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PHENIX'S THEORY OF STRUCTURE OF KNOWLEDGE:
SIGNIFICANCE FOR CURRICULUM DEVELOPMENT.

THE OHIO STATE UNIVERSITY, PH.D., 1978
PHENIX'S THEORY OF STRUCTURE OF KNOWLEDGE: SIGNIFICANCE FOR CURRICULUM DEVELOPMENT

DISSERTATION

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

By

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* * * * *

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PUBLICATIONS

Books written in Chinese and published in Taiwan, China:

The Possibility and the Perspective of Theology, 1-44 pages, March 1969.


FIELDS OF STUDY

Major Field: Curriculum and Foundations

Studies in Curriculum Theory. Professor Paul R. Klohr

Studies in Fundamentals of Curriculum. Professor Elsie Alberty

Studies in Instruction. Professor James K. Duncan

Studies in Philosophy of Education. Professor Philip Smith
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CHAPTER ONE

INTRODUCTION AND STATEMENT OF THE PROBLEM

An Overview of the State of the Field

A satisfactory definition of curriculum is not yet available. Two factors contribute to this situation. First, a definition is not to be taken as a finished statement indicating and interpreting a particular property or attribute which is never changed. The result of any new discovery in any area of study will inevitably lead to a reinterpretation of its definition. Cassirer underscores this fact:

For there is always a danger that this sum [of] property will be made up of components which negate one another, and the danger becomes particularly acute for an infinite manifold. Here methods of concept formation which are perfectly reliable and unobjectionable in the realm of the finite may well result in determinations that embrace a contradiction to the structural principle of the manifold.1

Second, curriculum, itself, consists of two elements (revision and development) which makes it difficult to define. An early scholar in the field, Zirbes, recognizes these two elements:

Development is better than construction, but it is ambiguous. If used here would it mean process, the way a curriculum becomes, or development, as an organism develops, or development as
it is used in speaking of what is being developed from 'blue prints,' as a suburban subdivision is developed, and is then spoken of as 'a development.' When one really thinks basically, the word becoming may have a misleading connotation, for a live curriculum goes on becoming and is not expected to become a finished development. 2

However, common to almost all definitions are two elements: content and process. For the purposes of this investigation the focus will be on these two. Beauchamp's definition of content is basic. Mooney's idea of process is also central.

Beauchamp defines curriculum substantively to include three elements: theory, schooling, and a course of study:

A curriculum is a written document which may contain many ingredients, but basically it is a plan for the education of pupils during their enrollment in a given school. It is the overall plan that is intended to be used by teachers as a point of departure for developing teaching strategies to be used with specific classroom groups of pupils. A second legitimate use of the term curriculum is to refer to a curriculum system as a sub-system of schooling. A curriculum system in schools is the system within which decisions are made about what the curriculum will be and how it will be implemented. A third legitimate use of the term curriculum is to identify a field of study. 3

Mooney, on the other hand, sees curriculum from its operational function. It can be defined as

. . . helping teachers to sense and follow children's belongings, beings, and becom­ings. . . to help children get themselves together in their various aspects of structur­ing experience so that they operate more easily whole than split. 4
From the content to the process, there are two closely-linked threads: educational objectives and the systematic arrangement of instructional stimuli (Goodlad). Most educators would agree with Goodlad that there is a distinction between curriculum and instruction. However, there will be no learning activities unless there is an interaction between the individual and his environment (classroom, teachers and materials).

A concept of curriculum that limits it to a post hoc account of instruction is of little value. Surely curriculum must play some role in guiding instruction. If so, it must be viewed as anticipatory, not reportorial.

The relationship between curriculum and instruction is shown by Mauritz Johnson in a model indicating that curriculum is an output of one system and an input of another (instruction).

Central to the problem of understanding curriculum phenomena is the nature of sources. The selection of the sources of curriculum clearly relates to the intended outcomes of education. The three sources of curriculum are usually viewed as:

1. the needs and interests of the learners
2. the values and problems of the society
3. the disciplines or organized subject-matter.
Figure 1

A Model Showing Curriculum as an Output of One System and an Input of Another
Among these three sources, Mauritz Johnson asserts that only the third can be considered as a source. Even at that, he still prefers to use "the total available culture" as the source of curriculum, because the recognized discipline may ignore the body of unorganized knowledge.

This was recognized by Bellack in 1956 when he identified '. . . the expanding content of the culture as the source of curriculum content,' which he defined, in turn, as '. . . those elements of the content of the culture which are considered appropriate or relevant to the instructional aims of the school.'

These three sources of curriculum are not exclusive. They are a matter of emphasis. Johnson makes an important point when he asserts that we had better choose teachable cultural content as the source of curriculum and also that the organized discipline is comparatively more important if it can reach out to include the unorganized knowledge. Phenix's curriculum theory supports this view as the more detailed analysis of his work will demonstrate.

Since an understanding of the nature of sources of curriculum is basic to an overall view of the state of the field and to an understanding of the context in which this study is undertaken, the following discussion of the three prevailing views of sources is relevant. This discussion centers on two conventional classifications of curriculum—the discipline-centered and the child-centered.
If all curriculum content is to be derived from the disciplines, it is evidently important to identify them. Each discipline has distinctive concepts and methods that set it off from other disciplines. In each case, these characteristic ways of inquiry have proved their power to increase knowledge and to economize learning. Jerome Bruner's discipline-oriented curriculum was seen as a curriculum manifesto in 1960. Today, curriculum theorists tend to see social problems as the crucial elements in the field of education. When we seek to generate a new curriculum rationale focusing on social issues, we have to be careful not to sacrifice the scientific achievements of the past decade. Therefore, it is valuable to discuss Jerome Bruner's *The Process of Education* to see what it might contribute to new knowledge in the field of curriculum.

For Bruner, the nature of knowledge is the content of curriculum. Bloom and Krathwohl's taxonomies of knowledge are useful in understanding what might be termed a Brunerian approach. These taxonomies are applicable to any of the subdivisions of knowledge or educational units into which school curricula are divided. Although the main purpose of the *Taxonomy* is for the classification of educational goals or objectives, it provides a better understanding of the structure of knowledge used by Jerome Bruner in his curriculum reform proposals which dominated the 1960's. The
Taxonomy divided knowledge into three domains: cognitive, affective, and psychomotor. The cognitive domain deals with knowledge itself such as comprehension, synthesis, and analysis. The affective domain deals with values, such as interests, attitudes, and appreciations. The psychomotor domain deals with motor skills, coordination, and adaptation. There is an overlap between the cognitive and affective domains. Those formulating the taxonomies make this clear. However, curriculum makers frequently disregard the fact of an overlap.

Cognitive domain contains six major classes: knowledge, comprehension, application, analysis, synthesis, and evaluation.

Knowledge, as defined here, involves the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure or setting. ... The process of relating is also involved in that a knowledge test situation requires the organization and re-organization of a problem such that it will furnish the appropriate signals and cues for the information and knowledge the individual possesses.10

Knowledge is organized and structured information used to transfer a skill or to generate other knowledge. In comprehension, the emphasis is on the grasp of the meaning and intent of the materials. In application, the emphasis is on putting a theory, method or principle into practice. It is used as a body of knowledge to transfer training.
Analysis emphasizes the breakdown of the material into its constituent parts and the detection of the relationships of the parts and of the way they are organized. Synthesis is defined as the putting together of elements and parts so as to form a whole. This is a process of working with elements and combining them in such a way as to constitute a pattern or structure not clearly there before. Evaluation is defined as the making of judgments about the value of ideas, works, solutions, methods, etc. It involves the use of criteria as well as standards for appraising the extent to which particulars are accurate, effective, or satisfying.

Affective domain is different from the cognitive in that it consists of values instead of facts. Values are interrelated in a structure of a view of the world; therefore, when one differentiates his own value system from the others, he gradually attaches emotional significance to it and reacts regularly to it. It is a process of internalization which represents continuous modification of behavior.

The Affective Taxonomy classified affective behavior into five levels: (1) receiving, which includes awareness, willingness to receive, and controlled or selected attention; (2) responding, which includes acquiescence in responding, willingness to respond, and satisfaction in response; (3) valuing, which includes acceptance of a value,
preference for a value, and commitment or conviction; (4) organization, which includes conceptualization of a value and organization of a value system; (5) value complex, which includes two categories, generalized set and characterization.

If we compare these two domains, we can see that there is an overlap, or connection, between them as stated in the Taxonomy in the following roughly parallel descriptions of levels:

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Bruner, in The Process of Education, says clearly in the preface that his proposals for the "new curriculum" are for the teaching of science. He states:

The intention was not to institute a crash program, but rather to examine the fundamental processes involved in importing to young students a sense of the substance and methods of science. Nor was the objective to recruit able young Americans to scientific careers, desirable though such an outcome might be. Rather, what had prompted the meeting was a conviction that we were at the beginning of a period of new progress in, and concern for, creating curricula and ways of teaching
science, and that a general appraisal of this progress and concern was in order, so as to better guide developments in the future.\textsuperscript{12}

Another special point in his approach is that the best way to teach science is not to teach the subject-matter, but to teach the structure of a subject in order to let students learn how to learn.\textsuperscript{13} The whole book concentrates on four themes: structures, readiness, intuition, and interest. Since these themes are so much a part of the so-called curriculum reform movement, they are delineated in some detail here.

In the Brunerian perspective, the curriculum of a subject should be determined by the most fundamental understanding that can be achieved of the underlying principles that give structure to that subject. Without a fundamental structure of a field of knowledge the teaching will be made extremely difficult. Students will lose interest and easily forget what they have learned because the knowledge they have acquired cannot be tied together in a systematic order. The use of the basic principles of various fields of inquiry in curriculum is very important. Bruner sees four general claims:

The first is that understanding fundamentals makes a subject more comprehensible. . . . The second point relates to human memory. . . . Third, an understanding of fundamental principles and ideas, as noted earlier, appears to be the main road to adequate 'transfer of training'. . . . The fourth claim for emphasis on structure and
principles in teaching is that by constantly reexamining material taught in elementary and secondary schools for its fundamental character, one is able to narrow the gap between 'advanced' knowledge and 'elementary' knowledge. 14

Bruner proposes a bold hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. In order to clarify his hypothesis, he examined three ideas: (1) intellectual development, (2) the act of learning, (3) the spiral curriculum.

1. Intellectual development. He thinks that the task of teaching a subject to a child is to arrange the structure of that subject in terms of the child's way of viewing things, that is, in the thought form of children. And this first representation of the structure of a subject can later be made more powerful and useful by virtue of this early learning. He introduced Piaget's intellectual development of the child (pre-operational stage); and then set forth an argument against Piaget's theory by quoting Inhelder's memorandum. Inhelder suggested in her memorandum that the teaching of science and mathematics, such as the invariance of quantities or probabilistic reasoning, led her to think that the basic ideas in science can be taught to children younger than the traditional age.

2. The act of learning. In the learning process there is a series of episodes called "learning episodes." Some
students have longer learning episodes, some students have shorter learning episodes. Each episode involves three processes in order to have a full understanding of the subject they are learning. The three processes are acquisition, transformation and evaluation. When we form a unit in curriculum, we have to recognize the importance of learning episodes. In the absence of learning episodes units drag on with no climax in understanding. Here we can see clearly that Bruner uses the act of learning instead of Piaget's intellectual development. In other words, he emphasizes the differences in children's mental activity rather than their psychological growth. He says, "There is a surprising lack of research on how one most wisely devises adequate learning episodes for children at different ages and in different subject matters."  

3. His concept of the spiral curriculum is an outgrowth of his basic ideas about the nature of learning. Since the structure of subject-matter can be taught to any child at any time, we had better encourage children to learn as early as possible. Therefore, the curriculum should be planned to fit children's capacities and to speed up the learning process by ordering concepts as if they continued in the form of an ever larger spiral.

For Bruner, analytic thinking is deductive reasoning, and intuitive thinking involves implicit perception. Once answers are achieved by intuitive methods, they should be
checked by analytic methods. This means a bold hypothesis has to be followed by a careful verification. Intuition is defined, as Bruner quoted from Webster, as "immediate apprehension or cognition." It means the act of grasping the meaning or structure without explicit reliance on the analytic apparatus of one's craft. It usually produces the wrong answers for the lack of verification, and most of the time, it looks imaginative. The problem is how a teacher can guide the intuitive student without the sacrifice of his gift. Bruner's suggestion is that teachers have to prepare their fields so well that they can go easily beyond the textbooks. 16

The nature of motives for learning is another important element in curriculum reform. The question is how to arouse the interest of students. Here, Bruner is clear about what must be done. First, the materials have to be so devised that they will challenge the superior students while not destroying the interest of average students. Second, in order to achieve an optimum level between apathy and temporary excitement for classroom activity, teachers should consider how to establish long-term interests. If students can develop a taste for a more active autonomy of attention, they will have a better change to pursue academic excellence. Social trends can also influence or reinforce students' interest and attention. In the early 1960's, scientific
research and concern for national security tended to dominate the social arena.

Theorists of child-centered curriculum usually base their rationale on Rousseau's *Emile* and Dewey's *The Child and the Curriculum*. Historian Lawrence A. Cremin has a perceptive comment on this theory source. He thinks that child-centered curriculum is a distortion of Dewey's intention and shifts the balance of Dewey's pedagogy. However, those who are in favor of child-centered curriculum are not without a sound reason for doing so. Dewey's strong opposition to formalism in philosophy makes him attack subject-matter in education. In *The Child and the Curriculum*, he says:

To the growth of the child all studies are subservient; they are instruments valued as they serve the needs of growth. Personality, character, is more than subject-matter. Not knowledge, or information, but self-realization, is the goal. To possess all the world of knowledge and lose one's own self is as awful a fate in education as in religion. Moreover, subject-matter never can be got into the child from without. Learning is active. It involves reaching out of the mind. It involves organic assimilation starting from within. Literally, we must take our stand with the child and our departure from him. It is he and not the subject-matter which determines both quality and quantity of learning.

Again, in *My Pedagogic Creed*, Dewey writes:

The teacher is not in the school to impose certain ideas or to form certain habits in the child, but is there as a member of the community to select the influences which shall affect the child and to assist him in properly responding to these influences (Article II--What the School Is).
I believe that the question of method is ultimately reducible to the question of the order of development of the child's powers and interests. The law for presenting and treating material is the law implicit within the child's own nature (Article IV--The Nature of Method). 20

We have to be aware that what Dewey speaks against is not subject-matter per se; it is the concept of subject-matter and the way it is handled in classrooms. It is not Bruner's discipline-centered curriculum that Dewey speaks against, it is the traditional concept of education he attacks. In effect, the "new psychology" Dewey saw in his time is no longer what Bruner now sees as the "new psychology." It should be noted that Dewey views subject matter both as a disadvantage and also as a necessary component of curriculum.

Dewey identified three "evils" in the traditional view of subject matter:

(1) The lack of any organic connection with what the child has already seen and felt and loved makes the material purely formal and symbolic. . . . The genuine form, the real symbol, serve as methods in the holding and discovery of truth. They are tools by which the individual pushes out most surely and widely into unexplored areas. They are means by which he brings to bear whatever of reality he has succeeded in gaining in past searchings. But this happens only when the symbol really symbolizes--when it stands for and sums up in shorthand actual experiences which the individual has already gone through.

(2) The second evil in this external presentation is lack of motivation. . . . When the subject-matter has been psychologized, that is, viewed as an outgrowth of present tendencies and activities,
it is easy to locate in the present some obstacle, intellectual, practical, or ethical, which can be handled more adequately if the truth in question be mastered. This need supplies motive for the learning.

(3) The third evil is that even the most scientific matter, arranged in most logical fashion, loses this quality, when presented in external, ready-made fashion, by the time it gets to the child. It has to undergo some modification in order to shut out some phases too hard to grasp, and to reduce some of the attendant difficulties. What happens? Those things which are most significant to the scientific man, and most valuable in the logic of actual inquiry and classification, drop out. The really thought-provoking character is obscured, and the organizing function disappears.22

But equally significant, Dewey also recognized the crucial importance of subject matter. For example, in Experience and Education, he suggested that any subject-matter has to be identified with the child's observation, memory, information and imagination in his life-experience. Otherwise, the child will not learn anything valuable.

From here as a starting point, the next step is to develop:

... what is already experienced into a fuller and richer and also organized form, a form that gradually approximates that in which subject-matter is presented to the skilled, mature person.22

Here we can perceive that his concept of an organized form of subject-matter is not much different from Bruner's idea of structure of knowledge.

The following are Dewey's three understandings of the use of subject-matter:
(1) In the first place, the experimental method of science attaches more importance, not less, to ideas as ideas than do other methods. There is no such thing as experiment in the scientific sense unless action is directed by some leading idea. The fact that the ideas employed are hypotheses, not final truths, is the reason why ideas are more jealously guarded and tested in science than anywhere else. The moment they are taken to be first truths in themselves there ceases to be any reason for scrupulous examination of them. As fixed truths they must be accepted and that is the end of the matter. But as hypotheses, they must be continuously tested and revised, a requirement that demands they be accurately formulated.

(2) In the second place, ideas or hypotheses are tested by the consequences which they produce when they are acted upon. This fact means that the consequences of action must be carefully and discriminatingly observed. Activity that is not checked by observation of what follows from it may be temporarily enjoyed. But intellectually it leads nowhere. It does not provide knowledge about the situations in which action occurs nor does it lead to clarification and expansion of ideas.

(3) In the third place, the method of intelligence manifested in the experimental method demands keeping track of ideas, activities, and observed consequences. Keeping track is a matter of reflective review and summarizing, in which there is both discrimination and record of the significant features of a developing experience. To reflect is to look back over what has been done so as to extract the net meanings which are the capital stock for intelligent dealing with further experiences. It is the heart of intellectual organization and of the disciplined mind.23

The child-centered curriculum cannot function without being involved both with disciplines of knowledge and with
the social context from which they derive and in which the child lives.

Joseph J. Schwab views the aims and methods of Dewey's new education as inherent to his conception of... inquiry: "a new conception of knowledge." "Its aim was not to explain and provide settled 'understanding' but to persuade its readers to embark upon a practice." Schwab has named this method "pragmatic rhetoric." Usually, this concept has been misused, as Schwab explains:

As the means by which Dewey hoped to convey his view of education, pragmatic rhetoric points to the fact that Dewey's evangelists rendered him a poor service when they interposed between him and the teacher a series of deceiving simplicities which purported to contain the 'new' view of education. This point applies to the present as well as the past. If teachers are effectively to guide their students through and to the exercise of intelligence, they cannot, themselves, be unreflective. The teachers college and the administrative structure of the school cannot afford, therefore, to repeat the error of the epitomists, to provide their teachers with fixed techniques, content to be learned by rote, and imposed curriculums. Teacher training ought, in some measure, to become teacher education despite the pressure of an expanding population. It ought to exhibit the material which their students will teach as matter for reflection rather than as matter for docile mastery. It ought to exhibit proposed ends and methods of instruction in some of their difficult, tangled, and doubtful connection with the imperfect and incomplete researches on society, the learning process, human personality, and similar topics, from which they stem.
Dwayne Huebner, a current curriculum theorist, defines education as "concern for man's temporality." He thinks there is a conflict between the needs of society and the needs of children in today's education. He has identified three components in curriculum: memory (or tradition), intention (or hermeneutic art), and community, a caring collectivity in which individuals share memories and intentions. Huebner further states:

By making these comments about the child as a new being, I do not intend to take a romantic view of the child, nor to make a statement about the goodness of man versus the evil of society. I do intend to call attention to the language for talking about the infant and child that tends to mask the life style of the parent and educator: traditions, memories, and intentions.

He urges that a curriculum person "think through the dialectical relationships between the individual and the society or community in such a way that both maintained some kind of rhythmic continuity and change."

Clearly, there is yet a third way of conceptualizing curriculum--namely, a curriculum that is society-centered. Robert S. Zais has commented that the discipline-centered curriculum appears to be in a decline. However, Bruner in 1971 came to the defense of the position that the discipline of knowledge does not neglect social reconstruction. He argues that knowledge of any discipline does not train children to become vocational experts without concern for
their economic and social life. He admits the limit of the idea of curriculum which should be expanded to the whole culture. The acquisition of knowledge is governed by selective purpose, but knowledge "transcends the uses to which it is put. What one has and how one gets it turn out to be quite different." Finally, he recognizes the difficulty and confusion inherent in this problem:

I believe I would be quite satisfied to declare, if not a moratorium, then something of a de-emphasis on matters that have to do with the structure of history, the structure of physics, the nature of mathematical consistency, and deal with it rather in the context of the problems that face us. We might better concern ourselves with how those problems can be solved, not just by practical action, but by putting knowledge, wherever we find it and in whatever form we find it, to work in these massive tasks. We might put vocation and intention back into the process of education, much more firmly than we had it there before.

A decade later, we realize that The Process of Education was the beginning of a revolution, and one cannot yet know how far it will go. Reform of curriculum is not enough. Reform of the school is probably not enough. The issue is one of man's capacity for creating a culture, society, and technology that not only feed him but keep him caring and belonging.

Curriculum involves cultural and ecological factors. Three issues are crucial to an understanding of this relationship. First, human development is culturally assisted. This leads to the second issue, the devices that human culture provides its participants to amplify and extend their potentialities. And finally, there is a limitation
of educability of the human biological organism.

Again, to cite Bruner, there are several prerequisites in the learning process:

One learns something in order to learn something next. One major function of human pedagogy is to develop and provide means that allow a learner swiftly and surely to run through various prerequisite series and thus to achieve a full and early use of the culture and its technology. But the construction of prerequisites presents difficulties. For one thing, the steps of instruction must match the child's own trends of growth. For another, the learner must be brought to independence at the end of the sequence rather than becoming perennially dependent on outside instruction.32

In a delineation of these complex relationships, Bruner relates learning to culture and politics. Pedagogical theory is not only technical but also cultural and political. Any educational reform confined only to the schools and not concerned with society is doomed to fail.

I have had the intimate experience over the last five or six years of participating in and observing the attempt to translate a more general theory into one single course in the social sciences, 'Man: A Course of Study' (1965), designed for the fifth grade. The experience has taught us all not to be casual about means. For it soon turns out that what seems like a simple pedagogical premise would, if implemented, produce a minor revolution in teacher training or in film-making or in school budgeting.33

In looking forward to education for the future, Bruner continues:
The first [form of activity] is that we shall probably want to train individuals not for the performance of routine activities that can be done with great skill and precision by devices, but rather to train their individual talents for research and development, which is one of the kinds of activities for which you cannot easily program computers. Here I mean research and development in the sense of problem finding rather than problem solving. . . .

