncan and Frymier have conceived of three elements inherent in the holistic nature of events—whether they are about to happen, are occurring, or have been completed: the known, the unknown, and the miracle. The known represents that which can be predicted; the unknown, that which will yield after-the-fact theorizing; and the miracle, that which remains of the event after one considers the known and the unknown. (See Figure 25.) For current use it will also be helpful to consider a subdivision of the known separating that which is known and generalizable and that which is known and nongeneralizable or unique, and therefore idiosyncratic.

Having examined the critical characteristics deemed necessary for optimum utility of the action-oriented

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Fig. 24.---Characteristics of Model: Adaptiveness

Fig. 25.---Characteristics of Model: Comprehensiveness
paradigm, it is possible to follow through with the development and explanation of the Model of Intent.

**Development and Explanation of Model of Intent**

In the series of Figures 26-32 the generalizable Model of Intent is presented. The simplified system model showing input, process, and output (Figure 26a) was the initial base from which the development began. As this Model of Intent was designed for a human activity—education—the input, in most simplified terms, is the person who comes to the system for a purpose; the process is the "something" that happens to the person as a result of his coming to the system; and the output is the modified person who either leaves the system or recycles to another activity or event. (See Figure 26b.) When one actually begins to analyze the process component of the system the model and resulting applications become complex. Three specific elements of the overall model (diagnosis, development of curricular components, and prescription) have been assigned identification numbers in order to code them to a more detailed "break-out" and clarification of relationships within and between the elements. (See Figure 26c.)

While all elements of the model are considered significant, the educational participant and the learning event—the people and the action—are primary. Without either there is no need for the development of the model or
Fig. 26.--Development of the Model of Intent
related tasks, much less for the whole educative process.

Having recognized the people and the event as primary, it is now appropriate to consider the identification of and relationships between the other elements. The value systems of the participants and the diagnostic data concerning them are the input for the decision-making process of prescription. The curricular components or segments that have been designed and produced by building, district, state, regional, or federal developers are made available to the one-to-one and small group prescribers who together determine the combination of people, things, activities, and climate that will optimize the particular learning event under consideration.

Each event undergoes continuing diagnostic evaluation. The results of this process are fed back into the total process at several points, primarily as input for the next prescriptive decision-making action, but also as information for the diagnosis and curriculum component tasks.

Diagnosis (1.0). In looking at the diagnosis component (identified as 1.0) in Figure 27, it is evident that three major classes of information need to be made available: (1) conceptual constructs and empirically verified hypotheses from a number of fields that contribute to human growth and learning, such as psychology, perception, and communication; (2) measurement and instrumentation data concerning potential ability and prior achievement, and (3)
Fig. 27.—Breakout of the Diagnosis Process (1.0)
idiosyncratic data concerning the particular participants and the particular situation under consideration.

Curriculum Component Development (2.0). In addition to awareness of the participants' value systems and information from the diagnosis component, a third element, the development of curricular segments, is needed as input for the implementation of the prescriptive process. (See Figure 28.) As the main purpose of the curricular segment component is to design and produce, in usable format, the micro-units of artifacts infused with operationalized ideas, concepts, and activities, to be used by the participants as they prescribe the details of the learning event, it is important to show this element in considerable detail. In Figure 28 the general features of the component are shown in relation to one another and to the total system. The two major subsections of planning and action are identified, each with their appropriate subunits. Because of the semantic confusion or ambiguity often caused by identification by undefined terms, it will undoubtedly increase the utility of this model to closely examine these subsections. In Figures 29 and 30, therefore, the two major phases of planning (2.1) and action (2.2) are discussed in greater detail than are other sections of the model.

Planning Phase (2.1). The person charged with the responsibility for developing curricular segments would be wise to strengthen his interpersonal radar and whatever
Fig. 28.—Breakout of the Curriculum Component Development Process (2.0)
Fig. 29.--Breakout of the Planning Phase (2.1)
Fig. 30.—Breakout of the Action Phase (2.2)
other sensing devices he uses or can learn to use. The gathering of feelings, attitudes, and intuitions of those with whom he works, as well as of those in the environmental context within which he works, may prove to be a critical factor in the usability and success of the development project. Before a development task can get under way, the director or coordinator should have at least an elementary, but realistic, knowledge concerning a number of vital areas: (a) the social-cultural milieu in which he functions, (b) the universe of possible structures of people and things available with which to work, (c) the universe of values held by those individuals and groups with whom he works, (d) the universe of processes usable in operationalizing any potential plan of action, (e) theoretical constructs from the various subject disciplines, and (f) a broad base of research data to help in the later assessment of alternatives prior to selection of optimum actions. This preliminary knowledge base will be continually sharpened and broadened throughout the development process, as new data are gathered, goals specified, resources identified, and particular objectives delineated.