A second special requirement for education in the future is that it provides training in the performance of 'unpredictable services'. By unpredictable services, I mean performing acts that are contingent on a response made by somebody or something to your prior act. Again, this falls in the category of tasks that we shall do better than automata for many years to come. . . .

Third, what human beings can produce and no device can is art—in every form: visual art, the art of cooking, the art of love, the art of walking, the art of address, going beyond adaptive necessity to find expression for human flair.

These three—research and development, unpredictable services and the arts—represent what surely will be the challenge to a society which has our capacity to provide technical routine. I assume we shall teach the technical routines, for that is built into our evolving system. Will we be daring enough to go beyond to the cultivation of the uniquely human?

The child's intellectual growth is much influenced by his or her environment—parents, social, and economic conditions. Basic research undertaken by Bruner and associates throws light on these matters:
(1). . . 'higher intelligence is fostered by warmth, support, and plentiful opportunity and reward for achievement and autonomy.' (Kagan and Moss, 1964)

(2) City mothers rated their children lower in potentialities for independence, for self-reliance, and for ability to help with the family. It is a cycle. When the poor mother moves to the city, she becomes trapped with her children--more irritable, more interested in keeping peace than in explaining and encouraging adventure. She often, then, produces the very behavior she rates down. The urban environment itself restricts outlets for the child and, at the same time, reduces the mother's confidence in her children's capacity for coping with those that are left (Graves, 1969).

(3) "The middle-class mother tended to allow her child to work at his own pace, offered many general structuring suggestions on how to search for the solution to a problem, and told the child what he was doing that was correct. . . . The general structure offered by the mother may help the child acquire learning sets (strategies) which will generalize to future problem solving situations.

In contrast, the lower-class mother did not behave in ways which would encourage the child to attend to the basic features of the problem. Her suggestions were highly specific, did not emphasize basic problem solving strategies, and seldom require a reply from the child. Indeed, she often deprived the child of the opportunity to solve the problem on his own by her non-verbal intrusions into the problem solving activity.' (Hess and Shipman, 1965)

(4) [There are] three modes of communicating: cognitive-rational, imperative-normative, and personal-subjective. . . . The highest concentration of the first mode was found among middle-class mothers. . . . What is most lacking in the less-advantaged mother's use of language is analysis-and-synthesis. (Hess and Shipman, 1965)
(5) . . . class system has affected the distribution of knowledge. . . . Where the meaning system is particularistic, much of the meaning is imbedded in the context of the social relationship. . . . Where meanings are universalistic, they are in principle available to all.' . . . In short, it is the parochializing effect of a culture of poverty that keeps language tied to context, tied to common experience, and restricted to the habitual ways of one's own group. (Basil Bernstein, 1970)35

At a symposium on the "Education of the Infant and Young Child" at the American Association for the Advancement of Science late in 1969 (Denenberg, 1970), Bruner was asked to prepare a summary of reports on major programs of intervention. Much of the curriculum development of the 1950's and 1960's was viewed as "intervention." Bruner summarized the knowledge about this approach as follows:

(1) . . . programs had to consider the mother as a major factor.

(2) growth involves a small, step-wise acquisition of skill and competence on a day-to-day basis.

(3) There is an enormous contribution to cognitive development from factors that, on the surface, are anything but traditionally cognitive.

(4) It is now widely agreed that the idea of 'enrichment' puts the child in the position of a passive consumer. . . . the child] must be helped to be on his own, to operate eventually on his own activation.

(5) . . . there seems to be a wide range of alternative ways to succeed in an intervention program, the provision for success being that they produce opportunities for mother and child to carry out activities that have some structure to them.36
Other educators who are interested in social change besides Bruner are Ivan Illich, Paul Goodman and Charles Silberman. We can trace back such current efforts to the sources on social reconstruction in the work of Harold Rugg and George S. Counts. John Dewey's *My Pedagogic Creed* (1897), and *The School and Society* (1899) also suggest the relationship between education and social change. The current curriculum reform movement is "essentially continuous with the efforts of the early progressives" (Cremin).37

The stance taken in this study parallels Bruner's view: "It is self-evident that each generation must define afresh the nature, direction, and aims of education to assure such freedom and rationality as can be attained for a future generation."38 In effect, it is time to reconsider the nature, direction, and aims of education. What are the directions and aims of education since the economic and social structures have undergone change? Most educators, after analyzing these issues, have reached two conclusions: social science as it is commonly conceived in mainstream educational research is not adequate; and education cannot be value free, for it is politically influenced if it is not, indeed, politically conditioned.

The scientific management of curriculum has emphasized efficiency and predictability. It has conceived of the child as raw material and schools as factories.39 Herbert
M. Kliebard makes this assertion:

In the first place, the theory of behaviorism has been raised to the status of canon law in the social sciences, and so we are admonished to state the design specifications which set forth how a student will turn out in terms of observable behaviors. Second, in the 1920s doctrine of social efficiency has been overlaid with a thin veneer of academic respectability, and so the modern design specifications tend to call for a student to identify certain points on a map or to reel off the valences of a set of chemical elements instead of emphasizing practical, nonacademic activities. 40

This feeling of dissatisfaction toward the social sciences as they have come to be used in much social science research is held not only by a few educators, it is also shared by an increasing number of philosophers and sociologists:

There were those who declared that the very foundations of the social sciences were rotten; that, more often than not, what was supposed to be objective scientific knowledge was in fact a disguised form of ideology that lent support to the status quo; that the most striking characteristic of the social sciences was not their ability to illuminate existing social and political reality, but their inability to provide any critical perspective on what was happening; that the thinking exhibited in these disciplines gave a false legitimacy to the social technical control and manipulation that was infecting all aspects of human life. 41

... A social theorist is confronted by a variety of data, and he sees that this material "makes sense" or "fits" with a given interpretation. But the logical fallacy underlying post factum interpretations is that there are a variety of crude hypotheses which are in some measure confirmed or verified by the "facts," but which are designed to account for conflicting and contradictory states of affairs. Post factum
interpretations and explanations are frequently so flexible, vague, or open that they can "account" for almost any data. Merton is alert to a point that has been emphasized by Peirce and reiterated in our own time by Karl Popper: scientific theories must be refutable and falsifiable, and not merely verified or confirmed.42

This challenge of the social sciences leads to a need for a thorough reevaluation of the aims and objectives of education. Mauritz Johnson's curriculum model, for example, makes clear that besides sources of curriculum, there are selection criteria and structuring criteria. What the objectives or criteria of curriculum should be are difficult questions. Dewey's criteria of experience and Tyler's rationale are two efforts to cope with these difficult questions.

Dewey makes a strong case that, in dealing with educational problems, one should have a sound philosophy of experience.43 The criterion of experience is continuity--a continuing growth in the function of interaction and of situations:

I have already mentioned what I called the category of continuity, or the experiential continuum. This principle is involved, as I pointed out, in every attempt to discriminate between experiences that are worth while educationally and those that are not. . . . So far, however, we have no ground for discrimination among experiences. For the principle is of universal application. There is some kind of continuity in every case. It is when we note the different forms in which continuity of experience operates that we get the basis of discriminating among experiences.44
According to Dewey, the formation of purposes is a complex intellectual operation. "... the meaning of purposes and ends is not self-evident and self-explanatory." Purposes can be perceived in their functions in experience. "Overemphasis upon activity as an end, instead of upon intelligent activity, leads to identification of freedom with immediate execution of impulses and desires."46

Gail Kennedy, a student of Dewey's thought, has said that Dewey's naturalistic philosophy has a missing link in his concept of criterion of evaluation which is not explicitly to be justified.47 This investigation is convinced that Dewey has never tried to justify this issue—a constant interplay within in the process of inquiry between means and ends.48 However, Kennedy tries to defend Dewey by quoting from The Quest for Certainty (p. 265): "Judgments about values are judgments about the conditions and the results of experienced objects; judgments about that which should regulate the formation of our desires, affections and enjoyments." For Kennedy, this will not do. The critic would say that it is merely a juxtaposition of a statement about fact and a statement about obligation.49

Secondly, in the theory of evaluation, there is always an antecedent standard to start with. And essentially it is circular which means to beg the question we are asked. To this, Kennedy gives his approval, because it did happen in
both Hegel's and Bentham's systems. What Kennedy really sees is that in the principle of continuity the interaction between the organism and the environment is a complex set of activities. The criterion usually changes its meaning in the process of growing. The principle of continuity can still apply but it should apply in a more extensive way, as Kennedy notes:

No one, I am sure, will doubt that as a matter of fact there is such a thing as the progressive development of standards, that this is one of the results of continuing inquiry, that our norms do grow out of our experience under the stimulus of an ingression of novelty. Thus, "health" is a criterion which has continually changed in meaning during the long history of medicine, and in the law, "due process" is a standard which has been progressively developed as new cases involving this conception have been argued and decided. In every field of practice, criteria gradually evolve as more and more of the specific problems within that field are solved. Since this development of new standards during a process of continuing inquiry does as a matter of fact occur, it should be possible to formulate an adequate theory as to how it occurs. The question, then, is, Does Dewey give us an adequate account of the evaluative process within which there is a development of standards or the formation of new ends?50

To this question, for Kennedy, the answer is, "No."

"It is his failure to be sufficiently explicit on this point which constitutes what I have called the hidden link in Dewey's theory of evaluation."51

Maxine Greene throws light on these problems as she relates her philosophical position to curriculum discourse.
She draws heavily from Paulo Freire's idea that "liberating education consists in acts of cognition." Freire's main thesis is that education is to present learning as a struggle to recover a lost humanity, and curriculum is to be seen as a resource for transforming what exists. Greene believes that in social reform, Dewey's problem solving is not as active as Freire's "plenitude of praxis." She writes:

Reared in a Deweyan tradition, few of us need reminding of the utility of problem-posing education, particularly when compared with mere transferrals of information. Nor must we be reminded of the significance of cognitive action, the mode of action that involves knowing what one is doing and doing things in a way that effects connections within experience, with a full awareness of suitability of certain means to certain ends. We can assume that this would result in what Dewey described as a "constant reorganizing or reconstructing of the knower's experience" or "a direct transformation of the quality of the experience." [Democracy and Education, p. 89] Meanings would become richer and more perceptible, Dewey would have said; the knower, or the learner, would increase his capacity to direct the course of his life.

Freire takes us beyond this view in several ways. One relates to the focal conception of praxis. The other has to do with consciousness of backgrounds, with "inner time." Praxis is a particular kind of cognitive action. It involves problem posing and problem solving, but it crucially involves, as well, the transcending or surpassing of the existing social situation.
Greene thinks that "the pragmatist tends to take social reality... for granted as a given, like the fork in the road." Freire's view, which Greene believes:

can be made relevant to teaching within the schools, demands that individuals begin not only with the posing of relevant questions but also with a clear sense of "a reality to be produced." They cannot, he believes, break with naive knowledge without some intention to carry out a preconceived project, "to bring about the projected state of affairs" [Alfred Schutz, The Problem of Social Reality, p. 67].

Ralph W. Tyler's Basic Principles of Curriculum and Instruction (1949) is an influential book in curriculum development. The rationale explicated in this widely used reference is focused on four questions:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?

These four questions are usually interpreted by most educators as: (1) formation of objectives; (2) selection of learning experiences; (3) organization of learning experiences; and (4) evaluation.

Actually, the important point is the first step of forming objectives; because the selection and organization
of learning experiences are the means to achieve the goals (objectives), and the so-called evaluation is also based on the goals (objectives) as it measures their achievement. As Tyler writes:

These educational objectives become the criteria by which materials are selected, content is outlined, instructional procedures are developed and tests and examinations are prepared. All aspects of the educational program are really means to accomplish basic educational purposes.57

What are the educational objectives, or criteria, and where are they from? According to Tyler, the criteria are from the sources: the learner, the contemporary life, and the subject matter. To these three sources of curriculum, Tyler has added two more: philosophy of education and psychology of learning which he has sometimes referred to as philosophical and psychological "screens."

In 1966, Tyler was asked to comment on whether there had been any changes in his position. He wrote an article in which he said: "I still find adequate and highly useful the original statement of the four divisions of curriculum inquiry." 58 However in 1970, Herbert M. Kliebard gave a sharp criticism of Tyler's rationale in which he concludes that "The most crucial step in this doctrine is obviously the first since all the others proceed from and wait upon the statement of objectives."59 He also analyzes the source of educational objectives and reduces all of them to
a single source--the philosophical screen. Kliebard criticizes Tyler for confusing content with objectives. What the Committee of Ten proposed were not objectives but "four programmes," Kliebard asserts:

Evidently, the Committee of Ten was acutely aware of the question of a differentiated curriculum based on probable destination. It simply rejected the doctrine that makes a prediction about one's future status or occupation a valid basis for the curriculum in general education. The objective of mental training, apparently, was conceived to be of such importance as to apply to all, regardless of destination.

Moreover, Kliebard sees that Tyler follows his "spiritual ancestor, Franklin Bobbitt," facing the same problem as Bobbitt did in Los Angeles in 1921-23, trying to filter educational objectives through a philosophical screen by ending up with an arbitrary choice within a list of values which is no criterion at all.

Finally, Kliebard criticizes Tyler's principle of evaluation as a kind of "product control." "To Tyler, then, evaluation is a process by which one matches initial expectations in the form of behavioral objectives with outcomes." When this concept is applied to curriculum, it raises certain difficulties:

One of the difficulties lies in the nature of an aim or objective and whether it serves as the terminus for activity in the sense that the Tyler rationale implies. In other words, is an objective an end point or a turning point? Dewey argued for the latter. "Ends arise and
function within action. They are not, as current theories too often imply, things lying outside activity at which the latter is directed. They are not ends or termini of action at all. They are terminals of deliberation, and so turning points in activity" [Human Nature and Conduct, p. 223]. If ends arise only within activity it is not clear how one can state objectives before the activity (learning experience) begins. Dewey's position, then, has important consequences not just for Tyler's process of evaluation but for the rationale as a whole.65

From the foregoing discussion it is clear that the contemporary curriculum theorists do not only emphasize political and social problems but also concentrate on philosophical presuppositions. The question is: What kind of philosophy can be adopted as a criterion to form educational goals in order to identify those problems and cope with them? Should educators draw on pragmatism or adopt logical positivism? Do phenomenological existentialism or Marxism offer viable alternatives? These are some of the kinds of basic questions that curriculum theorists must face today.

James B. Macdonald has classified curriculum theorists into three groups: (1) traditionalists; (2) empirical scientists; and (3) reconceptualists. His classification coincidentally agrees with Beauchamp's definition which describes curriculum as subject matter, schooling, and plan (theory). The third group of curriculum theorists, in
Macdonald's article, does not have a consensus formula. He writes:

The purpose of these persons is to develop and criticize conceptual schema in the hope that new ways of talking about curriculum, which may in the future be far more fruitful than present orientations, will be forthcoming.66

Although the present field of curriculum theory may be described as "confused," the fact that Macdonald and others such as Pinar have identified a small group of individuals who are engaged in criticism and an attempt to project alternatives is promising.

At a 1974 curriculum theory conference, Klohr, identified nine characteristics that he felt best characterized the work of this group Macdonald and Pinar called reconceptualists:

1. A holistic, organic view is taken of man and his relation to nature.

2. The individual becomes the chief agent in the construction of knowledge; that is, he is a culture creator as well as a culture bearer.

3. The curriculum theorist draws heavily on his own experiential base as method.

4. Curriculum theorizing recognizes as major resources the preconscious realms of experience.

5. The foundation roots of their theorizing lie in existential philosophy, phenomenology and radical psychoanalysis, also drawing on
humanistic reconceptualizations of such cognate fields as sociology, anthropology, and political science.

6. Personal liberty and the attainment of higher levels of consciousness become central values in the curriculum process.

7. Diversity and pluralism are celebrated in both social ends and in the proposals projected to move toward those ends.

8. A reconceptualization of supporting political-social operations is basic.

9. New language forms are generated to translate fresh meanings—metaphors, for example.

The Statement of the Problem

Against the foregoing overview of the state of the field of curriculum development and theory, this study will: (1) explicate a more adequate concept of the nature of curriculum; (2) analyze the contributions of Philip Phenix as these relate to the structure of knowledge, a major component of the curriculum concept; (3) generate a theoretical base that incorporates a comprehensive view of the structure of knowledge; and (4) identify some of the most basic implications of this theoretical base for research and for practice in the field.

Procedures of the Study

The study will employ a philosophical-historical mode of inquiry involving both analysis and synthesis. The investigation, itself, is viewed as a theory generating
effort, i.e., the kind of effort Macdonald describes in his third category of curriculum theorizers. The final test of the adequacy of such an undertaking rests with these kinds of questions: Does the work identify some of the critical issues of the field? Does it raise fresh questions that lend themselves to further inquiry and, finally, practical empirical testing in real school settings? Is the resulting conceptual framework one that can continue to be built upon?

The traditional limitations of this mode of inquiry are recognized in the context of education as an "applied" field. However, the claim is made that such theoretical efforts should have high priority at the present time in view of the well-documented "ahistorical" and "atheoretical" nature of the field of curriculum.

Organization of the Study

The study is reported in five chapters as follows:
Chapter One: Introduction and Statement of the Problem;
Chapter Two: The Nature of the Structure of Knowledge;
Chapter Three: Phenix's View of Structure of Knowledge;
Chapter Four: A Proposed Synthesis Drawing on Phenix;
Chapter Five: Conclusion and Recommendations.
NOTES AND REFERENCES


7. Ibid., p. 133.

8. Ibid., p. 132.


11. Ibid., pp. 49-50.


13. Ibid., p. 6.
14 Ibid., pp. 23-26.
15 Ibid., p. 49.
16 Ibid., p. 68.
19 Ibid., p. 24.
21 Ibid., pp. 106-107.
23 Ibid., pp. 86-87.
25 Ibid., pp. 253-54.
27 Ibid., p. 39.
28 Ibid., p. 37.


44 Ibid., pp. 33, 35, 36.


46 Ibid., p. 69.


49 Kennedy, p. 423.

50 Ibid., p. 424.

51 Ibid., p. 428.


53 Ibid., p. 77.

54 Ibid., pp. 77-78.

55 Ibid., p. 79.

56 Ibid.


60 Ibid., pp. 76-77.

61 Ibid., p. 73.

62 Ibid., p. 76.

63 Ibid., pp. 76-77.

64 Ibid., p. 79.

65 Ibid.


Modern Theories of Knowledge

Philosophically speaking, theory of knowledge means epistemology. If we ask the question "What do we mean by knowledge?" it is difficult to answer because it is a vague concept. According to Bertrand Russell, it is like asking "What do we mean by baldness?"\(^1\) This study will survey five epistemologies to clarify the concept and to provide a context for the analysis of Phenix's theory and its implications for curriculum theory.

Rationalists believe mathematical truths are not dependent on experience. Mathematical truths are established by deductive chains that link them with self-evident basic truths. Intuition guarantees each link in the chain of demonstration. Einstein says, "Our experience hitherto justifies us in believing that nature is the realization of the simplest conceivable mathematical ideas."\(^2\) It is in this sense, rationalists believe, that the mind reasons, and experience can be understood only through principles. The ideal education, for Plato, is a mathematical education, in which the mind comes to an apprehension of truths concerning
ideal forms and which equips the student to grasp the natural world as a correspondence to these forms. Descartes has the same interest but ends up with the method of rational doubt. Both of them believe that truth resides in ideas and not in things.

Empiricists insist that human knowledge is acquired from experience (this proposition is shared by both old empiricism and modern analytical philosophy). In the empiricistic tradition, natural science is taken as the primary concern. Natural phenomena are revealed by experience; they are not disclosed by intuition, nor are their interrelationships derived from self-evident axioms. The mind, in John Locke's language, is a tabula rasa at birth. Locke distinguished the primary qualities which belonged to the body and the secondary qualities which depended on one's perceptions. Berkeley pointed out that the same arguments apply to primary qualities. Hume called them "impressions." In the nineteenth century they were named "sensations"; in the twentieth century philosophers used the term "sense data." Hume's skepticism with regard to the world of science stems from two propositions. First, all my data are private to me. Second, the discovery that matters of fact logically never imply any other matters of fact. The first proposition is not taken as seriously as the second one by most philosophers. It is the second proposition which puts all hypotheses in a state of complete skepticism as to
all the inferences of science and common sense. This is why Bertrand Russell and Alfred North Whitehead published *Principia Mathematica* (1914) in order to make a deductive argument possible. We have to have a premise which is not analytically necessary, i.e., the hypothesis of its falsehood is not self-contradictory. Mathematics may be understood to represent either logical relationships among concepts, or experiences. The ideal education, for empiricists, is to train students to acquire knowledge either by direct experience or by sound logical deduction.

Pragmatists do not agree with the rationalist view that knowledge can be absolute. They do not agree with empiricists either; they think the emphasis on science can neglect human social problems. The logic of pragmatism is usually identified as "instrumentalism." This means that logic is concerned not with how men do think, but with how they ought to think. For Dewey, the process is one of trying and understanding--trying an idea in practice, and learning from the consequences as a result of such trial. Mathematical knowledge is continuous with logic in the pragmatist's scheme. It is an apparatus useful for elaborating the import of hypothetical ideas. For education, the pragmatists emphasize the process of learning from experience. The mind is conceived neither as a deep well of truths nor as a blank slate upon which experience writes.
Rather it is viewed as having the capacity for active generation of understanding through the interaction between an organism and its environment. The ideal education is to let students learn how to connect ideas with real problems.

Existentialism is a movement rather than a school of philosophy. Virtually each existentialist has his own interpretation about human existence. The area of existentialism is also broad including, for example, novels and dramas. It was first initiated by Kierkegaard speaking in Philosophical Fragments against Hegel's objective-rational system. Kierkegaard was a contributor to the breakdown of the universal synthesis by arguing that the system of essences is not the reality in which we are living. We are living in the realm of existence, and in the realm of existence reconciliation has not yet happened. Man is in the tragic situation. This despair is described in The Sickness Unto Death. The second emergence of Existential philosophy was in the fifth decade of the nineteenth century. It was associated with neo-Kantian idealism and Kierkegaard remained completely unknown. In the eighteen-eighties a new existential thinking came from the "Lebensphilosophie" (Philosophy of Life). It included Nietzsche, Dilthey, and Bergson. The "Philosophy of Life" is not identical with Existential philosophy, but for historical reasons we can perceive the development of this type of thinking. The third form of modern Existential
philosophy has resulted from a combination of this neo-Kantianism with Husserl's Phenomenology, and also from a rediscovery of Kierkegaard and the early writings of Marx.

It is this third and contemporary Phenomenological Existentialism that has greatly influenced American educators (especially Reconceptualists) and it is also this movement of thinking that has caused much confusion and misunderstanding. This difficulty has been recognized by Peter Koestenbaum, the editor and translator of Husserl's Paris Lectures.

To accept Husserl's analyses we must grant that vague experiences are legitimate objects of philosophic scrutiny. We cannot restrict our efforts to the simple, the clear, and the distinct. For example, the structures of experience that are analyzed under "ego," "intersubjectivity," "horizons," "transcendental subjectivity," "Lebenswelt," "intentionality," and the like, are neither clear, simple, nor distinct. Quite to the contrary, the analy-sandum consists of obscure, fuzzy, and cloudy clusters of experience.3

Husserl's epistemology attempts to have an objective description of experience instead of Descartes' deductive proof. He tries to solve the dualism of subject-object dichotomy by the method of phenomenological epoché in order to reduce and analyze the essence of consciousness--intentionality. The original meaning of the Greek word epoché is "bracketing." The method of phenomenology is to bracket "my experience" and then to describe this experience by removing myself from the scene. It is a state of inter-
subjective reflection of one's experience. Husserl reports it is follows:

The examination of the act of perceiving... discloses an intimate relation between the act (the cogito) and the object (the cogitatum). The act synthesizes the object. The object, in other words, is said to be an intention: the object is meant and intended by the act. The act of apprehension constructs, fashion, constitutes the object. The precise nature of this process—central to epistemology—is discussed in Husserl's theory of intentionality.4

When Bertrand Russell says that the question "What do we mean by knowledge?" is comparable to the question "What do we mean by baldness?", what is really in his mind is this:

"Knowledge" is a vague concept for two reasons. First, because the meaning of a word is always more or less vague except in logic and pure mathematics; and second, because all that we count as knowledge is in a greater or less degree uncertain, and there is no way of deciding how much uncertainty makes a belief unworthy to be called "knowledge," any more than how much loss of hair makes a man bald.5

It seems strange that Husserl's study of logic and mathematics does not lead him to a conclusion similar to British Empiricism. Rather, it makes him go back to the parallel interest of the Cartesian tradition. When American pragmatism tried to form a synthesis between Formalism and Empiricism, the majority of scholars were more empirical than rationalistic. But when they have faced the new situation between Empiricism and Phenomenological Existentialism, they are split into two groups. The
reason is that some pragmatists are still in favor of empiricism because of their scientific interest. In contrast, some inclining toward humanistic studies have found a congruence with the concept of human experience in phenomenology which some scholars perceived to be near that of William James. 6

Jean Piaget formulates a new epistemology which is based on biology. In Psychology and Epistemology: Towards a Theory of Knowledge he posits a theory of knowledge that is a process of adaptation of mind to reality. Epistemology cannot be confined to pure speculation. This investigation will briefly describe three points of Piaget's epistemology: his definition of new epistemology, his criticism of empirical study, and his way of approaching epistemology.

Scientific epistemology, for Piaget, is an historico-critical analysis of the growth of knowledge:

A scientific epistemology, conceived as an analysis of multiple cognitive processes in their diversity, is comparable to a kind of comparative anatomy of the structure of knowledge which would confront the most distant intellectual constructions in different scientific fields to reveal invariants and transformations. 7

Piaget concludes, from his research, that in the formation of knowledge, perception structured by preoperatory and operatory schematism, is not only incomplete but even false:
The fundamental vice of such empirical interpretation is to forget the activity of the subject. The entire history of physics, the most advanced discipline based on experiment, is there to show us that it is never sufficient unto itself and that the progress of knowledge is the work of an indissoluble union between experiment and deduction, in other words, a necessary collaboration between the data offered by the object and the actions or operations of the subject--these actions and operations themselves constituting the logico-mathematical limit beyond which the subject is never able to assimilate the objects intellectually.  

The nature of intelligence is adaptation--an equilibrium between the action of the organism on the environment and vice versa. "Assimilation" is used to describe the action of the organism on surrounding objects. It absorbs substances and changes them into something compatible with its own substance. "Accommodation" is used to describe the environment acting upon the organism.  

Piaget acknowledges that the cognitive process cannot be separated from the influence of the affective domain. They are distinct in content, but inseparable in function. Piaget writes:

Affective life and cognitive life, then, are inseparable although distinct. They are inseparable because all interaction with the environment involves both a structuring and a valuation, but they are none the less distinct, since these two aspects of behavior cannot be reduced to one another. Thus we could not reason, even in pure mathematics, without experiencing certain feelings, and conversely no affect can exist without a minimum of understanding or of discrimination. An act of intelligence involves, then, an internal regulation of energy (interest, effort, ease, etc.) and external regulation (the value of solutions
sought and of the objects concerned in the search), but these two controls are of an affective nature and remain compatible with all other regulations of this type.

Structure of Knowledge in Curriculum Theory

Structure of knowledge means different things to different people. There are two chief reasons for the range of meanings. One reason is the relationship and overlapping with epistemology. The other reason is that structure of knowledge has an unlimited variety and richness. This investigation concentrates largely on the first reason but implicitly deals also with the second. Israel Scheffler has classified five different questions concerning knowledge:

First, we may consider the epistemological question: "What is knowledge?" To seek to answer this question is to strive for a general description or definition, a statement of criteria of knowledge which may serve to clarify its logical status.

Secondly, there is the evaluative question: "What knowledge is most reliable or important?" To address oneself to this question is to ask for a classification of sorts of knowing and a ranking of these sorts by reference to some reasonable standard of worth.

Thirdly, we may note the genetic question: "How does knowledge arise?" To answer this question is to give an account of the processes or mechanisms by which knowledge develops: it is, typically, to provide some model of the mind that may render learning processes intelligible.

Fourthly, there is the methodological question: "How ought the search for knowledge to be conducted?" To answer this question is to offer some conception of proper methods to be
employed in inquiry, together with a justification of these methods.

Fifthly, we may consider the pedagogical question: "How is knowledge best taught?" To answer this question is to say how teaching ought ideally to proceed in the transmission of knowledge.11

It is the pedagogical question which the 1960's discipline curriculum has tried to answer. It is a new development not to ask the question whether knowledge is outside of man being available to learners, but to see that knowledge is man's effort to explain phenomena so that learners can produce knowledge. Bruner states the matter thus:

Knowledge is a model we construct to give meaning and structure to regularities in experience, the organizing ideas of any body of knowledge are inventions for rendering experience economical and connected. We invent concepts such as force in physics, the bond in chemistry, motives in psychology, style in literature as means to the end of comprehension.12

Educationists tend to travel on an uncharted map. They invent concepts. In the process of their journey, on the one hand, they have caused some confusion with epistemological problems; on the other hand, they have discovered the richness of new knowledge. Philosophy is no longer "queen of the sciences" as it was in the Middle Ages. Aristotle might think that he was writing a history of natural science by stating the laws of syllogism. But,
unfortunately, the modern sciences, especially physics, have achieved most of the time at the cost of philosophy. As Russell has commented on Locke's theory of knowledge, "Ever since Berkeley, Locke's dualism on this point has been philosophically out of date. Nevertheless, it dominated practical physics until the rise of quantum theory in our own day."\(^\text{13}\)

Joseph J. Schwab has generated a biology curriculum based on the conceptual structure of knowledge to investigate the nature, variety and function of knowledge in natural science. However, it has significant implications for the whole of education. He has divided structure of knowledge into three categories: organizational, syntactical and substantive.

The problem of the organization of the disciplines is the problem of classification. To identify the disciplines is to select the resources of curriculum. To arrange the relation of the disciplines to one another is to form the purpose of instruction. There are varieties of classification. For Schwab, the important point is not that each classification can afford a complete list of disciplines and definitions, "but rather (a) the distinctions it uses to distinguish disciplines; and (b) the educational problems and issues which these distinctions raise to
visibility.14 Schwab has introduced three different classifications of disciplines, those of Auguste Comte, Plato, and Aristotle.

Sociology
Biology
Chemistry
Physics
Mathematics

The above scheme of Comtian order reads from the bottom up. The principle of classification is that of dependency. Sociology develops after biology is known. Biology, in turn, rests on chemistry and so on. Comte's philosophy explains human knowledge in three different phases: theological, metaphysical, and positive. He thinks that the first two stages of philosophy seek cause and essence which are of uncertainty; the third seeks laws. It is this third stage--the positive sciences--he tries to develop.

But in his later works, he changed his interest in favor of utilitarianism. "The unity of knowledge is in 'science,' but a science which aims toward a religion of humanity whose truths are utilitarian."15 Schwab has suggested that the Comtian hierarchy can be read in a reverse order.16 For Comte, sociology is closer to the human mind in inquiry rather than it is an obstructive knowledge which he has held before. Schwab has thought that it might be tempting
to insert psychology between biology and sociology; however, "Comte would not, since psychicals would not be amenable to positive investigation." 17

In this analysis of various perspectives, it is instructive to examine Plato's classification:

<table>
<thead>
<tr>
<th>Pure reason</th>
<th>&quot;Real&quot; ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding</td>
<td>Hypothetical ideas</td>
</tr>
<tr>
<td>Belief</td>
<td>Things</td>
</tr>
<tr>
<td>Conjecture</td>
<td>Images</td>
</tr>
</tbody>
</table>

In The Republic, Plato outlines the organization of knowledge. The Divided Line in Book VI gives the basic structure and the allegory of the Cave in Book VII figuratively claims the unity and direction of inquiry. The purpose of Plato's scheme is not to emphasize the classification of knowledge, but the formation of concept from knowing. Mathematics, in his time, is to be seen as a pure idea, or an archetype. Plato argues that knowledge lies within the soul of each of us. Concepts are developed by dialectic invention. Schwab sees three important senses in Plato's construction: First, the search for the meanings of words
(images) leads to natural things. A diversity of things will lead to a smaller number of hypothetical ideas; these will come to be representative principles or real ideas. The second sense is that such a move toward unity is a proper aim of dialectic. The third sense is that the objects of Platonic inquiry are not subject matters but the inquirers (knowers) knowledge is within. The learners have to cultivate their minds through the objects of inquiry (conjecture, belief, understanding, and pure reason). Finally, Schwab draws from the Platonic scheme an analogy of influence in the two major directions of modern education: one is current interests as "problem-solving" through inquiry; the other is that "the scheme has bearing on all efforts at integration of the curriculum."19

Aristotle, also, attended to the problem by projecting an organization of the disciplines:

The theoretical disciplines

\{ \begin{align*}
\text{metaphysics} \\
\text{mathematics} \\
\text{physics (natural sciences)}
\end{align*} \}

The practical disciplines

\{ \begin{align*}
\text{ethics} \\
\text{politics} \\
\text{rhetoric}
\end{align*} \}
The productive disciplines

The classification of knowledge is arranged into a hierarchy of knowing, doing, and making (creativity). The highest form of knowledge is the theoretical disciplines. It requires capacities for logical reasoning, inductive thinking and abstraction. The second class of disciplines is practical. The object is doing, which is concerned with choice, decision, and action. The third is the productive disciplines. Practitioners in these disciplines must have the capacity to give content to form.

The idea of Plato was maintained and developed by Aristotle in an organic whole, a whole that precedes its parts. Schwab perceives that the most important thing missing in modern education is Aristotle's practical disciplines.

In the case of the practical disciplines, we manage this by ignoring them. No public school and few private schools expend any substantial part of their resources on character development. We pretend that the home and the church are still the appropriate institutions for this purpose; or we postpone efforts indefinitely on the pretense that a consensus about goods is a necessary prerequisite to character education; or we fail to
find out how far the behavioral sciences are able to give us means and methods for character development in an institutional, urban setting.20

What is the syntax of the disciplines? Schwab defines it as a way of discovery and proof, a criterion for measuring the quality of its data, an application of its canons of evidence.21 It is not a method, he asserts:

Rather, syntactical structure concerns itself with concrete descriptions of the kinds of evidences required by the discipline, how far the kinds of data required are actually obtainable, what sorts of second-best substitutes may be employed, what problems of interpretation are posed, and how these problems are overcome.22

Moreover, "Most statements of most disciplines are like the single words of a sentence. They take their most telling meanings. . . from their context, their place in the syntax."23

The syntactical structure has its two main principles--verification and discovery. The conclusion from scientific research is not a determination; it is an interpretation of one area of knowledge and a process of reconstruction and discovery. Schwab, by using an example in biological research, expressed these two principles clearly in "The Long Term Syntax of the Sciences."24

Some inquiries are short-term in the sense that separate problems can be pursued separately in a short
period of time. The inquiries that usually fit in one pattern are stable in the sense that their authors think they know exactly what they are doing. The substantive structures are accepted as if they were eternal principles. The principle guides the inquiries, but is never, itself, the subject of our inquiry. For instance, "If the conception of unit gene is the going conception in genetics, the stable inquirer in that field tries to find how many genes and which ones control each of a number of identifiable traits."23

The long-term syntax is also called fluid inquiry. It is an inquiry set up to challenge the validity of conceptual frames of short-term inquiry. The stability and confidence in the short-term inquiry usually turn out to be inconsistent and disparate.

Suppose that by this experimental pattern we have determined that organ X has function A, while organ Y has function B. Then, by accident or design, an experimenter removes both organ X and organ Y from the same animal, only to discover that the result is something far different from the expected mere sum of the losses of function A and function B. Here, then, is a startling disparity between what is expected on the basis of the substantive principle and what is actually disclosed.26

The long-term inquiry has a function to put the question dictated by a given or accepted principle of inquiry as a test of that principle.
According to Schwab, there are four purposes of fluid inquiry, which are:

First, to detect among stable enquiries the incoherencies of data, the failures of subject matter to respond to the questions put under the aegis of the extant structures, the conflict of conclusions, which indicate inadequacies of the substantive structure used.

Second, ... to obtain clues from current stable enquiries as to the specific weakness or inadequacy which characterizes the principle in question.

Third, ... to devise a modification of the existing structure or a wholly new structure to replace it.

Fourth, ... to test proposed new structures by submitting them to the community of the discipline for debate, defense, and attack.27

Substantive structure of knowledge in science is very difficult to describe because of its variety and complexity. Schwab even said that ... "it is impossible to describe the substantive structures of the sciences in general."28 Substantive structure is conceptual structure. Because conceptual structures can change this means that any body of knowledge dependent on that structure is not always stable.

For the knowledge which develops from the use of a given concept usually discloses new complexities of the subject matter which call forth new concepts. These new concepts in turn give rise to new bodies of enquiry and, therefore, to new and more complete bodies of knowledge stated in new terms.29
In this sense, it is comparable to or overlapping with the course of fluid inquiry in syntactical structure. However, it is a conceptual structure dealing with relationship, connection, and interaction of the constituents of knowledge. It is a structure of understanding the powers and limitations of the disciplines as reflected in the knowledge it produces. 

It also has two main principles—the revisionary character and concurrent development: the former accrues from the continuing assessment and modification of substantive structures, the latter shows us the inadequacies in our substantive structures which enable us to conceive new structures to the richness and complexities of knowledge.

The forms of substantive structures consist of five main kinds:

**REDUCTIVE PRINCIPLES.** Reductive principles instruct the enquirer to treat his subject matter as something which takes on its important properties from elements or parts of which it is constituted.

**HOLISTIC PRINCIPLES.** Holistic principles are superficially the opposite of reductive ones. Where reductive principles instruct us to find our explanation of wholes in their constituent parts, holistic principles require us to treat the larger whole as itself simply "being" (i.e., describable but not explained) and demands an account of discernible parts in terms of the unexplained whole.

**RATIONAL PRINCIPLES.** Principles of this kind require that the subject of interest be seen as given its character by its place in some
larger determinative whole or by some ratio imposed from without. . . . It will be noted that rational principles appear to overlap the formal holistic. The difference lies in the fact that formal holistic principles seek explanations of parts in terms of the formal whole where both whole and part are conceived as the proper subjects under investigation (e.g., the human organism and its parts); the rational principle, on the other hand, attempts to account for what it treats as its legitimate subject matter in terms of a larger, pervasive formal pattern which is not its proper subject of study. . . .

ANTI-PRINCIPLED PRINCIPLES. Anti-principled principles embody the familiar view that science ought to avoid principles and stick to the "facts." There are two common forms of such anti-principles. On the one hand, the "facts" take the form of algebraic or verbal equations whose terms are supposed to be in one-to-one correspondence with objective, discrete, measurable quantities. This sort of anti-principle is commonest in physics.

Elsewhere, and especially in the biological sciences, the "facts" take the form of chains of Millsian antecedent-consequent relations. The antecedent and consequent events are treated as objectively given and no rash statements about "cause" are made. There is only the affirmation of invariant antecedent-consequent relation. Some anti-principled investigations are carried on on principle. Their authors accept as prescriptive such positivistic notions as those of Mach and Karl Pearson. . . .

PRIMITIVE PRINCIPLES. Occasionally, a science may exhaust its current principles and find no effective replacements at hand. In such cases, enquiry may be refreshed temporarily by return to problems couched in common sense or practical terms. . . .
Reconceptualists' View of Knowledge

What does the term reconceptualist mean? The works of reconceptualists, according to James B. Macdonald, have appeared "to hang in an interesting but somewhat fuzzy relationship to educational activity." However, William Pinar, the editor of Curriculum Theorizing: The Reconceptualists, describes reconceptualists as minorities in the curriculum field—only 3 to 5 percent. They are trying to introduce "existentialism and phenomenology to the field, in order to provide conceptual tools by which we can understand human experience of education."

Philosophically speaking, existentialism is a revolt (Paul Tillich), and metaphorically speaking it is a "return to Greece" (Paul Klohr). Educationally, existentialism is a movement against positivism, i.e., discordance between right hand and left hand (Bruner). For instance, in the area of history, the positivist understanding of history is known as historicism. The method is to use the texts and monuments of history as "sources," seeking to reconstruct from them a picture of the past. It is concerned with facts and dates, that an historical event has objectively happened, and that the data should be kept as accurately as possible. Existentialist philosophers, especially Heidegger, see that historical facts do not just mediate what is present but are always the expression of a
possibility of human existence. This is a radical change in the interpretation of history. Instead of being apprehended by reality, man attempts to comprehend it. This attitude has been shown by the historian Reinhard Wittram:

The great historical occurrences of the past always appear to me like frozen waterfalls; images from which the life has fled, cold, rigid, and remote from us. . . . We grow chilly when we contemplate the greatness of fallen empires, vanished civilizations, burnt-out passions, dead intelligences. . . . If we take this seriously, we are seized by the thought that as historians we are practising a strange business: we dwell in cities of the dead, we embrace shadows, and pass judgment on the departed. (Reinhard Wittram, Das Interesse an der Geschichte, Göttingen, 1958, pp. 15ff)

Existentialism in education is a movement emphasizing humanistic concern in order to achieve a balance with scientific oriented curriculum in order to make possible a whole growth for the learners. It is difficult to introduce each individual essay; therefore, this research will single out three persons representing three different orientations: Phenix, drawing from religious existentialists such as Tillich and Buber; Greene, using atheist existentialists such as Sartre and Camus, Mooney, writing from psychologists such as Piaget and Carl Rogers.

Phenix limits his definition of "transcendence" to a narrow point (phenomenological immediate experience) in order to use it as a basic presupposition of a certain
set of curricular goals and styles. The word "style" was also used by Whitehead in *The Aims of Education* seeing style in an esthetic sense as the last acquirement of the educated mind. There are three dimensions of transcendence in Phenix's mind: infinitude of process, extension, and the qualitative. The first dimension is based on Bergson's *elan vital* and on Whitehead's *Process and Reality*; the second dimension is based on Whitehead's philosophy of organism in the concept of "ingredience"; the third dimension is based on Tillich's protestant principle, the principle of protest that denies any absolute qualitative ultimacy to an historical actuality. The protestant principle is distinct from "Protestantism" and other conceptual principles of interpretation (idealism, naturalism, dialectical materialism, etc.). It is a principle of justification through faith, the protestant principle that enables us to understand and interpret nature, society and personality. But the Reformation did not work out the implication of its re-discovery. Justification through faith came to be too narrowly interpreted as a means of salvation with the result that the individual human being is freed from the medieval church. The meaning of human existence is lost.

Phenix tries to use the concept of transcendence to form a relation of *identify-in-difference*. On the one hand,
he tries to overcome the dichotomy of subjectivity and objectivity. On the other hand, he maintains its duality.

However, the following two aspects have to be clear when we approach his concept of transcendence. First, "transcendence" is used to understand the meaning of essential humanness, a middle way between skepticism and dogmatism. Bertrand Russell sees that between ossification and dissolution, a social cohesion is necessary, and "man-kind has never yet succeeded in forcing cohesion by merely rational arguments." Phenix tries to resolve this difficulty as he knows it is the secret of man's unique adaptability:

All the varieties of human meaning exemplify this self-transcendence. It is the secret of man's unique adaptability. Because of it he can make judgments of truth and falsity, of beauty and ugliness, of right and wrong, of holiness and profanity; he can predict and control events, use tools, create interesting objects, make laws, organize socially, know the past, and project purposes. In short, this inherently dual quality of experience is the source of all that is characteristically human.

Secondly, as this investigator perceives it, Phenix has based his concept of quantity (singular, general and comprehensive) on Whitehead's extension, and his concept of quality (fact, form and norm) on Tillich's protestant
principle. By linking these two aspects (quantity and quality) with the six realms of meaning, he has formed the nine generic classes of knowledge, which he sees to be the foundation of general education.