From this preliminary information a specific need or problem area will be identified, and formal appointment of responsibility made. Assuming it is beneficial to develop a true "team" relationship among those who work together, it is still realistic to have one person to assume final
responsibility, avoiding a "passing-the-buck" situation. A multidisciplinary team is suggested in order to take advantage of a wide range of specialties and abilities. This demands special care and concern on the part of the leader to establish supportive working relationships, common understanding of terms, concepts, and modes of inquiry, and consensus on a general statement. A preliminary task of the development team is to review models and strategies related to educational change, curriculum development, utilization, and dissemination.

The establishment of broad goals for a development project implies the previous acknowledgment of a philosophical perspective. Once that is agreed upon publically, optimum strategies can be selected for goal accomplishment and the target population can be identified. After the potential "clients" are selected for whom the curricular components are being developed, the second round of need assessment can take place, verifying or modifying the original problem definition. At this point the broad goals can be restated at a level of greater specificity, however still subject to refinement following data gathering. This process assumes that collection procedures are made explicit, criteria for screening data are stated, and procedures for processing and utilizing data once collected are specified.
In addition to refined data on the target population, the environment, the universe of structures, values, and processes, and from related empirical and theoretical research studies, it becomes expedient to identify human and material resources available to the project, and to acknowledge the limitations and constraints under which the task shall be accomplished. At the completion of this data-gathering sequence management networks, control tools, and evaluation techniques can be specified. The degree of detail and complexity will be in direct relationship to the degree of complexity of the development project itself. As a final task in the planning phase, it is beneficial to recheck the statement of specific objectives for congruence with the newest data.

**Action Phase (2.2).** There are four major functions in the implementation or action phase: (a) the design of the components (2.21); (b) the demonstrating and testing cycle (2.22); (c) the dissemination activities accomplished through training and materials production (2.23); and (3) summative evaluation for present-project accountability and for future-project redesign data (2.24). It is assumed that formative evaluation for the purpose of continual diagnosis and internal design modification is ongoing throughout the entire action phase of development.

The design of the components (2.21) is a task that can advantageously draw on the expertise of a variety of
specialists. Curricular generalists and discipline specialists can select the "larger learnings" related to the goals of the project that are supportable by a variety of substantive, organizational, and instructional alternatives. Working under the guidance and direction of these team members, instructional system designers select an adequate variety of micro-segments for actual development. They identify the major functions and related subtasks necessary for such development, allocate tasks and resources to designated personnel, and follow the production process through to the completion of the prototype materials. In the meantime, team members, or a supplementary team, are being trained for the demonstration-testing cycle. Throughout this entire design phase, as well as during the demonstration-test cycle, and the production-dissemination phase, formative evaluation is continually in progress, providing input data for system modification.

The demonstration-test cycle (2.22) includes the planning of the demonstration subsystem, in which the prototype is tested and modified as often as necessary in light of the results of the test data and formative evaluations. Once the team has sufficient confidence in the prototype, the material is finalized, as are the demonstration activities and personnel requirements critical to the production and dissemination processes.
Production, dissemination, and utilization (2.23) are obviously discrete functions in many respects; however, from the total perspective of the educational participants who use the completed segments, they need not be separated. Were this analysis being made by the personnel responsible for the actual mass production of materials or for the planning and implementation of the inservice teacher training program, it would necessarily be in greater detail. It would include the use of management tools and techniques for efficient production and effective training.

The evaluation and redesign sequence (2.24) is necessary not only for determining the results of the project, but for the gathering of data usable to serve as part of the base for new decisions should the project be redesigned in the future. The evaluation subsystem is designed to provide for the collection of data to check relevance for the user, feasibility and economy of resource allocation, choice of solution strategy, procedural design, and similar components of the system. Following the data-gathering process, or as an integral part of that process, the effectiveness of the project is measured by whatever instruments currently considered most appropriate by the researcher-evaluator working with the project. This evaluation phase and the recycling through the planning, designing, demonstration-testing, and production-dissemination stages often proceed concurrently with utilization of
the curriculum components by the educational participants in the prescription process.

**Prescription (3.0).** The prescriptive function will be discussed from two integrated perspectives: the substance and the operation. For heuristic purposes these two can be isolated from each other, but in reality they are mutually interdependent.

When one considers the substance of prescription, there are a number of types of input: conceptual, technical, and managerial. (See Figure 31.) Constructs from the areas of learning and perception theory and from growth and development theory are beneficial. Selected experiences need to be organized and sequenced, as do selected teaching strategies and learning resources. Appropriate learning conditions need to be provided, as does the optimum mode of dissemination of the experience-strategy-resource package. This is done in light of the needs and objectives of the particular learning event being considered.