The main points of Maxine Greene's "Curriculum and Consciousness" are: (1) to emphasize the individual's learning experience, which is quite congenial with Dewey's *The Child and the Curriculum*, and (2) to have a literary criticism or philosophy of criticism which includes analytic philosophy and existentialism. It is clear that she is trying to plant continental philosophy on American soil as she has said in *Teacher as Stranger*:

At best, however, the teacher will face many options; and he can never be sure. He may be so distressed by the inroads of the system, by "production-orientation" and the rest, that he may opt for a concentration on spontaneity and free-form discoveries. He may feel that the most effective way to avoid the pressures of channeling and social control is to concentrate on the cultivation of personal sensitivity, the nurture of trust, the expression of feeling—even to "ecstasy." He may be convinced that emphasis on the experiential continuum Dewey describes and on the dispositions needed for reflective thinking or for inquiry is now required if inhumane systems are to be overhauled and the environment remade. He may believe depersonalization can be overcome if emphasis is placed on perceptual awareness and being present to the self. Only then, he may conclude, will the individual commit himself fully—and on his own initiative—to cognitive learning, for the sake of ordering the stuff of his life-world and creating a new reality.
If he does choose himself as a teacher more concerned with combatting meaninglessness than enhancing sensibility or encouraging expressions of "real feeling," he is likely to find suggestive ideas in both Deweyan thought and phenomenological perspectives.47

Greene's concept of consciousness is difficult to define, because she uses various resources. They include Sartre's epistemological and ontological interpretation of consciousness, "For-itself," starting from one's "prereflexive Cogito" (Being and Nothingness, p. LII),48 Merleau-Ponty's "primordial consciousness," the ground of all knowledge and rationality, and Freire's "background awareness," which is of an existential situation actually lived before the codifications.49 She also draws from Piaget's concepts of "decentering" and "epistemic subject." But, she rejects his concept of "individual subject" which, according to Greene, can be reduced to "epistemic subject":

The difference between Piaget and those interested in consciousness is, of course, considerable. For one thing, he counts himself among those who prefer not to characterize the subject in terms of its "lived experience." For another thing, he says categorically that "the 'lived' can only have a very minor role in the construction of cognitive structures, for these do not belong to the subject's consciousness but to his operational behavior, which is something quite different (Jean Piaget, Structuralism, p. 68). I [Greene] am not convinced that they are as different as he conceives them to be. Moreover, I think his differentiation between the
"individual subject" and what he calls "the epistemic subject, that cognitive nucleus which is common to all subjects at the same level" (Structuralism, p. 139), is useful and may well shed light on the problem of curriculum, viewed from the vantage point of consciousness. 50

Greene's effort is trying to use the new knowledge from the vantage point of action in the light of pragmatic instrumentalism. In this sense, her concept of consciousness can be clarified by her language as follows:

If it is indeed the case that the world is, in effect, meaningless for those who do not impose orders of their own, it is trivial to focus primarily on affect and sensitivity when attempting to help a learner resist false consciousness and control. Cognitive action is required: a naming of the world, a striving toward awareness of the self in action, of the forces that work to condition and those with the potential of setting the individual free. The learner must be enabled to take diverse vantage points on his own reality so as to understand in his own terms limitations and possibilities. And his learning must involve, as Merleau-Ponty puts it, a rediscovery "of my actual presence to myself, the fact of my consciousness which is in the last resort what the word and the concept of consciousness mean" (Phenomenology of Perception, p. xvii).

We are all aware that consciousness does not mean mere innerness or introspection. When we think phenomenologically, we realize that consciousness means a thrusting toward the things of the world. It refers, in fact, to the multiple ways in which the individual comes in touch with objects, events, and other human beings. These ways of coming in touch include all the activities by means of which realities present themselves: perceiving, judging,
believing, remembering, imagining (Aron Gur-witsch, The Field of Consciousness, pp. 3-6, 268). We realize, too, that consciousness is characterized by intentionality. It is always of something—something which, when grasped, relates to the act of consciousness involved as the meaning of that act.51

Based on her understanding of consciousness as self-reflection, she can hardly agree with R. S. Peter's and Phenix's academic discipline approach to curriculum theory.52

She adopts Schutz's metaphor of a stranger coming to a new town and referring to a new map as a model to explain Kafka's novel, Amerika, by analyzing the character, Karl Rossmann. This analogy tells us that Karl has failed to learn in a new situation because he cannot "bracket out" his subjectivity; and "he is incapable of breaking with egocentrism; he will remain alienated from himself and his own possibilities; he will wander lost and victimized upon the road; he will be unable to learn."53 Karl needs to learn more than what is understood as problem-solving.54 He has to function as an epistemic subject and move out of his own inner time into the intersubjectivity of a real world.55 "The 'work,'" Greene says, "with which we are here concerned is one of disclosure, reconstruction, generation. It is a work which culminates in a bringing something into being by the reader--in a 'going beyond' what he has been"56 (Sartre, Search for a Method, p. 91).
What is this "something" which needs to be brought into existence and what is its criterion? Greene has left this question unanswered.

Mooney's "The Researcher Himself" speaks not only to researchers but also to teachers. The difference between them is a matter of degree. "Good teachers can readily become good researchers." Moreover, the essay not only has a deep analysis of education, but also gives a fundamental challenge to the whole western culture. There are two splits in the tradition of the West. First, there was a split between man and the supernatural during the Middle Ages, and then there was another split between man and nature after the Renaissance and Reformation. Bertrand Russell makes a similar comment, that philosophy in the West is no man's land. "Philosophy, as I shall understand the word, is something intermediate between theology and science." Only a hairline between reason and revelation, between science and religion: finally, as Mooney sees it, they come apart:

The same split holds today though the form nature takes is not now a wilderness but the physical and chemical structures out of which are manufactured our technological advances. . . . In this separation of man from the to-be-conquered "out there," it is easy for a researcher to assume that man is separate from that which he seeks to comprehend and to stop with a concept of research which leaves no place for the researcher in what he creates.
The split is a process of alienation of human nature from man's being. How the researcher himself deals with this situation is the main theme of this essay. It focuses on the inner drama--the researcher's intimate experience with himself during his research activity--by using a metaphorical description. The metaphors used to see the researcher are consumer and producer.

The first analogy is that of shopping at a grocery store. A consumer's purpose is to choose a particular item which he likes best and which he feels will be most satisfying to his taste. A producer of any item of food has to know the difficult and complicated process of manufacturing the product.

The second analogy is that of a play--a playgoer who watches the play (consumer) and an actor who is in the play (producer).

The playgoer takes the action as a cue to the unfolding of the play and takes the play as significant according as it fits into the personal experience of his life. The actor, on the other hand, takes the action as a cue, not only to the progression of the play, but to the way in which the person performing the action is handling himself in structuring his role. The playgoer can forget an actor is a person behind the role he takes, but an actor cannot forget the person because he knows that any role an actor takes is structured out of a person, as well as out of a play. . . . An actor who is watching another actor, however, will look behind the role taken into the role taking.
The third analogy is that of a map maker—one who makes maps from other people's maps (consumer) and one who makes a map from his direct experience on a journey (producer).

Though both the producer and consumer make decisions, the producer is much more caught in necessities for self-commitment, self-knowing, self-confidence, and self-decision. It is not that what the consumer does is arbitrarily wrong, for acquaintance with the maps of others is what allows a producer to construe a map of meaning to other when structuring his direct experience into a map form, but rather that what the consumer does leaves out the core which the producer must use to integrate and direct what he does.

The consumer's view in research is to be identified with one who holds the view of the splits. Mooney has listed four reasons explaining why this view is appealing, another four reasons describing what this view does to the producer.

Why the consumer's view is appealing:

(1) We are broadly exposed to a consumer's orientation by a long and infiltrated cultural tradition which splits man from nature (or God) and gives man no substantial place to put himself when he tries to join the two (or three).

(2) We are able to accept the split and feel at home with it because of an ancient psychological inheritance which provides the position of witch doctor to solve just such problems.
(3) Furthermore, we are trained in operating split-wise by our years of schooling where the self of the learner is separated from the subject to be learned, and the former is made subservient to the latter.

(4) Graduate schools, which might be expected to make the shift to a producer's view in their training of research workers, get caught in the cultural tradition, the psychological milieu and habits of past schooling so that they, too, often do not help their students transcend the splits to realize the integrations needed for fruitful research production.

What the consumer's view does to the producer:

(1) Cramps the producer's thoughts by requiring him to use an intellectual system based on arbitrary splits—truth versus value, logic versus feeling, universality versus uniqueness, science versus art, nature versus man, etc. Much of the researcher's strength is bound up in just getting things separated and kept in their proper places.

(2) Introduces anxiety in the producer's thinking by making the arbitrary intellectual system also an arbitrary moral system. To one half of the splits are assigned the qualities that make for the good, the true, and the perfect; to the other half are assigned the qualities that make for the bad, the false, and the imperfect. The good half is the impersonal half; the bad half is the personal half. Every time a researcher makes an intellectual split, he is also making a judgment involving the placement of himself with respect to his being personally good or bad. A mistake in classification risks personal guilt.

(3) Robs the producer of a positive motivation by denying him the chance to claim anything good for himself: nature cannot be claimed, for it is already presumed to be separate from him; creation can't be his for it is nature's; truth can't be his for it, too, is nature's; ways of
getting at truth can't be his because they are already prescribed by, and are the property of, science; his problem cannot initially be his because it must first come from science; not even his conclusions can really be his because they must be shown as coming from independent facts and data which "speak for themselves."

(4) Enforces on the producer a negative motivation by assigning him a negative, trouble-making role. Values may be his but they are misleading; feelings may be his but they are private and are to be ruled out of bounds; the uniqueness of his personality may be his but it is distorting. Self-participation in inquiry only deforms the data. Man is the imperfect one, the weak one, the little one, the partial one, the created-but-not-creating one, the deformed one, the guilty one in any aberrations. On contrast, nature is flawless, true, perfect, powerful, inclusive, creative. It is man who, damned in the very act of being born a man, is also recurrently damned throughout his life because he is the maker of any mistakes.

Whereas the consumer's world view presents the splits, the producer's world view provides a framework integrating man and nature. There are some characteristics a producer has to have:

(1) He feels open and friendly toward his universe.

(2) He believes in himself as a legitimate and necessary center of his experiencing.

(3) He has faith that what he can consciously do can have a worthwhile influence on his universe.
(4) He feels comfortable in thinking esthetically.
(5) He is not only an observer but also a generalizer.
(6) He has an attitude to take research as a creative enterprise.
(7) He sees himself as an agent rather than as a subject or an object.

Mooney’s metaphor of "producer" is, in many respects, a modern version of progressive education. His thinking shows a deep understanding of John Dewey—a strong feeling against dichotomy, and an emphasis of personal growth through the transaction between an organism and his environment.64

As a producer, each one has to make his own map if he sees his learning experience as a journey. The direction of a journey is important because it leads one the best way to the destination. What is the criterion for an effective educational policy? One of Mooney's poems gives a clue.

Consummation

The fruit of the tree ripens;
it offers itself
as seed for the morrow.

Creation creating, created--
and the createds now form
the source for creations
on their way to creating
creations again, and new born;
the creators involved
to discover themselves
as means to the song--
and more--
as creation, itself, coming on.

The source of creation is the source of life. It is the horizon beyond man, the possibility of integration of nature and culture. It is a state of mind in shaping and grasping what already has gone into its fulfillment. Man as an energy system, as Mooney sees him, is constantly spending his energy and also seeking renewal by fresh inclusion. Life is an organic process of being and becoming in space and time. According to Klohr, man is the creator of his own culture, and he is also the bearer of his creation. In his journey, the recommended map is not a substitute for his journey. He needs guidelines in order to discover new routes, thus making his journey existing. However, a criterion is necessary for guidelines in order not to be lost. Man has to select his own values, but he has to be guided by his maturity in the conquest of sentimentalism and superficial identification. Man, as an agent, has to recognize the source of creation in order to achieve a coordination between his uniqueness and universality, a relation between separateness and mutuality.

Phenix's synoptic view of a philosophy of education is of this approach. The source of life, i.e., the essence of human nature is a criterion for curriculum development.
NOTES AND REFERENCES


4Ibid., p. XXII.


6Paul Tillich says in Theology of Culture, ed. Robert C. Kimball (New York: Oxford University Press, 1970), p. 79, "Accordingly, we should also assign certain features of pragmatism, especially of William James' thought, to this philosophy of Existence as immediately experienced."

Also Peter Koestenbaum in his "Introductory Essay" to Husserl's The Paris Lectures, p. XVIII, "Husserl rejects altogether this problematic Cartesian dualism. He prefers what, in effect, looks very much like a complex version of William James' neutral monism."


8Ibid., p. 87.


10Ibid., p. 6.

12 Jerome S. Bruner, On Knowing: Essays for the Left Hand (New York: Atheneum, 1970), p. 120.


17 Ibid., p. 12.

18 Ibid., pp. 15-17.

19 Ibid., p. 17.

20 Ibid., p. 21.

21 Ibid., p. 11.

22 Ibid., p. 28.


25 Ibid., p. 39.

26 Ibid., p. 40.


31 Ibid., pp. 38-41.


43 Russell, History of Western Philosophy, p. 22.

44 Phenix, Realms of Meaning, p. 22.


50 Ibid., p. 302.


53 Ibid., p. 313.

54 Ibid., p. 311.

55 Ibid., p. 312.

56 Ibid., p. 302.


58 Ibid., p. 180.

59 Russell, History of Western Philosophy, p. 13.


61 Ibid., pp. 188-89, 175.

62 Ibid., p. 189.

63 Ibid., pp. 184-86.

64 Ibid., pp. 197, 192.

CHAPTER THREE

PHENIX'S VIEW OF STRUCTURE OF KNOWLEDGE

Western philosophy is originally Greek. The three elements of the concept in early Greek philosophy—rhema (data), mythos (idea), and logos (language)—have played major roles in different schools of philosophy. The presupposition of modern philosophy in the West is the analysis of language rather than the expression of meaning. When contemporary existentialism is concerned with the matter of personal experience, it emerges a totally different approach to human language—a hermeneutical interpretation of meaning.

Phenix calls himself a classic realist. His philosophy of education, based upon the British-American tradition, brings together science and the humanities. His early Ph.D. dissertation was a study of the theological dimension in modern physics. Since then, he has kept this interest. He sees that meaning is the knowledge of understanding. "I consider my major work [to be] dealing with the epistemology of the various ways in which experience can be interpreted through the several groups of disciplines."
His life career is concerned with personal knowledge drawing heavily from Martin Buber's *I and Thou* and also from John Macmurray's two Gifford Lecture series (1953-54) "The Form of the Personal." The first series of these lectures was entitled *The Self as Agent* and the second series *Persons in Relation*.

**The Major Books of Phenix**

This phase of the study will explicate four of the major volumes written by Phenix. These are the four which he asserts are most representative of his ideas.

*Philosophy of Education* (1958) is a precursor of Phenix's epistemology in education. He believes that knowledge is basic in human development and therefore, "that the theory of knowledge must become a part of any satisfactory philosophy of education."³ The purpose of education is to increase human understanding and appreciation of knowledge in its complexities, ramifications, and connections. It is to provide a critical comprehensive view rather than a conventional didactical outlook. "This understanding in turn ought to provide a basis for appraising more fairly the claims made for knowledge, showing in what sense we know something and by what criteria the claims for knowledge can be made good."⁴
There are four contrasting aspects of knowledge according to Phenix's analysis:

First, there is a contrast between "knowing" and "having knowledge." It is a distinction between knowledge in its function and knowledge in its substance. The process of knowing is dependent on how much one has attained in his learning. The process and accumulation of knowledge are correlated. Phenix has a strong feeling against the "either-or" approach which usually leads to an extreme:

There are educators who are so concerned with developing the processes of knowing, through instruction in 'problem solving,' in 'research,' or in 'critical thinking,' that they neglect or repudiate the hard-won knowledge which has become the accumulated intellectual treasure of mankind. By this rejection they unwittingly undermine and impoverish the very process which they so single-mindedly seek to promote. On the other extreme are the educators who are so concerned to preserve the knowledge which has been handed down by the wise men of the past that they fail to develop in the learner any adequate competence in judging, applying, and creating knowledge.

Secondly, there is a contrast between "knowledge of" and "knowledge about." This is a distinction between direct knowledge and indirect knowledge, between immediate knowledge and mediate knowledge.

Thirdly, there is a contrast between perceptual and conceptual knowledge. This is a distinction closely related
to knowledge of and knowledge about. These two aspects of knowledge are both necessary, and their use should depend upon individual differences and upon the nature of subject matter. Phenix says, "Percepts without concepts would provide no real meaning or understanding. . . . . Concepts without percepts would be empty ideas, words with no concrete significance." In this sense, he is close to Kant's idea.

Fourthly, there is a contrast between propositional and non-propositional knowledge. This is a distinction between knowledge which can be symbolized in a statement through human language and knowledge which cannot be stated in a mediated form. Phenix comments that in an age of science, people are more impressed by propositional knowledge in a position looking for validity and information. He advocates the restoration of balance in education to recognize the importance of non-propositional knowledge.

Phenix also emphasizes the social nature of knowledge and the unity of knowledge. There are differences in standards for validating knowledge which is essentially social in nature. Different standards reflect different educational aims. On the other hand, knowledge is the search for truth which is independent from social agreement. However, knowledge is for use in human society and requires
communication. Unless there is mutual understanding, there is no possibility for communication. The agreement about the methods and content in a social group is called by Phenix a "community of discourse." \(^8\)

Knowledge in its social dimension is always relative to a given community of discourse. There is no truth-in-general, but only truth within the definitions agreed to by a particular communicating group.

Effective education takes place only within such communities of discourse. Knowledge cannot be meaningful nor truth powerful in the absence of clarity about the standards by which these communities are defined. Much teaching is ineffective because of confusion about the criteria of meaning. . . .

The point here is not that a single method of validation should be adopted, but that for any given area or item of knowledge meanings must be clearly defined by stating precisely what must be done to test the knowledge claimed. That is to say, there must be definite communities or discourse for all meaningful knowledge. It is only within such social contexts that growth in understanding can reliably take place.\(^9\)

Since we need a "community of discourse" to promote educational aims, it is feasible to have an agreement in knowledge, i.e., the unity of knowledge having a coherence between practice and theory in function and an integration between science and humanities in content. Phenix criticizes the unity of knowledge as poorly conceived either by a rejection of the validity of certain sources of knowledge or by reduction to one aspect of knowledge.\(^10\)
The reduction of knowledge is seen in modern times by science. Scientists would deny the validity of knowledge in values and emotions, because they think this kind of knowledge cannot be substantiated by logic and the senses. They assert that the only means of access to knowledge are exclusive and reductive procedures. What they prefer is an artificial unity of knowledge "which does not do justice to the true richness and variety of man's cognitive life." Phenix expresses this problem in the following way:

Perhaps the goal of unified knowledge—of that Truth which unites all partial truths—is not to be reached by restrictive definitions and reductive procedures but by the progressive enlargement and interweaving of the various communities of intelligible discourse. The ultimate unity would then consist not in a single set of facts, nor in one source or method, nor in one tradition or revelation, but in one community of persons who in all the manifoldness of their experience would be able to understand one another. It is one of the primary offices of philosophy and of the philosophy of education to assist in the creation of such a community.

As for the relationship between science and knowledge, Phenix has an excellent analysis in the eighteenth chapter of the book. He believes that there is a variety of methods in science and "there is no such thing as a scientific method in the sense of a single clear-cut procedure which one must follow to be scientific." For
instance, the method of discovery and the method of justification are both needed in scientific research. He clarifies this:

The problem of method in science is further complicated by the fact that the process of discovery may be entirely different from the procedure used to justify and confirm what has been discovered. Many an important discovery has been made accidentally. . . . However, once the discoveries have been made, it is necessary to develop procedures for establishing them firmly within the framework of scientific knowledge, and this calls for a kind of logical rigor and experimental adequacy which might have been lacking in the process of discovery.14

As to the question "What is science?" Phenix prefers to see it rather as an attitude. It is an attitude of curiosity, of belief in progress, of confidence in intelligence, of faith in the orderliness of nature, of modesty, and of respect for evidence.15

Education for the scientific attitude precludes the view that science is simply one area of study to be included in the curriculum. The scientific attitude is a pervasive personal outlook, which cannot be made to operate only in a restricted field. To become scientific-minded is to become a special kind of person with attitudes which will be apparent in all of one's thought and behavior.16

There are also some crucial aspects of science, the two most important of which are observation and experiment. Observation is a "constant subjecting of the existing modes of understanding the world to testing and retesting by further experience. . . . Experiment is a process of
observation under controlled conditions." These two aspects of science have to be used interchangeably. A consistent and close observation can reveal the deficiencies of existing knowledge—a contradiction between expectation and actuality. After the discovery of some contradiction demonstrated by observation, the most important work for the scientist to do is reconstruct the structure of knowledge in order "to make the expected and the actual agree." 

Realms of Meaning is one of Phenix's major works. The purposes of the book are to sketch and to reflect modern man's search for meaning in two categories: first, to show the forces of skepticism, frustration and confusion in present-day life, and second, to suggest some of the kinds of resources available for the construction of a meaningful philosophy of general education.

There are two types of knowledge: knowledge in quest of reason, and knowledge in quest of meaning. The former is comparatively easy to grasp, but the latter is rather elusive and sometimes even irrational. After acknowledging the importance of the influence of Bruner's *The Process of Education* on the structure of knowledge and the processes of disciplinary inquiry, Phenix proposes a similar reform in general education. His intent in this regard is expressed as follows:
In a somewhat similar vein, the present volume is an attempt to elaborate a philosophical theory of the curriculum for general education based on the idea of logical patterns in disciplined understanding. The central thesis is that knowledge in the disciplines has patterns or structures and that an understanding of these typical forms is essential for the guidance of teaching and learning. This thesis grows out of a concept of human as rooted in meaning and of human life as directed toward the fulfillment of meaning. The various patterns of knowledge are varieties of meaning, and the learning of these patterns is the clue to the effective realization of essential humanness through the curriculum of general education.

The next step one faces from his perspective is how to organize all knowledge in a structure of underlying ideas or principles. In the area of the humanities, the structure is not as clear as in the nature sciences. Phenix tries to solve this problem by defining the word "meaning" as a broad base, which covers all realms of knowledge. He asserts:

This difficulty can be avoided by using a unifying concept that expresses the broader connotations of the idea of reason. The concept proposed is meaning. This term is intended to express the full range of connotations of reason or mind. Thus, there are different meanings contained in activities of organic adjustment, in perception, in logical thinking, in social organization, in speech, in artistic creation, in self-awareness, in purposive decision, in moral judgment, in the consciousness of time, and in the activity of worship. All these distinctive human functions are varieties of meaning, and
all of them together--along with others that might be described--comprise the life of meaning, which is the essence of the life of man.21

The word "meaning" lets him not only have a departure from the Existentialists,22 but also from the Experimentalists.23 This fundamental concept is more pedagogical rather than philosophical. Phenix projects four dimensions of the concept:

The first dimension is that of experience. A meaning is an experience, in the sense that it pertains to human consciousness. It refers to the inner life, or the life of mind. This inner life has the peculiar quality of reflectiveness, or self-awareness. . . .

The second dimension of meaning is rule, logic, or principle. The many types of meaning are distinguished from one another by some difference in characteristic form. Each type of meaning has its own rule that makes it one kind of meaning and not another. Each is defined by a particular logic or structural principle. . . .

The third dimension of meaning is selective elaboration. Theoretically there is no limit to the varieties of meaning. . . . From the endless variety selection occurs. The types that are significant in actual human life are the ones that have an inherent power of growth and lead to the elaboration of the enduring traditions of civilization. . . .

The fourth dimension of meaning is expression. Meanings that have civilizing power are communicable. They are not private property. The communication of meanings takes place through symbols. Symbols are objects that stand for meanings. The possibility of symbolization is dependent on the unique human power of self-


transcendence, for the dual quality of reflective awareness is required to understand a symbol.

Summarizing, these are the four dimensions of meaning: the experience of reflective self-consciousness, the logical principles by which this experience is patterned, the selective elaboration of these patterns into productive traditions represented by scholarly disciplines, and the expression of these patterns by means of appropriate symbolic forms. These dimensions all pertain to the idea of meaning and help to explicate it.

If the essence of human nature is in the life of meaning, then the proper aim of education is to promote the growth of meaning. To fulfill this aim, the educator needs to understand the kinds of meaning that have proven effective in the development of civilization and to construct the curriculum of studies on the basis of these meanings.24

General education, according to him, is not elementary, but fundamental for human growth. There are six patterns of meaning: symbolics, empirics, esthetics, synnoetics, ethics, and synoptics. They are regarded as main elements of general education.25 Four principles are stated as guidelines in instruction:

(1) The materials for instruction should be drawn from the organized scholarly disciplines.

Understanding the disciplines is therefore essential to good teaching, for the disciplines are the key to knowledge and methods of inquiry that have demonstrated their fruitfulness in learning. Without the disciplines the teacher is cast adrift on a sea of arbitrary opinion. This is not to assert that knowledge from the disciplines is sufficient,
for good teaching, for the teacher is a mediator and not primarily a specialized scholar. A specialist in a discipline can be a failure as a teacher because he lacks ability or concern for mediation.\textsuperscript{26}

(2) Content should be chosen so as to exemplify the representative ideas of the disciplines. They are clearly of great importance in economizing learning effort.

Representative ideas are therefore at one and the same time principles of growth and principles of simplification. They are principles of growth because the patterns they reveal prove to be productive of further insight, yielding more and more particular exemplifications of what they typify. They are principles of simplification because they provide a kind of map of the discipline that keeps one from getting lost in the details. This is a surprising fact, that an understanding of the very ideas that make a discipline fertile, causing knowledge in it to expand rapidly, is also the basis for simplifying the task of learning the discipline.\textsuperscript{27}

(3) Representative ideas usually disclose methods of inquiry. Methods are useful in teaching. They are not only leading to discovery, but also can help us overcome skepticism, fragmentation, surfeit, and transience.\textsuperscript{28}

(4) The goals of selection have to be related to the quality of teachers and students rather than to the logic of the field in order to promote creativity and imagination.

Suppose now that the concept of meaning presupposed by the functionalists is mistaken and that what students really care for, even if for one reason or another they may not
to acknowledge it, is the awakening of the inner life through the nurture of imagination. Then studies directed toward the satisfaction of organic and social demands will not enlist enthusiasm or induce effective learning. Students will respond to and learn readily materials that release them from their ordinary concerns and lift them onto a new plane of meaning.

After a close analysis of the patterns of the disciplines, Phenix has divided the six realms of meaning into nine generic classes. The following is from Realms of Meaning. It is also in "The Architectonics of Knowledge," a paper delivered by Phenix in 1963 at the Fifth Annual Phi Delta Kappa Symposium on Educational Research at the University of Illinois, and published in 1964:

**LOGICAL CLASSIFICATION OF MEANINGS**

<table>
<thead>
<tr>
<th>Generic Classes</th>
<th>Realms of Meaning</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>Quality</td>
<td></td>
</tr>
<tr>
<td>General Form</td>
<td>Symbolics</td>
<td>Ordinary language, mathematics, nondiscursive symbolic forms</td>
</tr>
<tr>
<td>General Fact</td>
<td>Empirics</td>
<td>Physical sciences, life sciences, psychology, social sciences</td>
</tr>
<tr>
<td>Singular Form</td>
<td>Esthetics</td>
<td>Music, visual arts, arts of movement, literature</td>
</tr>
<tr>
<td>Singular Fact</td>
<td>Synnooetics</td>
<td>Philosophy, psychology, literature, religion, in their existential aspects</td>
</tr>
<tr>
<td>Singular Norm</td>
<td>Ethics</td>
<td>The varied special areas of moral and ethical concern</td>
</tr>
<tr>
<td>General Norm</td>
<td></td>
<td></td>
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</tbody>
</table>
Meaningful learning is based on a fruitful understanding. An understanding is a continuing reconstruction of what has been perceived before; it is not a fragmentary juxtaposition of subject matter. Six realms of meaning in Phenix's curriculum theory are arranged to provide the foundations for all the meanings coming into human experiences. They are interconnected in a life situation. In practice, meanings seldom appear in pure and simple form. According to Phenix, the symbolics and synoptics are placed at two ends of the other four realms to form a whole spectrum of meanings which are interdependent. The fourth realm, synnoetics, has played an important part in the whole system. It has to do with a knowledge of human understanding of self as a human being at the root of human nature. He explains:

The fourth realm, synnoetics, embraces what Michael Polanyi calls 'personal knowledge' and Martin Buber the 'I-Thou' relation. The novel term 'synnoetics,' which was devised because no existing concept appeared adequate to
the type of understanding intended, derives from the Greek *synnoesis*, meaning 'meditative thought,' and this in turn is compounded of *syn*, meaning 'with' or 'together,' and *noesis*, meaning 'cognition.' Thus *synnoetics* signifies 'relational insight' or 'direct awareness.' It is analogous in the sphere of feeling. This personal or relational knowledge is concrete, direct, and existential. It may apply to other persons, to oneself, or even to things.30

When we consider the synnoetics to be central, and move from the symbolics to the synoptics, we shall see that our knowledge increases in quantity and changes in quality. In other words, the extension of knowledge represents the intention of knowledge, and the intention of knowledge is expressed in the extension of knowledge. It is true when we start learning to form a concept or categorization, we try to identify the attributes and reduce the complexities. The nature of attributes having been clarified and expanded, our comprehension improves.

As Phenix's realm of synnoetics is mainly based on Buber's *I and Thou*, it is worthwhile to examine some of its significant concepts. It is a popular and a difficult book. It is popular because it speaks to the modern age dealing with anthropological foundations and sociological implications.31 It is difficult to read because Buber's Jewish Hasidic tradition gives readers the wrong impression and often causes them to identify him with romanticism.32
However, this book has a wide influence in the academic society. Walter Kaufmann, the translator of the book, compares it with John Dewey's *A Common Faith* in succeeding in endowing the social sphere with a religious dimension.  

The main theme of the book emphasizes the importance of human relationships in personal encounters instead of philosophical speculation or scientific analysis. The book consists of three parts discussing the subjects of basic word, humanistic I, and religious You. This investigation will concentrate on the first two parts.

Basic words are spoken in a person's mode of existence.

The basic word, I-You can only be spoken with one's whole being.

The basic word I-It can never be spoken with one's whole being.

There is no I as such but only the I of the basic word I-You and the I of the basic word I-It.

When a man says I, he means one or the other. The I he means is present when he says I. And when he says You or It, the I of one or the other basic word is also present.

Being I and saying I are the same. Saying I and saying one of the two basic words are the same.

Whoever speaks one of the basic words enters into the word and stands in it.  

This person-to-person relationship is a radical criticism of Western philosophical tradition. A philosophy
of solipsism or subjectivism can hardly have room for a second person. For Descartes, the *cogito* is an assertion of "I am a substance whose essence is thinking." For Buber, man is not a thinking subject. A person's existence is in reciprocity and mutuality with others. He expresses this relationship:

> And even in the primitive function of cognition one cannot find any *cognosco ergo sum* of even the most naive kind, nor any conception, however childlike, of an experiencing subject. Only when the primal encounters (Urerlebnisse), the vital primal words I-acting-You (Ich-wirkend-Du) and You-acting-I, have been split and the participle has been reified and hypostatized, does the I emerge with the force of an element.35

It is clear that this essential twofoldness cannot be overcome by any ideology of ontology. The actual human life is a real personal encounter rather than a subjective ego apart from other egos. "The basic word I-You establishes the world of relation."36 There are three realms of relations, according to Buber:

The first: life with nature. Here the relation vibrates in the dark and remains below language. . . .

The second: life with men. Here the relation is manifest and enters language. . . .

The third: life with spiritual beings. Here the relation is wrapped in a cloud but reveals itself (*sich offenbarend*), it lacks but creates language.37
Buber's emphasis on language in human relations shows his deep Hebrew religious faith. The Hebrew God is a God of hearing not of the Greek concept of seeing. God is not an object of discourse, concept, or even experience. "He cannot be spoken of, but he can be spoken to; he cannot be seen, but he can be listened to." The human relations between I-Thou and I-It can be realized from this spiritual fountain which is on a boundary running across the world of ideas. When a genuine personal relation functions in school, it is an encounter between pupils and teachers. As Buber says:

Elsewhere I have characterized the relationship of a genuine educator to his pupil as being of this type. The teacher who wants to help the pupil to realize his best potentialities must intend him as this particular person, both in his potentiality and in his actuality. More precisely, he must know him not as a mere sum of qualities, aspirations, and inhibitions; he must apprehend him, and affirm him, as a whole.

Man and His Becoming is the Brown Haley Lectures delivered at the University of Puget Sound in 1963 by Phenix. The book deals with the disciplines as revealing facets of human nature. Human nature has played a crucial role in the history of education. Man's existence and his development (growth), his actuality and possibility, his inclination and expectation, all of these have a great influence on deciding policy-making in education.
When talking about human nature, one usually goes back to the knowledge about human nature—the understanding of man from different fields of study. This holds true whatever one's theory of knowledge may be, the knowing person may depend on the theory of knowledge he has accepted. Phenix holds a holistic viewpoint in understanding man's being and his growth. He thinks any field of study has its advances and limitations:

Every way of knowing about man and his becoming succeeds by virtue of certain methodological self-limitations. Just because each way is itself and not some other way, it yields only partial understanding. Conflict and confusion result when this partiality is forgotten and the advocates of particular disciplines presume to tell the whole truth.\(^4^1\)

The chief purpose of the book is to achieve a comprehensive, holistic understanding of man instead of a partial and limited analysis of man which he calls "an epistemological imperialism."\(^4^2\) The book consists of three chapters: "Being and Becoming Human" dealing with man in the natural sciences; "Being and Becoming Related" dealing with man in the social sciences; and "Being and Becoming Onself" dealing with man in the humanities.

Though Phenix agrees with the traditional three-fold division of man (body, mind, spirit), he thinks these three parts are not separate entities. Each part exists in a mutual relationship of interdependence, tension, and unity
with the other parts. Phenix has clarified the terms "body," "mind," and "spirit" used in his book; ... 
'body' refers to material things perceptible to the senses, 'mind' refers to the processes of perception, reasoning, and learning, and 'spirit' refers to human self-awareness and freedom of choice.\footnote{44}

Mathematics is a system of symbols dealing with abstract ideas and not with existential interpretation of these ideas. Definition, axioms, and theorems in mathematics are universal but they are invented and elected by the thinkers not imposed upon man from objective realities. This concept of mathematics, for Phenix, is evidence of seeing man as a spiritual being. "Hence, mathematics is a prime revealer of man as a self-conscious, or spiritual, being. ... It is exercised only by virtue of the power of self-transcendence."\footnote{45} Freedom of thinking and the demand for consistency have shown not only human nature in his spiritual function, but also in his intellectual rationality. "Logical necessity governs only after the rules of the mathematical system have been posited and accepted."\footnote{46} Mathematical form is pure abstraction, and the human mind has the ability to recognize the form. "The mind made manifest in these orders is not the fullness of human mentality, but mind in its universal aspect."\footnote{47}

The central importance of mathematics is further explicated:
These observations also point to the role of mathematics in the making of persons. Mathematical studies in the curriculums of schools and colleges sharpen self-awareness in thinking, stimulate conceptual inventiveness, and develop the capacity for symbol construction and transformation. They also provide for growth in powers of abstraction, generalization, and perception of formal relationships and inculcate a sense of inexorable objectivity of valid thought—and even, perhaps, of corporeal being.

Physical science does not seem to have anything to do with human nature and growth. Nevertheless, Phenix thinks that modern physics enables man to demonstrate his success of prediction and control through technology. "The intelligibility of the world is evidence that to some degree man is at home in nature, or akin to nature, and this recognition is an important source of hope and courage for mankind." The early Stoics had a strong sense of universal reason in nature which made them develop an ethics of universal justice and equality.

Biology, for Phenix, has a direct influence on human development. The theory of evolution gives man an insight into the process of life in the principles of change and self-preservation:

The first is that human beings, along with all other living things, are amazingly self-consistent. Throughout all the changes and circumstances of existence they seek to maintain their distinctive identity. This is a fact that educators tend to forget in their efforts to make and mold the young...
The second great truth is that man participates in a universal process of construction in which ever higher levels of differentiated coordination emerge. . . . This direction is toward increasing individuation in cooperative interdependence, as opposed to the increasing disorder of isolated physical processes.50

In conclusion, Phenix criticizes the inadequacy of experimental psychology in its method. To exhibit universal regularities about human behavior is doubtful. "It is difficult to see how anything significant can be known about human subjects by eliminating everything subjective and treating them as if they were only objects."51

Social studies are concerned with human life. The purpose of inquiry is focused on human relations. Phenix in this chapter again emphasizes Buber's I and Thou:

There are two 'primary words,' which he calls 'I-Thou' and 'I-It.' The primary word I-Thou is the fundamental personal relation from which authentic being springs. The primary word I-It appears when the personal relation is replaced by a depersonalized subject-object relation.52

First, Phenix talks about language. Language is a human creation; it is a tool for communication. Phenix explains that language is not a system of signals but of symbols.53 Signals can easily fall into arid formalism becoming rote memory without real understanding. On the other hand, symbols have the power to convey meanings:

In every community and in every age verbal formulas need to be critically examined and re-interpreted, through dialogue and fresh experience,
in order that their power as bearers of meaning, and hence as creators of authentic human existence, may be assured.54

As for the solutions of social crises, Phenix analyzes four possibilities:

... The first is to retreat into pure individualism. ... This atomistic solution is a romantic illusion, for persons are made in and for relation, and anyone who imagines himself to be self-sufficient is simply oblivious to the network of relations in which his being consists.

The second approach is to work for the creation of a monolithic universal culture in which all particular patterns of life will be eliminated. ... Though man has universal properties that link him with all other members of his species, he also has qualities that he shares with only some of his fellows, and still others that are his own singular properties. To organize mankind on a uniform global pattern would eliminate one of the most enriching bases for human existence.

The third possibility is to create a system of cooperating cultures, united by certain common commitments required to adjudicate conflicts, but still preserving the group identities that give the separate cultures their distinctiveness. ...

It appears unlikely, however, that the form of man's life-in-relation will in the long run be that of a plurality of cultures. With the accelerating pace of travel and communication, the conditions of relative isolation and constancy required for ethnic continuity and identity are ceasing to exist.

... the fourth and most promising possible solution to the problem of intergroup conflict. ... is the emergence of a single pluralistic world society, in which there will be ample provision for individual and group differences, but not on the basis of relatively independent culture groups.55
Man has rationality. He also has propensities. He needs freedom and order. He has the sense of justice and equality. Phenix strongly supports a comprehensive understanding of human nature. Any partial understanding of human nature is a truncated conception. He also suggests that human nature has to be nurtured toward maturity for the common goodness of society rather than for an unlimited expansion of selfish desire. "Becoming a mature person requires the discipline of wants."

Any good social reform or social policy can never be achieved without support and cooperation by each member of the common community. "It is a fatal mistake to suppose that a good community can be constructed by combining partial human beings according to some ideal blueprint."

In schools and colleges, the best preparation and continuing support for integral occupations . . . is liberal education, in which the full range of human potentialities is developed, rather than a narrowly conceived program of vocational training. Such liberal education is entirely consistent with a high degree of specialized technical instruction, provided the latter is carried out imaginatively and with continuous concern for the wider bearings and the deeper meanings of the specialty.

The main theme of the chapter titled "Being and Becoming Oneself" is to analyze humanistic studies, disclosing man and his becoming and what can be inferred about human nature from these studies. First, Phenix talks about
esthetics. Esthetic experience is different in kind from descriptive observation. It must be perceived as a form of unique expression by esthetic imagination and direct intuitive understanding. However, "Esthetic objects are [also] embodiments of reason." Without this esthetic basis reason becomes narrowly canalized in its generalizing modes and loses the creative vitality of the particular perceptions upon which all intelligence, including that of science and practical organization, depends. In this sense scientific, technical, and social man is rooted and grounded in esthetic man.

There is a unity of matter, reason, and spirit in one's life through the esthetic experience. Esthetic experience reveals human nature in the pursuit of uniqueness and universality and in a balance between progress and conservation.

On the one hand, they [the arts] provide for freshness and novelty through acts of creative origination. On the other hand, they allow for the preservation of consummatory values through the fashioning of enduring material objectifications.

Poetry is another form of the arts. Phenix thinks it is embodied in language. Rhythm and metaphor are two essential characteristics of poetry. They can renew one's insight, awaken one's slumber, and purify one's nature:

The conformity and routine of a secure and predictable life-order militate against the creative vigor proper to living things. Poetry is a means of combatting such conformity and
repetitiveness. The connections established in good poetry are not the obvious and standard ones. The poet's aim is to awaken the reader from his conventional slumbers by presenting metaphoric associations that disturb established relationships and to substitute ones that are fresh and laden with further possibilities of insight.65

Religion is a phenomenon in any culture. Phenix thinks that it is the primary truth, and deeply rooted in man's complete inwardness. He agrees with Alfred North Whitehead's comment on religion as emphasizing solitariness.66 This solitude of inwardness has a significant impact on human life. "Complete inwardness is participation in the source and ground of all being."67 It can provide a power of reconciliation in man's alienation from his environment:

The really significant truth about a person is the particular complex subjectivity that constitutes his peculiar being. Once this concrete personal reality is recognized as the primal truth, the process of analytic abstraction can be undertaken, to disclose the general and universal aspects shared among persons. It is not possible to follow the reverse process, of deriving personal significance from the consideration of abstractions. No accumulation of abstractions can yield the personal concretion in which meaning is realized.68

In summary, Phenix prefers a holistic point of view. The three domains of study about human nature "do not contradict each other, but are mutually complementary."69 The natural sciences disclose the universal aspects of human nature. The humanities show man's nature in his
particularity and uniqueness. The social sciences are trying to draw a boundary between man's universality and solitude, thus involving human nature in the appreciation of social life within different groups.

After this examination of Phenix's books on knowledge and human nature, this study turns next to an analysis of his views on the relationship between knowledge and human development. *Education and the Common Good* is a book dealing with moral philosophy. The book is concerned with education, the content of instruction, and the nature and source of values. It also challenges the concept of democracy in the pragmatic outlook. It is a development and a departure from Dewey's *Democracy and Education*. The following shows something of the nature of this departure:

At many points the influence of John Dewey and other pragmatists will be evident, particularly their belief in democracy as a comprehensive way of life, their confidence in the wide relevance of the scientific spirit and methods, and their commitment to education as a moral enterprise. However, in other respects the position taken in this book differs substantially from that of the pragmatists. They base their philosophy on the concept of man as an intelligent adaptive organism and regard reason as an instrument for solving problems of adjustment to the natural and human environment. They hold that to be moral is to be social, and that the ideal of social life is democracy, in which the fullest possible harmony of interaction is realized. This position is most compatible with what is hereafter designated as the 'democracy of desire,' in which conduct is conceived of as guided by
desire disciplined by reflection on the consequences of various courses of action.

... The sole criterion in respect to values is what is true, right, and excellent, apart from how satisfactorily personal or group interests are served. The pragmatists hold that man is the measure of truth and goodness, that ultimately something is worthy because intelligent human beings want it. The position here taken is rather that man is himself judged and measured by an antecedently conceived goodness, and that it is the proper goal of man to discover and be fashioned after the image of that excellence.70

What makes Phenix's standpoint so substantially different from Dewey's is that for Phenix there is an antecedently conceived goodness to measure man and not vice versa. For Dewey, however, there must not be any antecedently fixed qualifications to be looked upon as criteria (Dewey, *The Quest for Certainty*, p. 69). Phenix has stated clearly that he draws this concept from Paul Tillich's idea of "theonomy":

In its theoretical basis much has been drawn from Paul Tillich. One guiding principle is what Tillich calls 'theonomy,' which means a situation where the divine ground of being shines through the finite conditions of historical existence and where man sees the orders of truth and right as the law of his own being. This is the meaning of the life of reverent devotion, as opposed to the self-sufficient finitude of autonomous man, and to servile subjection in what Tillich calls 'heteronomy,' which may be interpreted as the essence of undemocratic authoritarianism.71

It is a mistake to think that Tillich has a notion that there are three separate components in human history
and that theonomy is a concept of absolute authority imposed on man. It is also a mistake to suppose that Phenix strongly opposes human autonomy. For Tillich, "Theonomy does not mean the acceptance of a divine law imposed on reason by a highest authority; it means autonomous reason united with its own depth" (Tillich, Systematic Theology, Vol. I, p. 85). It is only when reason affirms and actualizes its structure without regard that its depth is autonomous. Autonomy means the obedience of the individual to the law of reason, i.e., the nomos (law) of autos (self). It is the law of nature. Historically, autonomous reason has liberated and maintained itself in a struggle with heteronomy. Heteronomy means the law of reason from outside, i.e., the nomos (law) of heteros (strange). The problem of heteronomy is the problem of an authority which claims to represent reason.