The operation or process implied in prescription is that of decision-making. (See Figure 32.) Based on the data gained in diagnosis and recognition of value systems, and on the potential curricular segments available, the educational participants become involved in an active decision-making task. Alternative prescriptions are considered, anticipated consequences are projected, and the
Fig. 31.—Breakout of the Prescription Phase: Substance (3.0)
Fig. 32.—Breakout of the Prescription Phase: Process (3.0)
probability of success is balanced with the desirability of outcome for each, allowing the selection of the optimum components for the learning event.

Following the prescription of the learning event, of course, comes the actual event itself, and then the evaluative diagnosis which completes a temporal sequence. In reality, this evaluation, because of its diagnostic function, is the beginning of the next learning event sequence, for data from the evaluation is considered as informative and corrective feedback throughout the system. If the goal of the curricularist is to facilitate the learning event at whatever operational level, this model has the potential to assist him.
CHAPTER IV
CRITERIA FOR ACTION

Underlying this entire research and development effort is a major assumption: the goal of the curricularist is to facilitate the "learning event." If this assumption is valid, one must go beyond the posing of theoretical dimensions and the investigation of constructs and formulations—indeed, beyond the development of models to guide the application process. The major assumption must be operationalized. This chapter is an attempt to implement that assumption through the stimulation of four criteria for action:

1. The broad assumption that the goal of the curricularist is to facilitate the "learning event" should be translated into operational terms.

2. The areas of inquiry that should be investigated prior to making educational commitments, developing curricular components, or making related decisions should be identified.

3. The participants in the educational enterprise, their sources of influence and power, and the processes in which they engage as participants should be recognized.
4. The procedures for implementation should be temporally sequenced into a systematic design.

Translation of the Goal into Operational Terms

The translation of the broad curricular goal—facilitation of the learning event—into specific performance criteria necessitates the identification of the applicable operational level at which the curricularist will function. Once the level has been identified, the unique characteristics of the role and responsibilities of the curriculum developer in relation to the spatial distance from the "learner" can be specified.

One-to-one Level

If the operational level is one of personal interaction wherein two educational participants work together, the person assigned the curricular role and responsibility has an intimate interactive relationship with the person assuming the "client" role. In this case, both parties are mutually involved in the planning, implementing, and evaluating stages of the event. Each is in direct contact with the value system(s) of the other and, through continued personal communication, constantly influences the perceptions of the other.
Small Group Level

If the operational level is one of interaction among members of a small group, then a number of educational participants work together. The role and responsibilities of the curricularist differ from those associated with the one-to-one situation, for a small group involves a number of "clients," each of whom must be considered in dual roles: (1) as important individuals, and (2) as interacting elements in one another's environmental context. In the small group situation two related factors must also be considered: (1) learning is still an individual function, for each person's unique perceptions determine the meaning of his experiences; and (2) basic issues related to group processes, such as structure, communication, conflict, cohesiveness, and climate, must be considered as critical elements in this multiple-person interactive arena of operation. While all participants are involved in the planning, implementing, and evaluating stages, many individual perceptions and need gratifications must be integrated with the perceived group goal.

Building-District Level

If the curricularist is to work at the building level, or at the larger, but still local, district level, an important shift in perspective is essential. With relatively few exceptions, he now must consider the "norm" of a
selected population rather than one or more individual participants in the learning event. A certain amount of individualization is still possible, in dealing with local norms of selected populations having at least some degree of similarity in experiences and perceptions.

**State-Regional-Federal Level**

In the most general arena of curriculum development—the state, the regional, and the federal level—the curricularist must be concerned with normative data and other generally applicable contextual information. The "typical" learner, the "typical" community, and the "typical" task become the major concerns. The curricularist, at this level, assumes the responsibility for identifying areas of common basic skills and general information that would be applicable to learning events in the general area of state, region, or nation. This level represents the greatest "distance" from direct participation in the individual learning event.