Phenix has recently created (coined) a new term "holonomy," which means totality, to take the place of "theonomy" in order to communicate with the scientific mind.72

In the beginning of the book, Phenix urges the need for goals and principles to guide social as well as individual life. "Education is not a neutral enterprise. It is permeated with convictions about what is important to know and to become."73 After examining the function of democracy in education, Phenix reaches a conclusion that there are two types of democracy: democracy of desire, and democracy of worth:
The first kind of democracy is founded on the principle of organizing life to insure maximum satisfaction of human interests or claims. According to this conception, the highest good is independence, or autonomy. This type of democracy is here referred to as the democracy of desire, since the image of human nature upon which it is based is that of an intelligent organism striving single-mindedly to fulfill its desires.

The other type of democracy centers around devotion or loyalty to the good, the right, the true, the excellent. It is referred to as the democracy of worth. Devotion is different from desire. It is primarily other-regarding rather than self-interested. The watchword of the democracy of worth is responsibility, not autonomy.

Under the democracy of desire, each individual is expected to seek his own interests and to fulfill his own needs. Education serves as a means to transform and refine desires. Phenix comments that the democracy of desire was the dominant idea in the 1960s. It has been "the prevalent view in every sphere of life— in scholarship, in the arts, in work and play, in politics, economics, and international affairs, and even in religion." In the democracy of worth, education is encouraged in order to learn what is responsible to self as well as to society. Everyone is not self-centered but rather self-giving. The rest of the book is divided into four subjects: intelligence, creativity, conscience, and reverence. They are all analyzed under these two types of democratic principles.
in order that the foundations of freedom and individuality be comprehensively understood. 76

The Major Papers of Phenix

"Key Concepts and the Crisis in Learning," published in 1956, is epoch-making in its concept of structure of knowledge. In 1959, the Woods Hole Conference focused on the same concept. Historically, it can be compared with invention of the infinitesimal calculus developed in different forms by Newton and Leibniz about the same time.

The article begins with the problem of modern education and then formulates a basic principle to cope with the problem. The most pressing problem of modern education as Phenix sees it is the vast and rapid expansion of new knowledge. The fast growth of knowledge makes education more specialized and departmentalized. On one hand, we need persons of technical competence; on the other hand, we need persons who have a comprehensive view in order to meet the demand for social cohesion. There is confusion and disorder. When the social-economic structure changes, the old value system, following this change begins to disappear. Phenix observes:

To keep the world machine going, an ever-increasing supply of highly trained experts is imperative. But it is precisely the narrowness of vision resulting from the concentration necessary to produce the experts that may cause that ignorance of the whole which can destroy the delicate balance of the civilized order. 77
Concurrently with this dilemma, there is a disproportion between what is available and necessary to know and the capacity of individual ability to know it. Phenix comments further:

The results of this situation are all too apparent, particularly to professional intellectuals. There is a frantic scramble to 'keep up' in one's own specialized field, to have even a nodding acquaintance with the most important research and writing being done in it, and to read even cursorily the current journals of the profession. Coupled with this is the anxiety that one cannot keep abreast of even the most basic advances in other fields. . .

Students also know the crisis well, especially at the higher levels of education. Spurred on by specialists, each of whom acts as if he expected everyone to master the contents of his own discipline, the student becomes burdened and discouraged at the hopelessness of the task that lies before him. Little wonder that so many seek escape in the narrow and unimaginative security of a highly circumscribed academic discipline.78

The only way to minimize the disparity between available knowledge and ability to learn is to adopt what Ortega y Gasset called the basic principle of education, i.e., the principle of economy. The purpose of this principle is to organize the teaching and learning experience in such a way that the maximum of learning can be achieved within a minimum of time and energy. Therefore, educators or curriculum workers have to select and organize teaching-learning experiences and materials with reference to this principle of economy. According to Phenix, there are three
ways of doing this:

One type of approach is administrative. Some of the basic functions of the administrator are to organize teachers and learners in the most efficient practicable ways, to make available suitable buildings, equipment, and materials, and to establish effective channels of communication and supply. . . .

A second type is psychological. Testing procedures of many kinds, teaching methods based on research in learning, intelligent approaches to emotional development, and use of data on motivation are some of the fruits of psychological understanding which have been profitably applied to enlarge the human capacity to learn.

A third approach is philosophical. It attacks the crisis in learning by an analysis of the nature of knowledge in its several kinds. . . .79

In this article Phenix is concerned with the third (philosophical) approach. Three basic ideas undergird his approach:

1. Organization of knowledge

   Knowledge is not merely an accumulation of separate information. It is a process of the amplification of generating new knowledge. Each field of study has some family resemblances. These similarities make it possible to classify bits of knowledge into one or more frameworks. It is easier for students to understand these common features.
2. Economy and concept-formation

Concept-formation is a process of classification. It is also used in the organization of the facts and theories which make up the fabric of knowledge. "Economy in learning requires that the principle of simplification by means of concept-formation be extended beyond the realm of things to the realm of ideas."80

3. Key concepts

In any field of study it is possible to discover certain key concepts representing the common features of general information. "Such concepts are basic central ideas an understanding of which opens the door to an effective grasp of an entire field of knowledge.owego Teachers had better know the basic concepts of their disciplines and conduct their instruction in the light of these concepts. Phenix explains further:

... This does not mean that the key concepts should be taught explicitly and directly, at least to beginners. It does mean that particular items of knowledge should be selected and used with an eye to their exemplification of the basic concepts of the field.

Ineffective teaching and learning, according to this thesis, are due in no small degree either to the failure to understand the need for comprehensive organizing concepts and their function in the economy of learning or to using the wrong key concepts (e.g., having mistaken ideas about what science or history really is).82
"The Disciplines as Curriculum Content" was published in 1962 to reemphasize his 1956 paper "Key Concepts and the Crisis in Learning." A similar approach to the subject matter of the major fields of learning is shared by others like Jerome Bruner. The main theme of the paper is to develop structure of knowledge with reference to the idea of the disciplines. "My thesis, briefly, is that all curriculum content should be drawn from the disciplines or, to put it another way, that only knowledge contained in the disciplines is appropriate to the curriculum."83

First, Phenix defines the term "discipline" from its etymology. The Latin word discipulus means a disciple; the verb form of discipulus is discere which means "to learn." Therefore, "a discipline may be construed as knowledge, the special property of which is its appropriateness for teaching and its availability for learning."84 Secondly, he analyzes three fundamental features based on the issues of appropriateness for teaching and availability for learning. These three fundamental features are: analytic simplification, synthetic coordination, and dynamism. Finally, he concludes that "Education should be conceived as a guided recapitulation of the processes of inquiry which gave rise to the fruitful bodies of organized knowledge comprising the established disciplines."85
It is a controversial paper with both pros and cons. This study will present one argument from Maxine Greene's paper "Curriculum and Consciousness." Greene's criticism is that Phenix's emphasis on disciplines leads to a loss of the subjectivity of the individual and the feeling of loneliness. She writes:

Philip H. Phenix argues similarly that 'the curriculum should consist entirely of knowledge which comes from the disciplines, for the reason that the disciplines reveal knowledge in its teachable forms' (Philip H. Phenix, "The Disciplines as Curriculum Content," p. 195). He, however, pays more heed to what he calls 'the experience of reflective self-consciousness' (Phenix, Realms of Meaning, p. 25), which he associates specifically with 'concrete existence in direct personal encounter' (Phenix, Realms of Meaning, p. 25). . . . but what is excluded, I believe, is what has been called the 'subjectivity of the actor,' the individual actor ineluctably present to himself. What is excluded is the feeling of separateness, of strangeness when such a person is confronted with the articulated curriculum intended to counteract meaninglessness.86

She also explains Phenix's theory of discipline by using the metaphor of a map borrowed from Schutz:

Phenix has written that education should be understood as 'a guided recapitulation of the processes of inquiry which gave rise to the fruitful bodies of organized knowledge comprising the disciplines' (Phenix, "The Disciplines as Curriculum Content," p. 195). Using the metaphor of the map, one might say that this is like asking a newcomer in search of direction to recapitulate the complex processes by which the cartographer made his map.87
Greene's criticism has indicated the deep crises of two arguments. The first argument is the long-standing issue between child-centered and subject-centered curriculum theories. The other argument is between atheist existentialists on the subject of human nature (ontology).

For the first argument, Arthur R. King and John A. Brownell hold an opposite view to that of Greene. They think that Phenix's paper can avoid this misleading dichotomy in curriculum theory. Moreover, they claim that there is a difference between disciplined knowledge and subject matter. "The former means the disciplined substance and artful syntax of bodies of thoughtful men; the latter signifies the atomistic, unrelated, factual material...." 89

For the second argument, the religious existentialists, especially Buber and Tillich, do not agree that man can be defined as a pure closed system of being without community activities. Buber, after analyzing Heidegger's ontology, says:

In these words Husserl says that man's essence is not to be found in isolated individuals, for a human being's bonds with his generation and his society are of his essence; we must therefore know what these bonds really mean if we want to know the essence of man. That is to say, that an individualistic anthropology either has as its subject man in a condition of isolation, that is, in a condition not adequate to his essence, or in fact does consider man in his bonds of community, but regards their
effects as impairing his real essence, and thus is not thinking of that fundamental communion of which Husserl speaks.90

Tillich's criticism is even more radical as he includes some religious existentialists such as Kierkegaard. He also points out that Sartre, in order to keep his concept of absolute freedom, has painted all his plays in a pessimistic color. He writes:

The Existential thinker needs special forms of expression, because personal Existence cannot be expressed in terms of objective experience. So Schelling uses the traditional religious symbols, Kierkegaard uses paradox, irony, and the pseudonym, Nietzsche the oracle, Bergson images and fluid concepts, Heidegger a mixture of psychological and ontological terms, Jaspers uses what he calls 'ciphers,' and the Religious Socialist uses concepts oscillating between immanence and transcendence. . . .

We can make the same criticism of Sartre's pure existentialism and his sensitive psychological analysis. The greatness of this man is that he is the psychological interpreter of Heidegger. He is perhaps misinterpreted on many points, but nevertheless his psychological insights are profound. But here we have the same thing that we have found before: Sartre says man's essence is his existence. In saying this he makes it impossible for man to be saved or to be healed. Sartre knows this, and every one of his plays shows this too. . . .91

"Teacher Education and the Unity of Culture", which deals with the role of the teacher in the process of cultural integration, was published in 1959. It consists of three sections. In the first section, Phenix suggests the need for a balance between differentiation and unification
in educational development. In the second section, he argues that the school as an agent has to promote this integration. In the third section, he gives some proposals for the teacher's education.

Human experience is a continuing process of dialectic development in Phenix's view. There have always been tensions between the polarities of unity and diversity, oneness of reality and its many-ness, freedom and determinism. From Parmenides to Hegel, all the philosophers have tried to work out some solutions in solving this struggle. Phenix perceives that in contemporary culture there are two phenomena—scientific enterprise and democratic social organization—interweaving into this tension. Scientific research intends to explain nature in its manifold complexities and regular simplicities. The democratic system attempts to adjust itself to the claims of freedom and order. Phenix thinks that in a good democratic system "genuine individuality is preserved within a framework of constructive coordination." He suggests that the best thing we can do is to support a healthy balanced system between the two poles of unity and diversity. As for the present condition, he feels that "We are rich in variety of experiences and in the accumulation of things, but poor in the means of coordinating them meaningfully and productively."
If we want to achieve cultural integration and maintain its balance, social organizations are necessary, Phenix concludes. Traditionally these institutions are state and church. In modern industrial society there are three new organizations--corporate business, the mass media, and the educational system. These five institutions have played a major role in shaping people's life and value systems. Sometimes one of them has occupied a dominant position. Phenix's thesis is that schools should provide the source of cultural integration as they are responsible to the claims of critical intelligence and resist any effort to subordinate themselves to other interests.94

Finally, he suggests that the teacher's education comprises three kinds of studies:

1. Studies in the major skills and fields of knowledge
2. Professional studies
3. Integrative studies.

Most teachers are well equipped with the first two kinds of studies. What is needed is to emphasize the third kind of studies in the teacher's education.

The third kind of studies (integrative studies) is the refinement of general education or liberal education. The purpose of these studies is to achieve a comprehensive outlook. "Integrative studies may be useless or positively harmful when pursued by persons without a considerable fund
of well-assimilated knowledge and experience." In summary, Phenix's argument is that teachers and schools have the responsibility to achieve this goal—cultural integration.

A Summary of the Main Points of Phenix's Thinking

This study is concentrated on Phenix's main works in curriculum theory; therefore, most of his writings on religion are omitted. The complete list of his publications comprises Appendix A. This summary will review his philosophy of education, curriculum theory, and humanistic concern.

Every great philosopher has the freedom and privilege to start a new school of philosophy on the ground of his presupposition. Descartes has built his philosophy on the concept of self-evidence; Hegel, abolishing the distinction between premises and conclusions, sees that knowledge is constituted by a coherent system; Dewey, abandoning the concept of knowledge and substituting for it the concept "beliefs that promote success," believes that truth is a matter of scientific free inquiry.

Phenix holds a synoptic comprehensive view of philosophy. Philosophy, for him, is not a body of knowledge nor a tool for inquiry, but "a way of looking at knowledge which we already have. It involves the organization, interpretation, clarification, and criticism of what is already with-
in the realm of the known and the experienced."

After analyzing the way of a philosopher looking at knowledge, Phenix examines the concept of education and, finally, forms a definition of the philosophy of education.

Aim. The aim of philosophic inquiry is to purify, enrich, and coordinate the language used to interpret experience.

Method. The method by which this transformation takes place is the dialogue.

Level. Philosophy is distinguished from other disciplines also by the level of concepts with which it has to do. It is the function of philosophy to deal with the most basic ideas, with those conceptions which lie at the root of the language we ordinarily use or even of technical and specialized discourse.

The love of wisdom. Note that by this definition philosophy is not wisdom itself but love of wisdom. Thus, the philosopher is not so much one who has arrived, attained, or accumulated as one who is concerned and devoted. To be philosophic is to possess an attitude, a spirit, an intention, rather than a secure accomplishment. An ignorant man in search of wisdom would be more of a philosopher than a learned man satisfied with his knowledge.

Comprehension. The wise man takes a comprehensive view. He considers all the available data. He is not content with one corner or department of experience. He strives to see life whole.

Perspective. The wise man does not take a partial narrow view. He has sufficient breadth of outlook to see things in perspective and thus to assess their true significance.

Insight. The wise man is not superficial, but has insight. He knows that things are not always what
they appear to be, that the seemingly trivial and insignificant may actually be of the greatest importance or that the outwardly impressive may ultimately be of little account.

Vision. The wise man is in some sense a 'seer'—one who has vision. This does not mean unbridled speculation or an irrational mysticism. It means that the philosopher has a view which lifts him from purely immediate and common concerns to the wider possibilities of the world ideally and imaginatively conceived. He searches for concepts and principles which illuminate and meaningfully interpret the whole range of human experience. For example, one of the great modern visions is that all experience—that which relates not only to the behavior of material bodies but also to life and mind—can be analyzed and coordinated by the method of critical scientific intelligence. This daring outlook, based on the assumption of the universal relevance and competence of scientific method, is no less a high philosophic vision than, for example, the traditional religious vision of a world created and directed by an omnipotent deity.

Concerning the definition of education, Phenix analyzes six common understandings of the word. They are: a human enterprise, a process, direction, development of human beings as persons, by persons, and intentionality. Under the meaning of direction, he comments:

Not all processes involving human development are education. It is only those which guide, direct, or fashion personal becoming. That is to say, education requires an educative agent acting upon the person to be educated. It is an interactive, bipolar process. This rules out a view of education as a process of unfolding, as the emergence in persons of powers already
present but not apparent. It rules out processes of organic maturation and those which produce purely instinctive behavior.99

The definition of education, according to Phenix, "is the process whereby persons intentionally guide the development of persons."100 By combining his two concepts, those of philosophy and of education, Phenix defines:

Briefly, philosophy of education is the application of philosophic method and outlook to the area of experience called education. It includes such things as the search for concepts which will coordinate various aspects of education in a comprehensive scheme, the clarification of meanings in educational terminology, the exhibiting of basic premises or assumptions upon which statements about education rest, and the development of categories which relate education to other areas of human concern.101

Phenix's curriculum theory is difficult to grasp. Because of his strong emphasis on the disciplines, he has been usually associated with Schwab and Bruner in the "disciplinary curriculum" by most educators, e.g., Robert S. Fais, and Daniel Tanner. This causes a misconception that Phenix's curriculum theory is not compatible with his holistic view of the philosophy of education. But, on the contrary, it is also this point that makes his theory so significant. Phenix has been trying to make personal knowledge understood in a meaningful way in the light of the disciplines. This study shall review his main points of
disciplined knowledge, and then analyze his holistic view of curriculum theory.

Phenix's structure of knowledge has been discussed in his two papers "Key Concepts and the Crisis in Learning" and "The Disciplines as Curriculum Content." These two papers are sometimes overlapping. In the first paper, he talks about three key concepts in science: abstraction, public verification, and fruitfulness. In the second paper, he uses different terms talking about similar ideas. He says that there are three fundamental features that measure the degree and quality of disciplines. They are: analytic simplification, synthetic coordination, and dynamism. It is necessary to examine these concepts in detail:

First, analytic simplification. The primal essential for effective teaching is simplification. All intelligibility rests upon a radical reduction in the multiplicity of impressions which impinge upon the senses and the imagination. . . .

This simplification of experience through the use of symbols may be called analytic. . . . It proceeds by the discrimination of similarities and differences, whereby entities may be divided and arranged in orderly fashion. Analysis is possible only because the human mind is able to abstract, that is, to discern properties, qualities, or forms of things. . . . The function of abstraction is to simplify--to reduce the complexity of unanalyzed experience by selecting certain shared properties of kinds of things and neglecting their other features. . . .
Analytic abstraction is a way of thinking which aims at ease of comprehension and reduction of complexity.

[Second, synthetic coordination]. A discipline is a conceptual structure whose function is not only to simplify understanding but also to reveal significant patterns and relationships. Analysis is not an end in itself; it is the basis of synthesis. By synthesis is meant the construction of new wholes, the coordination of elements into significant coherent structures. Disciplined thinking is organized thinking. Differences and distinctions are recognized within an ordered framework which permits synoptic vision.

Such synthetic coordination is not opposed in tendency to analytic simplifications; both are aspects of a common process of intelligible ordering. Thus, the notion of parts within an ordered whole involves both the differentiation which is presupposed by the idea of parts and the unity which is implied by the idea of a whole. A discipline is a synthetic structure of concepts made possible by the discrimination of similarities through analysis. It is a hierarchy of ideas ordered as a unity-in-difference.

It is only in this sense that disciplined knowledge can be called complex. The simplifications of abstraction make possible the construction of cognitive complexes—i.e., the weaving together of ideas into coherent wholes. Concepts are no longer entertained in isolation, but are seen in their interconnections and relationships.

The third quality of knowledge in a discipline I have called its dynamism. By this is meant the power of leading on to further understanding. A discipline is a living body of knowledge, containing within itself a principle of growth. Its concepts do not merely simplify and coordinate; they also invite further analysis and synthesis. A discipline contains a lure to discovery. Its ideas excite the imagination to further exploration. Its concepts suggest new constructs which provide larger generalizations and reconstituted modes of coordination.
Theories which merely coordinate and organize a given body of data but do not stimulate further experimentation and inquiry are scientifically unimportant.

Based on these key concepts, educators have legitimate reason to group Phenix together with Bruner and Schwab in one class of curriculum theorists. However, Phenix's emphasis on discipline does not entail a lack of concern with human growth.

Phenix's holistic view of curriculum theory is embodied in the six realms of knowledge in his *Realms of Meaning*. The classification of these six realms of knowledge is Aristotelian rather than Comtian. If we compare Aristotelian organization of disciplines with Phenix's six realms of meaning, we can perceive the similarities:

<table>
<thead>
<tr>
<th>Aristotle</th>
<th>Phenix</th>
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<tr>
<td>Theoretical disciplines</td>
<td>Symbolics</td>
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<td></td>
<td>Empirics</td>
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<td>Synoptics</td>
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<tr>
<td>Practical disciplines</td>
<td>Ethics</td>
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<td>Synnoetics</td>
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<tr>
<td>Productive disciplines</td>
<td>Esthetics</td>
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Phenix's curriculum theory is not difficult to grasp in theory, but it is difficult to perceive its implementation. The reason is that for a long time, we have neglected
the practical disciplines of Aristotle. Phenix is not without comprehension of this difficulty when he has commented on these two areas of study (ethics and synnoetics) in the following:

Among all the realms, the two dealing with personal and moral knowledge are at one and the same time the most essential and the most problematical. They are the most essential because they deal with elemental human meanings that sustain all other knowledge. They go most directly to the core of personhood and color every type of understanding. Because they are so elemental they are also problematical. The personal and moral types of knowledge are not abstract and objective to the same extent as the other types are, and therefore they are more affected by the contradictions and perplexities of concrete human existence. . . .103

Since personal knowledge is essential and problematical, how to organize it into a disciplined knowledge is a crucial question. Phenix thinks that personal knowledge is quite different in kind from scientific knowledge. He believes that the philosophical anthropology of Buber and Existentialism can provide a basis for disciplined understanding in the synnoetic realm. This leads to the next section which is about his humanistic concern.

The real problem of humanism is not the conflict between the individual and society, but that individualism or collectivism usually splits the wholeness of life. It is his concept of "synnoetics" (cognition of togetherness)
that makes Phenix so different from Bruner and Schwab.

He writes:

If the essence of human nature is in the life of meaning, then the proper aim of education is to promote the growth of meaning. To fulfill this aim, the educator needs to understand the kinds of meaning that have proven effective in the development of civilization and to construct the curriculum of studies on the basis of these meanings. 104

In order to understand the real meaning of life and to provide for the formation of human growth in school curriculum, Phenix cannot but draw heavily from Existentialism. The philosophy of contemporary Existentialism derives its way of formulating its critical opposition to the rationalistic view of reality from the traditional distinction between "essence" and "existence." The word "existence" comes from existere, meaning "emerge" which designates its root meaning "being" within the totality of Being, in distinction from "not being" or "nonbeing." Existentialists insist that reality or being in its concreteness and fullness is not "essence." It is not the object of rationalistic experience, but rather "existence" is reality as immediately experienced, with the accent on the inner and personal character of man's direct experience. Existentialists are appealing from the conclusion of rationalistic thinking which equates reality with the object of thought,
with relations or essence, to reality as men experience it immediately in their actual living. The term "synnoetics," which Phenix uses, "refers to meanings in which a person has direct insight into other beings (or oneself) as concrete wholes existing in relation." He writes:

"Language, science, and art are concerned with essences, while personal knowledge is existential. That is to say, the former fields deal with various kinds and qualities of being, while the latter has to do with being itself, that is, with concrete existence. To be is to be in relation. There is no such thing as absolutely solitary existence. The very concept of isolation has significance only against a background of others from whom one is separated. Separateness is relative nonbeing; all dividing of things depends upon their prior being in relation."}

Phenix's emphasis on human relations rather than separateness is derived from Buber's philosophical anthropology especially in the book I and Thou. He draws on Buber's thought in this passage:

"A classic discussion of the meaning of personal knowledge is found in the writings of Martin Buber. According to Buber, fullness of being consists in relation. Relations are of two kinds: 'I-Thou' and 'I-It.' I-Thou is a 'primary word,' not in the sense of a spoken utterance, but as a creative event. I-Thou arises out of the 'reality of combination.' I-It, on the contrary, arises out of separation. I-Thou, being primary, is not produced by the conjunction of a prior 'I' with a prior 'Thou.' Rather, I-Thou is the primordial reality from which 'I' and 'Thou' are derived by abstraction. Thus, the infant's earliest life consists in relation, and only
gradually are the self and the other discriminated as separable beings. On the other hand, I-It is derived from setting together 'I' and 'It.' First comes the 'I' (derived from I-Thou) as existing over against things (It), and from these two put in the relation of subject to object comes the I-It.

Buber adds that the 'I' of I-Thou is not the same as the 'I' of I-It. In being separated and then impersonally reconnected a fundamental alteration in the quality of being takes place. The 'I' of I-Thou is a connected person with subjectivity; the 'I' of I-It is a differentiated individual who is a subject over against a world of objects.107

Very few scholars, as Michael W. Apple perceives it, have seen that disciplined knowledge involves a personal construction of human beings and have taken it seriously under examination.108 The contemporary curriculum issue is more humanistic, political, and cultural oriented. The challenge is much more crucial than before, as Klohr perceives it:

We have not developed ways of thinking about curriculum that Huebner and Macdonald have, for the past ten years or so, urged that we explore—namely, by using the logic of the aesthetic, the social, and the moral disciplines. Nor, as Cremin has pointed out, have we had much direct help from professional philosophers.109

Bertrand Russell, as a professional philosopher, recognized the importance of having such a new philosophy though he did not have much interest in doing it. He asserts:
The ancient world found an end to anarchy in the Roman Empire, but the Roman Empire was a brute fact, not an idea. The Catholic world sought an end to anarchy in the Church, which was an idea, but was never adequately embodied in fact. Neither the ancient nor the medieval solution was satisfactory—the one because it could not be idealized, the other because it could not be actualized. The modern world, at present, seems to be moving towards a solution like that of antiquity: a social order imposed by force, representing the will of the powerful rather than the hopes of common men. The problem of a durable and satisfactory social order can only be solved by combining the solidity of the Roman Empire with the idealism of St. Augustine's City of God. To achieve this a new philosophy will be needed.

Phenix's interests in both religion and science and his holistic view of curriculum theory can form a basis for the future development of such a new philosophy. His emphasis on disciplined knowledge and realms of meaning can be interpreted as covering both process and content, sequence and scope in a curriculum theory in which a balance between child-centered curriculum and subject-centered curriculum can be maintained. Moreover, his proclamation of a democracy of worth and of the common good can be looked upon as a criterion for educational objectives in Tyler's Rationale.
NOTES AND REFERENCES

1 In an interview with Phenix, July 26, 1978, at Teachers College, Columbia University.


4 Ibid.

5 Ibid., p. 299.

6 Ibid., p. 301.

7 Ibid., pp. 301-302.

8 Ibid., p. 315.

9 Ibid., pp. 315-16.

10 Ibid., p. 319.

11 Ibid., p. 320.

12 Ibid.

13 Ibid., p. 327.

14 Ibid., pp. 327-28.

15 Ibid., pp. 328-30.

16 Ibid., p. 330.

17 Ibid., p. 331.
18 Ibid.


20 Ibid., p. x.

21 Ibid., p. 21.

22 Ibid., p. 33.

23 Ibid., pp. 337-41.

24 Ibid., pp. 21-25.

25 Ibid., p. 8.

26 Ibid., pp. 316-17.

27 Ibid., p. 324.

28 Ibid., pp. 310, 333-34.

29 Ibid., p. 346.

30 Ibid., p. 7.


32 Ibid., pp. 24-25 (Kaufmann's prologue).

33 Ibid., p. 30 (Kaufmann's prologue).

34 Ibid., p. 54.

35 Ibid., p. 73.
Ibid., p. 56.

Ibid., pp. 56-57.

Ibid., p. 26 (Kaufmann's prologue).

Ibid., p. 65.

Ibid., p. 178.


Ibid., p. 6.

Ibid., p. 7.

Ibid., p. 6.

Ibid., p. 12.


Ibid., p. 17.

Ibid., p. 19.

Ibid., p. 25.

Ibid., p. 35.

Ibid., p. 36.
52 Ibid., p. 43.
53 Ibid., p. 44.
54 Ibid., p. 48.
55 Ibid., pp. 57-59.
56 Ibid., p. 67.
57 Ibid.
58 Ibid., p. 69.
59 Ibid., pp. 69-70.
60 Ibid., p. 83.
61 Ibid., p. 82.
62 Ibid., pp. 83-84.
63 Ibid., p. 86.
64 Ibid.
65 Ibid., p. 98.
66 Ibid., p. 107.
67 Ibid., p. 110.
68 Ibid.
69  Ibid., p. 114.


72  In an interview with Phenix, July 26, 1978, at Teachers College, Columbia University.

73  Phenix, Education and the Common Good, p. 18.

74  Ibid., pp. 24-25.

75  Ibid., p. 25.

76  Ibid., p. 34.

77  Philip H. Phenix, "Key Concepts and the Crisis in Learning," Teachers College Record, 58, No. 3 (December 1956): 137.

78  Ibid., p. 138.

79  Ibid., pp. 138-39.

80  Ibid., p. 139.

81  Ibid., p. 140.

82  Ibid.

84 Ibid.

85 Ibid., p. 195.


87 Ibid., p. 306.


89 Ibid., p. 94.


93 Ibid.
94  Ibid., p. 340.
95  Ibid., p. 341.
97  Phenix, Philosophy of Education, p. 4.
98  Ibid., pp. 4-8.
99  Ibid., p. 12.
100  Ibid., p. 13.
103  Phenix, Realms of Meaning, p. 188.
104  Ibid., p. 25.
105  Ibid., p. 193.
106  Ibid., pp. 195-96.
107  Ibid., pp. 197-98.

110 Bertrand Russell, History of Western Philosophy, 1965, p. 482.
"Synthesis" in Greek means "putting together," but historically it has different connotations. It may mean:
1. **Not genuine.** This concept can be traced back to the struggle of early Christianity with heresies. Christian dogma has to be pure and not mixed with other religions or philosophies such as Gnosticism or Manichaeism.
2. **Ideology.** This concept is developed from Hegel's interpretation of history. Hegel sees that history is a process of dialectic movement. The dialectic process is based on the principle of negativity. It is not adequate to see Hegel chiefly in terms of the triadic dialectic: thesis, antithesis, and synthesis. This can be a caricature of Hegel, but it happens to be a caricature for which he is largely responsible in his later writings, especially in his encyclopedia. The central point of Hegel's idea is the negative element in every life process. The negation drives the positive out of itself and reveals its inner potentialities. This is another idea taken up by existentialism. That is also the reason why modern existentialists have been moving toward neo-Hegelians. According to Hegel, life is not
possible without negativity: otherwise, the positive would remain within itself in a dead end of identity. The continuous process of life which goes out of itself and tries to return to itself by way of reconciliation has in itself the principle of negativity. It is on this crucial principle of negativity that Hegel's synthesis can be easily interpreted as an absolute deterministic ideology predicting and knowing the outcome of history in its future development. This is the hybris which brought Hegel's synthesis to its final dissolution without seeing its greatness.

3. A New Order. This concept has been formulated by John Dewey in his progressive education. There is always a conflict between theory and practice. The business of the philosophy of education is not the formation of a compromise, nor of an eclectic combination. It is:

... to ascertain the causes for the conflicts that exist and then, instead of taking one side or the other, to indicate a plan of operations proceeding from a level deeper and more inclusive than is represented by the practices and ideas of the contending parties.

... It means the necessity of the introduction of a new order of conceptions leading to new modes of practice. It is for this reason that it is so difficult to develop a philosophy of education, the moment tradition and custom are departed from. It is for this reason that the conduct of schools, based upon a new order of conceptions, is so much more difficult than is the management of schools which walk in beaten paths. Hence, every movement in the direction of a new order of ideas and of activities directed by them calls out, sooner or later, a return to
what appear to be simpler and more fundamental ideas and practices of the past—as is exemplified at present in education in the attempt to revive the principles of ancient Greece and of the middle ages.1

Dewey has also a deep understanding of both the advantages and disadvantages in Hegel's system. Dewey perceives the danger in the concept of synthesis which can easily be misused either as an absolute ideology or as a dichotomy. He continues:

It is in this context that I have suggested at the close of this little volume that those who are looking ahead to a new movement in education, adapted to the existing need for a new social order, should think in terms of Education itself rather than in terms of some 'ism about education, even such an 'ism as 'progressivism.' For in spite of itself any movement that thinks and acts in terms of an 'ism becomes so involved in reaction against other 'isms that it is unwittingly controlled by them. For it then forms its principles by reaction against them instead of by a comprehensive, constructive survey of actual needs, problems, and possibilities. . . .2

It is the reaction against formalist, traditional, education that leads to the decline of the progressive movement after the formalists have waned. It is also Phenix's effort to have a comprehensive and constructive reform that makes him so important to us. Both Dewey and Phenix have a holistic and inclusive view of education. Hegel's great synthesis lies in the fact that he has gone further than any other philosopher in pushing the enterprise to its limit.
In Hegel's system, the partial affirmation of a notion is its relation to the whole. But a complete coordination of all elements within the unity of the whole notion makes impossible any abstract isolation of elements, and so cancels all one-sided affirmations. Post-Hegelians, Kierkegaard, Nietzsche, and Marx have been aware of this. Dewey and Phenix are, of course, not exceptions.

This investigation adopts the third meaning of synthesis, i.e., a new order, as a framework in which to examine four categories (elements) out of the nine characteristics that Klohr identified in the work of the reconceptualists during the Curriculum Theory Conference at Xavier University in 1974. Finally, this study comments on Harvard's 1978 undergraduate "Core Curriculum" proposals.

Four characteristics that Klohr identified:

1. A holistic, organic view is taken of man and his relation to nature.

The interaction between man and his environment is the beginning of knowledge. Epistemology, the knowledge of knowing, is a part of ontology, the knowledge of being. Every epistemological assertion is implicitly ontological. Modern philosophy has been trying, on one hand, to emphasize epistemology and on the other hand to reduce ontology to technology. According to empiricism, scientific knowledge should consist of proven propositions. But these
propositions can only be strictly logical deductions which enable us to infer truth but not to prove it. This criterion makes empiricists accept only a relatively small set of hard facts or factual propositions. Unfortunately this same criterion, the identification of knowledge with proven knowledge, leads scepticism to deny all knowledge and opens the door to irrationalism. Logical positivism even refuses to understand anything that transcends technical reason, thus making philosophy irrelevant for many questions of humanistic concern.

Ontological reason, from the time of Parmenides, has been the assumption of all philosophers that the *logos*, the word which grasps and shapes reality, can do so only because reality itself has a *logos* character (rational form or pattern). Since then there have been widely different explanations of the relation (interaction) between subjective reason (the *logos* structure of the grasping and shaping self) and objective reason (the *logos* structure of the grasped and shaped nature). Rationalism emphasizes objective reason without explanation of the fact that matter is receptive to the structural power of reason. Empiricism emphasizes the subjective reason of experiences without being conscious of its presupposition that reality has the power of producing a reasonable mind through which it can grasp and shape itself. Pragmatism emphasizes action
or problem-solving, leaving the difference between subjective and objective reason without explanation. Existentialism has the same intention as pragmatism, trying to overcome the dichotomy between subjective and objective reason. It aims to cut under the "subject-object distinction" and to reach the stratum of Being which Jaspers, for example, calls the Ursprung or "Source." In order to penetrate to this stratum, we must leave the sphere of "objective" things and pass through the corresponding "subjective" inner experience, until we arrive at the immediate creative experience or "Source." Personal experience can never be objectified. Heidegger introduces the concept of Dasein (being-there) as the expression of experience. However, from Being and Time (1927) to "Time and Being" (1962), Heidegger has been trying to improve this metaphysical tangle. What he has accomplished is only a complex and subtle reverse which leaves the question unsolved.

It is difficult to have a convergence in the history of ideas, but it is possible to have a balance in the practice of education—a holistic view of culture. As Phenix sees it:

I suggest that a healthy civilization is balanced with respect to differences and unity and that the excess of either plurality or oneness is a work of an ailing culture. When differentiation dominates, the result is chaos, anarchy, destructive conflict, waste,
dispersion, and triviality. When unity reigns supreme, the consequence is stagnation, rigidity, inflexibility, and sterility. The well-balanced civilization possesses dynamic and contrast-ful integrity, wherein differences both temporal and extensive are so related as to become mutually enhancing.  

Philosophy goes astray when its integrative function is conceived in the manner of a monolithic system or method, for the result of such restriction is just the opposite of unification, namely, the generation of sectarian philosophical orthodoxies. Furthermore, education organized under the guidance of such philosophies is diverted from its proper connection with the living sources of culture. For example, an existentialist, a Thomist, or an experimentalist philosophy of education, seriously applied, would impoverish teaching and learning by directing attention too narrowly to certain aspects of experience.

What we have emphasized here is a synoptic view of a philosophy of education—a synthesis of unity in diversity and diversity in unity, a unity but not uniformity and diversity but not disorganization. Different epistemologies have to be implemented skillfully for the fruitfulness of education; but structure of knowledge has to be differentiated in each of the different disciplines in curriculum-making. By using Bruner's metaphor, we can perceive that the left hand cannot be identified with the right or the other way around. They cannot be reduced one to another either. It is a function of coordination and correlation.
2. The individual becomes the chief agent in the construction of knowledge; that is, he is a culture creator as well as a culture bearer.

"What is man?" This is the most difficult question to answer. There are two reasons for this difficulty. First, as Phenix sees it, any field study of man is partial; and man is too complicated a subject to be completely understood. Secondly, in the process of knowing, man is an element for investigation. In this case man has to be shifted from a thinking subject to an investigated object. This raises another question, that is: Can man be eliminated from his emotions and be treated the same as other objects (organic or inorganic), e.g., whether or not social science is pure science? The argument continues between those who think that social science is pure science and those who think that social science is not.

In order to avoid man as either a thinking subject or an investigated object, the most promising alternative is to see man as a free agent. This approach needs a reconstruction of the traditional philosophy of man. John Macmurray says in The Self as Agent:

The Self must be conceived, not theoretically as subject, but practically, as agent. Secondly, human behavior is comprehensible only in terms of a dynamic social reference; the isolated, purely individual self is a fiction. . . . In face of both difficulties
a radical modification of our philosophical tradition is demanded. The first requires us to substitute for the Self as subject, which is the starting-point of modern philosophy, the Self as agent; and to make this substitution is to reject the traditional distinction between the subjective and the objective. The second compels us to abandon the traditional individualism or egocentricity of our philosophy. We must introduce the second person as the necessary correlative of the first, and do our thinking not from the standpoint of the 'I' alone, but of the 'you and I.'

There are two concepts in human knowledge: one is the concept of the self-as-subject, the other is the concept of the self-as-agent. What John Macmurray has proposed is that we should substitute the "I do" for the "I think" as our starting-point and center of reference, and do our thinking from the standpoint of action. He criticizes Descartes' method of doubt which is based on "I think."

For him it is unproductive, and self-contradictory:

The method of doubt would have us abstract from the fact of belief or disbelief, separate what is believed from the believing of it and entertain it simply as a 'proposition' whose truth or falsity is undetermined. It is hoped that this will provide us with a neutral starting-point for an activity of thinking which aims to determine, purely theoretically, whether it is to be accepted as true or rejected as false. Only when it has been so certified by reason can it properly be said to be known. This, it may be said, is the point of view of philosophy--that nothing is known until it has been transformed, by rational criticism, from a mere belief into a logical certainty. Knowledge, in this strict sense
of the term, is the product of thought and lies at the end of a process which begins in doubt.\textsuperscript{9}

To transfer the task of logic from the analysis of thinking to the analysis of language, the vehicle of thinking, is to take a step towards the recognition of the mutuality of personal communication. But to stop here and to conceive that purpose of philosophy is simply the logical analysis of language is to be stuck with the presuppositions of traditional philosophy from which Macmurray has suggested a departure.

Macmurray's proposal of having a philosophy of "I do" rather than "I think," in order to emphasize human relations instead of logical speculation, is a philosophical version of Buber's religious book \textit{I and Thou}. This kind of personal knowledge is difficult to understand and also difficult to practice. It is a kind of knowledge in which the knower is not only an observer, he is also a participator. It is the knowledge of both detachment and involvement, of cognition and passion. Aristotle criticizes Plato's theory of equating of virtue with knowledge (\textit{arete with logos}). He thinks it is not practical to have such an idea. Aristotle restores the balance, by building his moral knowledge, which he calls "self-knowledge," in man's \textit{orexis}--the striving aspect of mind--corresponding with natural law. This kind of knowledge can be used, as guiding
principles to practice in a concrete situation in human experiences. These guiding principles cannot be taught. They have only the validity of schemata.

Abraham Kaplan describes self-knowledge as wisdom. He explains that reason is always affected by emotional needs and these emotional needs may stimulate reason. When one has done something wrong, he tries to hide his wrongdoings and to rationalize his behavior. This kind of self-deception cannot be corrected by any knowledge unless one is willing to admit his mistakes. This immediate self-awareness is wisdom, therefore wisdom cannot be taught.¹⁰ Hans-Georg Gadamer says in Truth and Method, "Nothing is so terrible, so uncanny, so appalling as the exercise of brilliant talents for evil."¹¹ This is why Spinoza was highly respected by most historians. "He not only believed his own doctrines, but practised them."¹²

This actual estrangement in man's nature drives him to search for his essential goodness. Maxine Greene acknowledges that modern man is fighting against dehumanization and depersonalization. In industrial society, man is like a cog in the machine. He looks for his identity. He does it in the light of some "image of man." What should the school do to help students' cognitive and affective growth? Greene comments that under the crush of society, man is powerless and invisible.
John Holt describes school children as "subject people" forced into a school as into a jail. Edgar Z. Friedenberg describes the public school as the instrument through which society acculturates people into a blueprint before they are old enough to resist it. Ivan Illich says that the institution of the school is repressive and puts persons in iron chains.

From criticisms such as these and others, we have learned that today it is not enough for the school curriculum to meet the needs of society; it is necessary for the school curriculum to answer the challenge from society. If this is so, what criterion is the basis for curriculum reform, when there are no universal values in modern philosophy? Phenix proposes an ideal which is based on human essentialness, not on natural fact. "An ideal is not an actuality, not a fact, but a possibility that ought to be realized, a potentiality it is desirable to actualize." He criticizes the pragmatist method which reduces ends to means, and also "commits the naturalistic fallacy of identifying a fact with a value." "To use the method effectively, one has to be able to evaluate the worth of consequences." What Phenix has suggested here is worthy of consideration. We need an ideal which is based on human nature, rather than on the one-sidedness of either religion or science:
Such an ideal of what human life can be and ought to be is consistent with the facts of human experience and with the persistent visions of universality, truth, beauty, love, duty, and integrity that have come down in the moral traditions of mankind. It states a goal, based on the study of human potentialities, by which the consequences of actions may be assessed, and hence provides a solid ground for moral decisions. On this foundation, it would seem, a defensible and productive theory of morals can be established—a theory according to which the entire educative endeavor is seen as a moral enterprise aimed at the consummation of human life through the increase in meaning in all its realms.16

3. A reconceptualization of supporting political-social operations is basic.

Education is concerned about people. It cannot neglect the political-social condition in which people live. Moreover, any political change directly influences the educational program and curriculum-making. At present, a rather small group of thoughtful educators seem to be more radical than they were in the 1960's toward a genuine reform of schooling. Maxine Greene's new book Landscapes of Learning (1978) talks about the irrationality of man and the emancipation of education. The ASCD 1975 Yearbook, Schools in Search of Meaning, has the same attitude. It includes criticisms of schooling by Dwayne Huebner, Esther Zaret, William Burton, James B. Macdonald, John S. Mann, and Michael W. Apple. The main themes of the Yearbook are indicated as follows:
It seems to us that the 'real' meaning of schools (as they presently stand) is their depoliticization as an institution. We feel that we must help expose the fact that some people use schools, books, and ideas to control others; and that life is being aware of controlling and being controlled, of the oppressed and the oppressors. Thus we felt we must call attention to political freedom, not simply existential freedom. Schools, we felt, are not in search of meaning, only people are. Meaning is always the meaning of particular people with particular interests and with particular histories (p. 4).

Education is the activity of liberation (a la Nietzsche): liberation from ignorance, fear, want, disease, and alienation from oppression, and liberation from the role of unwitting oppressor. Anything short of this overreaching goal is an act of training, and an act of present depoliticized training in the interests of others (p. 4).