This discussion emphasizes the wide variety of role designations and related responsibilities assigned to those who develop curricular components for learning events at various operational levels. Such role designations and selected illustrative examples of "typical" responsibilities assumed by the worker at each of the levels are summarized in Figure 33.
<table>
<thead>
<tr>
<th>Operational Level</th>
<th>Illustrative Role Designations</th>
<th>Representative Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-to-one</td>
<td>facilitator, leader, teacher, counselor, instructor, educational participant</td>
<td>works directly with one other educational participant in diagnosing for, prescription of, and evaluation of learning event(s).</td>
</tr>
<tr>
<td>Small group</td>
<td>group leader, teacher, peer leader, counselor, facilitator, educational participant</td>
<td>works directly with small groups: (1) balancing individual diagnosis and prescription with group goals and achievement; (2) encouraging group participation: (a) recognizing different member-functions and (b) integrating and facilitating participation; (3) encouraging group processes of standard setting, structure and organization, and communication; (4) developing awareness of and concern for human environmental context, such as climate, relationships, use of time, space, facilities, etc.</td>
</tr>
<tr>
<td>Building-district level</td>
<td>facilitator, curriculum coordinator, instructional leader</td>
<td>(1) gathers and uses normative data about own clientele and the unique socioeconomic context; (2) gathers information about availability of resources: (a) commercially distributed and (b) locally produced; (3) plans and implements adequate in-service activities to facilitate utilization of curricular segments by those working directly with the learner</td>
</tr>
<tr>
<td>State-regional federal level</td>
<td>curriculum project director</td>
<td>(1) gathers and uses normative data appropriate to state, regional or national populations; (2) works with discipline specialists to determine basic skills, discipline structure and general information needed as common foundation for all learners in the domain under consideration; (3) works with instructional technologist to design and produce micro-segments of curricular materials which can be utilized by the persons involved in individual learning events</td>
</tr>
</tbody>
</table>

Fig. 33.—Selected Roles and Responsibilities of Curricularist
Identification of Areas of Inquiry

If the goal of the curricularist is to facilitate the learning event, it is important, not only to determine the operational level at which he functions, but also to consider the areas of inquiry that will provide fruitful data for the curricular decision-making process. (For a summary, see Figure 34)

Psychological Area

From this domain, the curricularist can gain an awareness of the role of the phenomenal self (self-image, self-concept, personal frame of reference) and the manner in which the role functions in individual and group learning situations. From the works of James, Thorndike, Watson, and Hull to the current use of games theory models, decision-making models, information theory constructs, cybernetic theory, and language-thought relationships, the psychology of learning is of obvious interest to the curricularist.

Sociological Area

Because the school is commonly recognized as a social institution, and because the educational participants are usually involved in a wide variety of "social" groups, this domain provides helpful information for the curriculum worker. Sociology, as the study of human groups, their organization and operation, opens up a broad area of inquiry and poses a great variety of prior questions. The nature,
One-to-one

Small group

Building District

State Regional Federal

Learning theory
Self-concept
Social development
Perception

Role playing
Morale
Communication
Interaction
Group dynamics

Role of organization
Types of staff
differentiation
Local normative
data

Viability of school as an effective
social institution

Determine source of power for
decision making,
Hierarchical administrative
structure

Availability of
resources in
terms of personal,
materials, equipment,
physical facilities
and funding

Organization of
time and space;
patterns of
educational
environment;
sequence of materials
and events; sensitivity
to variety of
communication forms

Efficient and
effective
management procedures

Role, limitations and assistance:
Legislature
Congress
USOE
other Gov't agencies

What is of
"value" to
community?

What trends
toward change
are evident?

Awareness of recycling of
innovations and
reoccurring
emphasis

Fig. 34.--Selected Topics of Concern to the Curricularist
structure, and type of group organizations, the process of group cohesion, styles and forms of inter- and intra-group communication, conditions promoting and inhibiting group action, and patterns of group-member interaction are all potentially productive areas for study. Typical of useful sociology-based prior questions are those pertaining to the conditions of the cultural milieu in which the learner functions, the socioeconomic background of the learner, the experiential base of the learner compared to that of his peers, the hierarchical bureaucratic structure of the administrative organization responsible for political and economic decisions, and the leadership style and process techniques of the group leader.

Political Area

The task of curriculum development is largely one of choice and selection, of balance and trade-off between conflicting ideas, demands, pressures, and potential solutions. Lacking a system that will guarantee successful decision-making in the educational arena, the curriculum worker often becomes a policy-maker in the sense that he must continually make politically wise and expedient decisions. Questions pertaining to sources and uses of influence and power are those most commonly investigated in this domain.
Economic Area

Closely related to the area of political influence is the economic field in which resources are acquired and allocated, sometimes within the area of political reward or control. Because "curriculum" is not just a concept or an idea, but a tangible aggregate of people, things, and activities, it represents a realistic capital investment by those who control the funds. The curriculum developer needs a great deal of information about the manner in which funds are obtained and allocated, the availability of human, technical, and financial resources for various types of expenditures, and the types of human engineering techniques that can help provide the greatest degree of efficiency without sacrificing the desired level of effectiveness.

Historical Area

For many, the rapidity of change and the popularity of current novelties and innovative practices have lessened the importance of examining history in attempting to solve contemporary problems. It is still important, however, to recognize that present actions tend to be limited by past actions as well as by forces shaping the future. The curricularist needs to analyze the historical structure of his operational domain, and in so doing discover what is still of value and what benchmarks of the past will best serve to measure progress in the future. For example, how
did the writings of Socrates speak to the process of inquiry now so popular in curricular reform programs? What can we learn from the one-room schools of the past about heterogeneous grouping and individualization of instruction?

Aesthetic Area

The concept of aesthetics is not limited to a specific discipline, yet within the context of the contemporary cry for the humanization of education, it becomes more critical than during previous eras. Not only has the demand for "humanism" become more pressing, but the knowledge with which to respond has become more available. More is known now than ever before about the influence of the organization of time and space, the patterning of educational environments, the sequencing of materials and events, and the need for sensitivity to a variety of forms of communication. The information is at hand. The task is to make it available in an easily usable form for the improvement of the educational enterprise.

Ethical Area

No identification of areas of inquiry for the curricularist would be complete without reference to the area of ethics, for it is here that theories and constructs concerning values are examined. As the curricularist makes decisions regarding the selection of objectives, content of curricular components, processes to support with supplementary materials, he must consider personal values, socie-
tal values, and even such specific value questions as:
"What is of value to whom and by what standards?"

The Participants: Their Roles, Influence and Processes

The participants in the educational enterprise function in many roles, exerting their influence in a variety of ways through a number of different processes. It is helpful for the educator charged with the development of any type of program to be aware of the roles and controls typically associated with the various operational levels. Such knowledge would help him in the task of balancing that which is desired with that which is possible under the specific conditions within which he works. The classification of such data for an individual curriculum worker's own situation is illustrated in Figure 35.

Within the one-to-one and small group situations the participants are mutually supportive or hierarchically juxtaposed with one member usually having, even if not demonstrating, legal responsibility for the learning outcome or educational event. Through such processes as communication, diagnosis, prescription, interpersonal interaction, criticism, and suggestion, as well as through the more action-oriented processes of implementation, members can have a positive influence as in mutual support and cooperation, or a negative influence as exemplified by antagonism or reliance on legal authority.
<table>
<thead>
<tr>
<th>OPEPATIONAL LEVEL</th>
<th>EDUCATIONAL PARTICIPANT</th>
<th>CONTROLS</th>
<th>PROCESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-to-one</td>
<td>direct participants</td>
<td>mutual support</td>
<td>communication</td>
</tr>
<tr>
<td></td>
<td>in the planning</td>
<td>-</td>
<td>diagnosis</td>
</tr>
<tr>
<td>Small group</td>
<td>and implementing</td>
<td>-</td>
<td>prescription</td>
</tr>
<tr>
<td></td>
<td>of the learning event</td>
<td>-</td>
<td>interpersonal</td>
</tr>
<tr>
<td></td>
<td>member having legal</td>
<td>also has access to legal authority</td>
<td>criticalism</td>
</tr>
<tr>
<td></td>
<td>responsibility</td>
<td>-</td>
<td>suggestion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>implementation</td>
</tr>
</tbody>
</table>

| Building-District | Supervisor              | legal authority | policy formation |
|                  | Administrative personnel | bureaucratic     | dialogue         |
|                  | Board of Education      | organization    | criticism        |
|                  | Local citizens          | advocacy         | assessment        |
|                   |                         | competency       | -                |
|                   |                         | policy and       | -                |
|                   |                         | precedent        | -                |
|                   |                         | control          | -                |

| State-Regional Federal | State Board | legal authority | development of |
|                       | Government officials | goods and money | proposals |
|                       | Business and Industry | prestige | accountability |
|                       | Academicians | advocacy | allocation of |
|                       | Foundations | criticism | resources |

Fig. 35. -- Selected Roles, Controls and Processes
At the building-district level the curricularist works with both lay personnel and professional educators who exert various forms of influence through a variety of processes. As is true of the more politically oriented state-regional-federal level, controls are often considered in terms of power as well as influence. While the control mechanisms and processes differ from situation to situation, the concept remains valid: it is helpful to be aware of the roles and controls associated with the operational level at which one functions.

**Systematic Design for Action**

The systematic approach to problem solving and project implementation employs logically valid tools and techniques to accomplish predetermined tasks. The number of phases or steps associated with a "systems approach" varies, and from one designer or project director to another. The eight processes suggested here represent a synthesis of the materials and processes found to be effective in actual use and to be consistent with reviewed writings in the field.¹

a. Identification of the problem or the area of action (need assessment)

b. Analysis of the problem—the system with which the project is concerned (system analysis)

c. Determination of a variety of potential solutions (alternative options)

d. Assessment of probability and desirability of each solution

e. Decision regarding the selection of the optimum solution (strategy)

f. Implementation of the selected strategy (action)

g. Evaluation of the results (assessment)

h. Modification of the solution, strategy, or product (redesign)

For a graphic representation of these design elements, see Figure 36.

The Need Assessment Process

This initial process allows for the specific identification and delimitation of the problem or project to be undertaken. The use of interviews and questionnaires are often found to be helpful methods for gathering data about the exact curriculum development project to be accomplished. Careful assessment of realistic "needs" before the start of any project eliminates problems that can develop if the curricularist is tempted to start with a
Fig. 36.---Design for Action
predetermined solution and then tries to make the problem fit that solution. Should there be an extreme restriction on available resources, priorities can be assigned to various identified needs in order to aid in selection.

**System Analysis**

When the curricularist assesses needs and assigns priorities before analyzing the system, the mixing of means and ends is prevented, for he has determined all of the "What should be done" before becoming committed to the "How it should be done." In the process of analyzing the problem, several critical components must be considered:

- situational data as basis for decision-making
- nature of functions and tasks to be accomplished
- human, technological and financial resources available
- optimum assignment of tasks to available personnel
- procedural strategies to be employed
- related factors unique to the individual project

Typical questions that might be asked could include:

"What critical areas of inquiry need to be investigated?"

"What tasks need to be accomplished?"

"What resources are available, and how might they best be allocated?"

"How might the unanticipated or the unique be best provided for?"
Potential Solutions

A wide variety of potential solutions are desirable, at least to the point of thinking beyond conventional solutions. The primary consideration in determining such options is a preliminary freedom from constraint or limitation. Because of the desirability of freedom from predetermined judgments, the technique of brainstorming is often found to be most effective.

Assessment of Probability

During this exploratory stage it is best not to try to assess feasibility as this lessens the possibility of considering ideas which upon first thought might appear impractical or inappropriate. There is ample time to discard unusable solutions after feasibility studies, cost-effectiveness comparisons, and desirability evaluations have been made.

Decision-making

In the light of the variety of potential solutions proposed, relevant data are gathered that will aid in the final decision-making process. The collected data form a consistent basis for selecting the solution that offers the optimum balance between the possibility for greatest success and the greatest degree of desirability.
Strategy Selection

Once the optimum solution has been selected, effective strategies are identified for the implementation of the solution. Decisions in response to at least the following eight questions need to be considered:

1. What tasks need to be accomplished?
2. How will they be sequenced?
3. What management techniques will be helpful?
4. What resources are currently available?
5. How should they be most effectively allocated?
6. What additional materials and equipment are needed?
7. How will project materials and products be produced?
8. How will the methods and media be evaluated?

Action

This phase is the one for which all others have been preparation. This is the time when the methods are used, the materials produced, and the tasks completed. During this stage continual formative evaluation is essential to keep maximum efficiency balanced with maximum effectiveness, for neither must be sacrificed if the optimum product is to result.
Assessment

Summative evaluation and final assessment of the project to satisfy accountability requirements are undertaken when the total development and implementation phases are completed. In addition to assessment, the data collected in this operation are also used as input for the redesign and/or modification of the initial project, should it be repeated under similar need conditions.

The systematic design of Figure 40 is simplified in Figure 37. Using this linear configuration, the curricularist can substitute data applicable to whatever he determines to be his operational level. This format is also consistent with the model of intent developed in Chapter III. The educational participants assess the situation by recognizing their value systems and by diagnosing their needs, desires, expectations, and competencies. To this diagnostic information, knowledge of available curricular components is added to allow the educational participants to engage in prescription--the decision-making process.

The implementation of the decision in this model is synonymous with the learning event at the individual learning level in the model of intent. Evaluative diagnosis is, of course, a needed component at whatever operational level, because of the recycling nature of curricular events.
Fig. 37. — Simplified Design Format
CHAPTER V

SUMMARY AND RECOMMENDATIONS

This study can best be summarized through an itemization of the conceptual and pragmatic products that have resulted from the research and synthesis processes undertaken:

1. Theoretical dimensions for the identification of constructs related to the total curricular task
2. Reassessment of priorities assigned to curricular referents
3. An action-oriented paradigm for the generalization of curricular designs
4. Specific criteria for action in the curriculum development arena
5. A set of postulates to guide the work of the optimally functioning curricularist

Conceptual Products

The identification and utilization of theoretical dimensions related to the curriculum development process and the reassessment of referent priorities are abstract products upon which the more practically applicable
products have been based.

Theoretical Dimensions

Three dimensions of the curriculum development process have been selected on the basis of their combined discrete-but-comprehensive quality. They will allow the curricularist to identify generalizable constructs and theoretical formulations useful to the total curricular task. These dimensions are: (1) the temporality of process, represented in the operations of planning, implementing, and evaluating, which are critical to any intended curricular action; (2) the spatial or distance relationships between the primary educational participant and the person assuming the function of curriculum development; and (3) the conceptual dimension, which expresses the degree of generality.

These three dimensions are further explained and unified in Chapter III. Together they serve as a data gathering and organizing device for the curricularist concerned with the total educational enterprise.

Referent Priorities

The extensive examination of historical and current literature in the curriculum field has made it possible to identify many patterns of referent priority. Curricularists have indicated much more agreement on the identification of the referents themselves than on the priority
ratings assigned to each referent. Most curricularists have included the society, the learner, and the discipline or subject matter in some form within their area of concern.

If priorities were specifically assigned, the patterns generally followed the pyramid form, with one of the three referents considered primary, and the other two secondary.

If priorities were not assigned, the reader was left to wonder whether the priorities were implicit in the philosophy of the author or whether, in fact, each of the referents was considered of equal importance.

This study suggests a different arrangement, based on the changing role of the educational participant, the nature of contemporary society, and the function of knowledge as a means to achieve a primary objective of education: facilitation of the development of the person as an individual and as a fully functioning member of his society. This reassessment of priorities has led to the
placement of the learner in both preceding and succeeding positions, with knowledge being the means to the end, and the societal context providing both the environmental setting, which serves as the background for the development of individual perceptions, behaviors, knowledge and experiences, and the social-cultural milieu, in which the learner functions and to which he gives direction.

\[ \text{KNOWLEDGE} \quad \text{LEARNER}_1 \xrightarrow{} \text{LEARNER}_2 \quad \text{SOCIETY} \]

**Pragmatic Products**

The next three items resulting from this study are related to field application by the practicing curricularist: (a) the action-oriented paradigm; (b) the criteria for action; and (c) the major postulates.

For heuristic purposes the multiplaned concept allowing for spatial separation of elements posed by Gideonse,\(^1\) combined with the temporal concept associated with planning, implementing, and evaluating used by Duncan and Frymier,\(^2\)

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provide an adequate base from which to analyze the process of curriculum development. In reality, it is obvious that dimensions of a process do not exist apart from one another. For purposes of examination, however, it has been helpful to analyze the unique characteristics of identified dimensions. It must be remembered that they were again synthesized into the totality from which they were separated.

**Action-oriented Paradigm**

A major product of this study is a framework or paradigm from which specific curricular designs, meeting requirements of the unique situation, can be generated by the individual worker. This paradigm is designed to serve as an organizing framework for the actual task of developing curricular components or learning experiences at a variety of operational levels. To generate such specific designs the curricularist substitutes information unique to his particular situation for each generalized component in the paradigm. For detailed development of this framework, see Chapter III.

**Criteria for Action**

Four criteria for the optimum implementation of the major assumptions have been developed:
1. The broad assumption that the goal of the curricularist is to facilitate the "learning event" should be translated into operational terms.

2. The areas of inquiry that should be investigated prior to making educational commitments, developing curricular components, or making related decisions should be identified.

3. The participants in the educational enterprise, their sources of influence and power, and the processes in which they engage as participants should be recognized.

4. The procedures for implementation should be temporally sequenced into a systematic design.

Chapter IV of this study expands the development of these criteria.

**Major Postulates**

A final product of the analysis-synthesis processes of this study has been a set of postulates to guide the work of the optimally functioning curricularist.

1. As the distance from direct interaction with the learner increases, the data most useful to the curricularist changes its form and source from idiosyncratic to normative.
2. The processes of diagnosis and prescription are applicable only when the curricularist is in direct interaction with individual learners. The converse of this postulate is that the curricularist who works at a nonpersonal spatial distance from the learner facilitates the learning event by providing curricular segments or micro-units to be used by others who are in direct interaction with the learner, and who can therefore participate in the diagnostic and prescriptive processes.

3. While the process of curriculum development involves both technical-logical and intuitive decision-making, aesthetic rationality or intuitive-based decisions and actions are of primary importance at the interpersonal operational levels. Technological rationality fulfills the primary role at the nonpersonal operational levels where it is more appropriate to consider learners and their educational and environmental conditions in normative terms as elements in systematic relationships to one another.

The major postulates derived from an analysis of the curriculum development process in relation to temporal and spatial dimensions are graphically shown in Figure 38.
Fig. 38.--Curricular Dimensions in Relation to Function, Data, and Rationality Continuums
**One-to-one Level.** At the one-to-one level, the educational participants diagnose and plan in the pre-active stage; decide, prescribe, and implement the learning event in the active stage; and carry out evaluative diagnosis in the post-active stage. The curricularist's role primarily involves use of curriculum components in the diagnosis and prescription processes. To make valid decisions, unique individual data are required concerning the value system(s), needs, desires, expectations, and characteristics of the participants. A certain intuitive-aesthetic quality permits more complete and fulfilling mutual development of the participants in the learning event than does complete dependence on technological rationality.

**Small Group Level.** The small group operational level is similar in processes and characteristics to the one-to-one level with one major, and obvious, exception. Rather than only two, a number of people participate. This necessitates consideration of a dual role for each: (a) as a unique learning individual, and (b) as an interactive element in the educational context of each other participant. The scope of the pre-active planning and diagnosing tasks is enlarged; not only must the value system(s), needs, desires, expectations, and characteristics of each member be considered, but adequate attention must be given to group processes and to integrating individual objectives with perceived group goals.
As in the one-to-one operational level, the curriculartist's role involves use of previously designed curriculum components, individual data rather than normative data are required, and an emphasis on aesthetic rationality is important.

Building-District Level. In the transition from the small group plane to the building-district plane, as spatial distance from the learner increases, a number of distinct changes are evident. The curriculum worker's role changes from one predominantly concerned with the planning and implementation of the learning event to one concerned with the design and production of curricular segments and micro-units through program activities and projects.

During the pre-active stage at least three activities are appropriate: (1) the curriculum development team is established, working relationships and team rapport developed, and usable models and strategies reviewed; (2) general goals of the project or program are specified, the target population identified, and more specific but still temporary objectives delineated on the basis of the needs of the population and the system; and (3) normative data about the target population are collected, available resources itemized, limitations and constraints recognized, and specific and finalized objectives stated.

During the active stage, at least three more major tasks are undertaken: (1) the design of the development
program or project is finalized; (2) prototypes are
developed and tested, which in turn lead to the design and
production of the curricular components; and (3) finished
products are disseminated, including development of support
materials, teacher's in-service sessions, and material
distribution to the users.

The post-active stage represents the summative evalu­
ation, which provides data for accountability requirements
and for redesign should the project or program be recycled.
This stage of evaluation following the action stage of the
project should not be confused with the various types of
formative evaluation that should occur throughout the
design and development stages.

Comparison of the building-district level with the two
previously discussed levels indicates differences in the
role and tasks of the curricularist within the three
temporal dimensions; in the type of data needed, now norma­
tive rather than idiosyncratic; and in the type of ration­
ality most useful in decision-making, predominantly
technological rather than aesthetic.

State-Regional-Federal Level. The major difference
between the building-district level and the state-regional-
federal level of operation is the type of normative data
required. At the local level the selected populations
involved permit the use of more selective data based on
local conditions, political considerations, and economic
support levels. At the state-regional-federal level the data needed would necessarily be applicable to a more general population.

Thus the greater the personal distance from the learner, the greater the need for generalizable normative data and for the use of technological rationality to increase the effective/efficient nature of any program or project developed.

**Recommendations**

A non-empirical study dealing with theoretical constructs and conceptual models leaves many areas in need of additional exploration. In addition to field testing the products of this study, at least three areas can be specified as needing further investigation:

1. The emerging reconceptualization of the role of the participant in the educative process
2. The degree of congruence between stated goals and values and operating attitudes and behaviors
3. The need for stability and resistance to change in a period of rapid societal and technological transition

Since the major objectives of this study were concerned with processes of development rather than with validation, the major recommendation is that the results be field tested by curricularists working at a variety of
operational levels. One type of research adaptable to this task would be that identified in the management literature as operations research. Operations research, often referred to as OR, combined the application of the research approach (observing, hypothesizing, and experimenting) with the use of scientific tools or techniques for the identification and analysis of problem areas and the selection, implementation, and evaluation of solutions to operational problems—problems in their real-life situational context.

Three techniques, consistent with operations research, would also be appropriate in the study of the educational enterprise in general, and in the validation of the proposed paradigms relating to curriculum development specifically:

1. The systems approach, which allows for the consideration of broad consequences to an entire system brought about by modification or redesign of a particular segment or subsystem

2. The use of models and simulation, which allows for the exploration of consequences of various alternatives before the final act of decision-making

3. The deployment of personnel as a team rather than as individual researchers and evaluators, which permits the interaction of various specialized competencies rather than isolated reports and assessments.
Thus there is yet much to be done, much to be verified. "Nevertheless, it is necessary to try to put together the best ideas and the best comprehension of the present, even though tomorrow's findings may invalidate some of them."

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