Much more dialog took place and it would be remiss not to suggest that certain areas of disagreement were not resolved. It was never clearly agreed upon whether the concept of 'class' should be construed in strict economic-social terms or broadened to 'class interests' in terms of a power elite. In either case, 'In whose interests?' was a commonly heard question. Meaning also cannot be totally reduced to political terms. The spiritual dimensions, or if one wishes, the metaphysics of politics, are morally complex and varied. Whatever accord individuals held was based upon the sense of justice, personal integrity, self-determination, and freedom that are a common historical background for us all (p. 5).

We begin with the assertion that the schools serve to legitimize the present social structure. The present social structure, called advanced United States capitalism, is characterized by: (a) bureaucratic organization, (b) hierarchical lines of authority, (c) job fragmentation, and (d) unequal rewards (p. 11).
From the main themes of the Yearbook, we know that the subject they are dealing with is broad; the problem they are to cope with is complex. However, the central question seems to be similar to that in Kliebard's criticism of "The Tyler Rationale," i.e.,

... we really have no criterion to appeal to in making a choice. We are urged only to make our educational objectives consistent with our educational philosophy, and this makes the choice of objectives precisely as arbitrary as the choice of philosophy. 17

This investigation will first examine the significant influence of Marx in social theory, and explore the meaning of political power. Finally, this study will draw some interpretations from Phenix's viewpoint on politics.

Western bourgeois society is the product of a double break from its tradition: the Reformation in religion and the Enlightenment in ideology. In Protestantism, the Western mind freed itself from the medieval bonds of ecclesiasticism; in the Enlightenment, it freed itself from the authority of absolutism. Marx saw that the belief of the Enlightenment in universal human reason was to begin with a polemic weapon of the bourgeoisie against feudalism, and then became a defense weapon against the proletariat. Only by negating itself could socialism have maintained a belief in universal reason. It perceived this long before bourgeois relativism had gained the same insight. This was
because socialism had recognized the contradictions in human reason and had become aware that it was conditioned by special interests and dependent on social groups.

In accordance with the Enlightenment, two different views of human nature have developed: that of liberalism and that of democracy. The empiricist tendency, corresponding to liberalism, presupposes that the elements of perception and instinct, by virtue of a demonstrable mechanism, can assume a rational form that in turn enables us to know objects well enough to act towards them in a rational manner. But the fact that there are mechanisms at play in a living being does not make that being itself a mechanism. Here lies the basic error of the objectified interpretation of the world that even socialism has not avoided in spite of its protest against it. This insight into the inadequacies of the older socialist concept of human nature has led today to a possibility of an alliance between Marxism and psychoanalysis, as in Habermas.

The rationalist interpretation of human nature, which corresponds to the democratic element of the bourgeois principle, is quite different. What for empiricism happens automatically, as it were, is here the result of constant spontaneous activity, a continuous fulfilling of logical and moral demands. The human mind itself, as the central
activity, creates the world that it knows and rules. Education thus plays a decisive role in this kind of thought. Since rationality does not develop naturally, education must intervene; the more developed intelligence must lead the less developed intelligence and bring it to maturity. Democracy must presuppose that the individual person, as well as humanity as a whole, is capable of education, that the content of knowledge is grasped and shaped by the categories and conditions of knowledge. The presupposition of this view of human nature is that substance can be apprehended through form, or, through pure reason, and amounts to a belief in harmony. Marx, trying to develop human nature in the class struggle, can hardly accept this theory. The social has priority over the individual. As Michael W. Apple has stated, there are:

... in the increasing use of therapeutic models in education, models that serve as excuses to change the individual child rather than the social and intellectual structure of the school to make it more responsive and responsible.18

The argument here is the question: How can a transformed social situation become possible without the transformation of the human beings that constitute society? Most Marxists avoid this question. Dewey has a clear understanding of this as he says in Freedom and Culture:
To give independent validity to any component of human nature would be, from the Marxist standpoint, a relapse into the 'idealistic' type of theory that Marxism came to destroy. 19

The most crucial point is Marx's conversion of Hegel's dialectical idealism into dialectical materialism. Marx directly attacks Hegel's concept of *Aufheben*, which means both negating and preserving. For Marx, Hegel's dialectical negation in fact removes nothing; it only labels things as having been negated. The real revolutionary character is softened by Hegel's system. It is obvious that his criticism strikes not only Hegel, but even the rational theory of progressive evolution, idealistic as well as naturalistic, including the later so-called "scientific Marxism." Dewey also comments on this:

. . . that Marx saw in Hegelian dialectic a principle which, when it was given economic interpretation, provided a sure basis for a science of social changes, while at the same time, it furnished the revolutionary movement a supreme directive for its practical activities. 20

The impulse of history cannot be converted into a succession of external events. What actually takes place contradicts the impulse of history just as much as it corresponds to it. The question of the "ought" cannot be answered by reference to "is." The good transcends being as Plato sees it. History is not fulfillment of
what is intended for humanity from its essence. The fulfillment of the essence lies rather in what confronts us as a demand of an "ought." Marx correlates the question of "is" with the question of "ought" by an interpretation of the antinomy of human nature. He did not pursue the problem as Hume did in his research for a justification of induction by the function of deduction to prove the truth of conclusions. That is why Marx is still appealing to most scholars today. Tillich perceived this in 1933 when he wrote:

Marx thus correctly brought socialist knowledge and action into primal connection with the proletariat. The fact that we find here a place where socialism, with dialectical necessity, grows out of being itself, constitutes the starting point for socialism's proof of the historical dialectic as a whole. The 'is' and the 'ought' are thus linked together once again in a concrete human situation. The socialist demand and historical reality are as one in the knowledge and action of the proletariat. At the same time, a structure of human being as such is disclosed in such thought and action, thus demonstrating that socialism is the decisive concern of Western humanity as a whole.21

Political power is derived from human nature. Without acknowledgement from the people, there will not be any form of government. Even in a totalitarian regime, the exercise of political power has to have support from a majority of the people. If any regime uses power without the consent of a majority of the people, it is no longer the exercise
of power, but only a struggle for power.

Nietzsche's "will to power," according to Heidegger's understanding in his Forest Roads, is neither will nor power in the ordinary sense of the words. The "will to power" is not the will of man to attain power over man, but it is the dynamic self-affirmation of life, the drive of living beings to realize itself with increasing intensity and extensity. Power is a process of being actualizing itself over against the threat of non-being. It uses and abuses force in order to actualize itself, but is neither the one nor the other. The self-affirmation of being is correlated to the power of being it embodies. The exercise of power happens in the life of any group: family, school, factory, or government.

Power needs compulsion, but compulsion needs the criterion which is implied in the actual power relation. Historically, this criterion is the principle of justice in early Greek philosophy. Justice is the power of being. The purpose of power is the fulfillment of justice which is usually carried on by tradition, morality, and law. From this analysis, those who are in power, it is concluded, do two things: they express the justice of being of the whole group; and at the same time they express the power and the claim for justice of themselves as the ruling class.
In a democratic system, the constitution gives the ruling class authority to express their own power and justice of being in the justice and power of the whole group. The power of being of the group constitutes their own power of being. They stand and fall with it. They cannot exist if the whole group definitely withdraws its acknowledgment. The silent acknowledgment received by the ruling class from the whole group cannot be understood without an element which is derived from human nature: not only justice and power, but also love.

In a radical Marxist system, the concept of power and justice is under the guidance of the dialectic principle. This means there is always an interaction or struggle between its particular and universal elements. To consider only the universal aspect is to make Marxism a general ethical and political idea for which there is no leading group (ruling class). To consider Marxism only in its particularity is to deny its capability of overcoming the class situation and thereby proletarian existence; this reduces Marxism to being resentment of the oppressing class. Any ruling class will sooner or later become corrupted. The final expectation is an anarchist classless society. Both John Dewey and Bertrand Russell acknowledge that Marxism in its absolutism has an eschatological religious implication. This basic notion creates a difficult
problem for Marxism, making an independent cultural productivity almost impossible. Revolution has to continue without end.

What should educators do in regard to political issues? Bruner suggests that the political process is committed to the slow, patient pursuit of the possible. Educators have their responsibilities and functions just as generals do, in fact they have a strong influence on the politics of war and peace. As a psychologist, Bruner speaks:

It is, if you will, the psychologist's lively sense of what is possible that can make him a powerful force. If he fails to fill his role as a diviner and delineator of the possible, then he does not serve the society wisely. If he confuses his function and narrows his vision of the possible to what he counts as desirable, then we shall all be the poorer. He can and must provide the full range of alternatives to challenge the society to choice.23

Phenix has suggested some possibilities that might challenge society to reform. His first criticism is that the capitalist economic system may cause grave social injustice; and the communist economic system can undermine incentives for production. He prefers a holistic third way in which to look at economics, not as a natural science, but as a policy science, providing a basis for making intelligent decisions in the light of the common good.24
Secondly, in contrast to *Schools in Search of Meaning*, Phenix emphasizes the ultimate meaning in the essence of human nature, which has to be explored through different realms of reason consistent with the fact of human experience. This concept of ultimate meaning is derived from Paul Tillich's concept of "ultimate concern." According to Tillich, ultimate concern is the preliminary concern. It is based on Kierkegaard's concept of passion: "...in every concern there is something about which one is concerned; but this something should not appear as a separated object which could be known and handled without concern."\(^{25}\)

Thirdly, Phenix proposes the concept of a democracy of worth, which is a strong challenge to the existing bureaucracy, as he writes:

> Under the democracy of worth, education is directed toward the learning of what is excellent. In such democratic education the learner's desires are relevant only insofar as they reveal the nature and extent of the transmutation that must be effected through teaching and learning. The cardinal principle of teaching is, then, to subordinate considerations of learner interest and satisfaction to those of transcendent qualitative worth. This does not mean that the wants and inclinations of the learner should be ignored, but only that they should never become the criterion of value. . . .

> The basic assumption of the democracy of worth is that the values that emerge in human experience are not in the last analysis determinations of human will but discoveries of antecedent possibilities. This assumption does not require any belief in 'absolutes' in the
ordinary sense of known values that are independent of time and circumstance. The excel-
lences toward which mankind gropes are mani-
fest in a great variety of forms. What is
true, right, or desirable is not determinable
in the abstract but only within each particu-
lar situation.26

4. New language forms are generated to translate fresh
meanings--metaphors, for example.

Language is not only a vehicle to transmit feelings
and thoughts among people in daily life; it is also a medium
through which human concepts change, and new understandings
open up. Therefore, language is greatly significant in
its function of communication and creativity. Modern
hermeneutics is a method of interpretation of language
derived from the exegesis of religious texts. The purpose
of interpretation is to find valid contemporary meaning in
ancient texts. In other words, its purpose is to build a
bridge between our familiar world and the world of thousands
of years ago, which we resist assimilating into our world.
Its task is to provide a conceptual framework within which
the process of interpretation functions. The meaning of
ancient texts must be recovered by a disciplined reconstruc-
tion of the historical situation in which it originated.
This means the interpreter is no longer a subject standing
back from history and comprehending it as the object of
his thought, but allowing himself to be apprehended by it
and drawn into it as a part of it. His understanding of
history takes place in an encounter with history, in which his own existence is at stake. By achieving understanding in relationship to history, man at the same time understands himself. What he gains from this is not only the knowledge of an unknown fact but an understanding which demands a personal decision. One cannot receive what the texts say simply as information, but one can understand them only if he affirms or denies them. Thus, understanding is always resolution and decision as well.

But the interpreter who encounters history in a text is not a tabula rasa. Rather, he approaches a text with certain preconceptions, or prejudices, in his mind. For Schleiermacher and Dilthey, the interpreter's preconception and prejudice have a negative value, blocking the validity of understanding. This is what the interpreter must transcend. For Gadamer, understanding is an event of transmission, or mediation; it is not subjective or objective knowledge. "As mediation or transmission, the interpreter's action belongs to and is of the same nature as the substance of history that fills out the temporal gulf between him and his objects." 27

The subjectivity of the interpreter is not something to be suppressed, but is a necessary factor in objective historical knowledge. This preliminary relationship to the matter which is expressed in the text always has
inherent in it a certain prior knowledge, and this prior knowledge is never neutral, but always exists in a particular form which is already interpreted. Bultmann and Heidegger describe this as a prior understanding. Without such a prior understanding, there is no communication between the text and the interpreter; the text will be a closed document. What is that which is before the prior understanding? For Bultmann, it is the revelation of God; for Heidegger, it is the "hermeneutical circle."

Phenix has not written with a special focus on hermeneutics as Huebner has done. However, both of them have shared the same commitment but have different interests. Huebner's hermeneutics is concerned with the Marxist criticism of schooling, while Phenix concentrates on the reform of the disciplines of learning. However, they have the same commitment, which is the humanistic concern for education. According to Phenix, the search for meaning is not only existential, but also empirical. This holistic orientation holds Phenix reluctant to use metaphors or analogies. Nevertheless, he has used the analogy of the biological organism to illustrate the function of society as an integrating whole.

Though analogies often seriously mislead, they are sometimes rhetorically useful. To illuminate my thesis I shall take a chance with the familiar and in some respects inappropriate analogy between society and the biological organism.
According to logical empiricism, metaphors are meaningless sentences. But it is surprising that Wittgenstein, in the empiricist tradition, has used metaphors in all of his writings. Wittgenstein in his early writing, *Tractatus Logico-Philosophicus*, found the boundary between sense and nonsense of language based on a definite criterion of meaning. But later, he shifted from the substance of language to the social conventional uses of language (*Philosophical Investigations*, numbers 199, 241, and 288). We cannot make language mean what we want it to mean; we can use it only if other people can come to understand how we are using it. That is in a language game, we have to follow certain rules—socially accepted customs. There are no absolute criteria of "sense" or "nonsense." There are only limits of language, but there is no such a thing as the limit of language (*Philosophical Investigations*, number 119). We can draw a boundary only according to the established order for a particular purpose (*Philosophical Investigations*, number 499). "Where we say 'This makes no sense' we always mean 'This makes nonsense in this particular [language] game.'" Most of the confusion and misunderstanding in philosophical arguments come from using the right rules in a wrong game or vice versa.

Wittgenstein's attitude toward language made Rudolf Carnap feel very uneasy when they met in 1927. Arne
Naess, the Norwegian philosopher, in his *Four Modern Philosophers* comments on Carnap as follows:

... In short, it looks as though Carnap had little interest in the more basic moves in thinking, the stages before the conscious adopting of particular, or perhaps all, frameworks. From the point of view of bringing a high level of exactitude to scientific research this is, of course, understandable: whatever precedes the adopting of a linguistic framework for mathematics, logic, and physics can hardly be considered to be scientific in character. . . .

The aim of logical empiricism has been brilliantly expressed by Herbert Feigl, one of its pioneers. 'The future of empiricism will depend on its ability to avoid both the reductive fallacies of a narrow-minded positivism. . . as well as the seductive fallacies of metaphysics' (Herbert Feigl, "Logical Empiricism," p. 375 in Twentieth Century Philosophy, ed. D. D. Runes).

The pet phrase of the reductivist, as Feigl remarks, is 'nothing but,' organisms are nothing but machines, mind nothing but matter, ideas are only epiphenomena of economic (or physiological) processes. This is the way of the reductive materialist. There are other sects too: matter is nothing but clusters of sensations (reductive phenomenalism), universals are only words (reductive nominalism). Good and evil are no more than projections of our likes and dislikes (ethical scepticism), and so forth. These reductions are destructive, they make our world poorer.32

Another example of using metaphor in the philosophy of science is Thomas S. Kuhn's "Normal Science as Puzzle-Solving" which is Chapter IV in his book *The Structure of Scientific Revolutions*. Kuhn after a study of the history
of science in the seventeenth and eighteenth centuries, found out that what makes a scientist keep at continuous hard work is not any purpose or belief; it is from the strong challenge of the puzzle—a driving force of commitment. Quoting Kuhn: "The existence of this strong network of commitments—conceptual, theoretical, instrumental, and methodological—is a principal source of the metaphor that relates normal science to puzzle-solving."\(^{33}\) If normal science is looked upon as puzzle-solving, then there will be many possibilities and not just one solution. But there must be rules which limit the nature and procedures of solutions. Therefore, there is no criterion for choosing a puzzle, but there will be a criterion for choosing problems. Such a criterion is usually the function of a paradigm. Normal science is not entirely determined by rules, but by shared paradigms. Kuhn suggests: "Rules... derive from paradigms, but paradigms can guide research even in the absence of rules."\(^{34}\)

Later on, Kuhn clarifies his metaphor of puzzle-solving when he states:

\[\ldots\] It is important to notice that when I describe the scientist as a puzzle solver and Sir Karl Popper describes him as a problem solver, the similarity of our terms disguises a fundamental divergence. Sir Karl writes (the italics are his), 'Admittedly, our expectations, and thus our theories, may precede, historically, even our problems. Yet science starts only with problems. Problems crop up especially when
we are disappointed in our expectations, or when our theories involve us in difficulties, in contradictions.' I use the term 'puzzle' in order to emphasize that the difficulties which ordinarily confront even the very best scientists are, like crossword puzzles or chess puzzles, challenges only to his ingenuity. He is in difficulty, not current theory. My point is almost the converse of Sir Karl's.35

Karl Popper in his paper "Normal Science and Its Dangers" defends himself and also criticizes Kuhn's normal science as puzzle-solving. Popper's standpoint, as stated in his *The Logic of Scientific Discovery*, tries to eliminate subjective psychological intuition and maintain the neutrality of science. He criticizes Kuhn's puzzle-solving, in the light of a preconceived notion, as an approach. "It shows that one never reads or understands a book except with definite expectations in one's mind."36

Kuhn admits that he disagrees with Popper:

... The resulting clarification will, in addition, permit me to suggest what I take to be the root of my single most fundamental difference from Sir Karl.

He and his followers share with more traditional philosophers of science the assumption that the problem of theory-choice can be resolved by techniques which are semantically neutral. ... For Sir Karl and his school, no less than for Carnap and Reichenbach, canons of rationality thus derive exclusively from those of logical and linguistic syntax. Paul Feyerabend provides the exception which proves that rule. Denying the existence of a vocabulary
adequate to neutral observation reports, he at once concludes to the intrinsic irrationality of theory-choice.37

Kuhn's purpose is to try to find out how paradigms operate independently of rules in the normal science of puzzle-solving, but his concept of paradigm is not clear. Kuhn does not want to have any presupposition of the concept of paradigm. He perceives it as a "way of seeing," or a method of interpretation of what a scientific process is. Kuhn's paradigm is a new concept of science, which has attracted much attention and controversy. Margaret Masterman has a clear evaluation in her analysis of Kuhn's theory:

... So, if we retreat from all further consideration of Kuhn's 'new image' of science, we run the risk of totally disconnecting the new-style realistic history of science from its old-style philosophy: a disaster.

And if we go forward, and if I am right in my analysis, we have got to re-examine what is true of analogy in the light of what Kuhn has shown to be true of paradigms.38

The most striking metaphors that speak directly to curriculum theory are Bruner's "left hand" in his book On Knowing, and Mooney's "two feet" in "The Researcher Himself."

Bruner says:

... I have felt that the self-imposed fetish of objectivity has kept us from developing a needed genre of psychological writing--call it protopsychological writing if you will--the preparatory intellectual and emotional labors on which our later, more formalized, efforts are based. The genre in its very nature is literary and metaphoric, yet it is
something more than this. It inhabits a realm midway between the humanities and the sciences. It is the left hand trying to transmit to the right.

I find myself a little out of patience with the alleged split between 'the two cultures,' for the two are not simply external ways of life, one pursued by humanists, the other by scientists. They are ways of living with one's own experience.39

Mooney's metaphor is as follows:

'As a scientist, I am concerned with the "good" as well as the "true." I see the "good" and the "true" as reciprocally fused in one rhythmic stride through life. Striding requires of me a foot on the ground to hold my weight and a foot on the move to carry me forward. Through the foot on the ground, I am sensitive to the question, Will the earth support me here? Through the foot on the move I am sensitive to the question, Where would be good for me to go? The former is the question of "truth" and the latter is the question of "good." Neither is serviceable to me apart from the other, for both are appendages of the one that is me and both are equally true and valuable for me... this is a matter of my giving attention according to the ebb and flow of my transactions with my environment. It leaves me squarely in the center of my life as the creature through whom the relatively true and the relatively good get their formation, relation, and inseparable function.'40

Phenix does not say very much about metaphors; nevertheless, his suggestion for having a "community of discourse" (Philosophy of Education, pp. 317-20) is significant and practical as a possibility for interdisciplinary research. Piaget believes that interdisciplinary collaboration in the
natural sciences has a lead over that in the human sciences. From Piaget's observation one reason is that in natural sciences there is a "common trunk" to discover a series of generalities and complexities in accordance with Auguste Comte's criteria. In the human sciences, there is a lack of such an order. Another reason is that in the natural sciences, there is a need for a grounding in the disciplines preceding one's special field which usually encourages cooperative research with other fields of study. In the human sciences usually no such a need exists, or the need is not so urgent. Also in this situation, there is a splitting-up of courses among university faculties, in an effort to keep the prestige of their specialization. What we need is research for interdisciplinary collaboration, not a mere juxtaposition or reduction.

From his analysis, Piaget suggests three solutions for inter-disciplinary discussions:

These solutions are: (1) reduction from the 'higher' to the 'lower'; (2) irreducibility of the phenomenon of the 'higher' level; and (3) reciprocal assimilation by partial reduction of the 'higher,' but also by enrichment of the 'lower' by the 'higher.'
Harvard's Report on the "Core Curriculum"

Having examined Paul Klohr's four aspects of curriculum theory, this study will review Harvard's report on the "Core Curriculum." It is a 1978 report proposed by Dean Henry Rosovsky to improve the undergraduate program existing since 1945. Under the new proposal, an undergraduate would be required to take from seven to ten courses from the five core areas, which are:

- **Literature and the arts.** One literature course, one in fine arts or music, and one that shows the links between literature and the arts.
- **History.** One course covering a contemporary problem and another interpreting an event from an earlier era.
- **Social and philosophical analysis.** A social science course such as psychology or economics and a course focusing on ethics, law and politics.
- **Science and mathematics.** One course in physical science or math and another in biological or behavioral science.
- **Foreign languages and cultures.** One course concerning a foreign culture and its language.

It is important to notice what is being included and what is being excluded in order to understand the main principles in the proposal:
We are not proposing an identical set of courses for all students, and we are not proposing an even-handed introduction to all fields of knowledge. The proliferation of knowledge makes both of those goals impractical, except at the cost of severe simplification and the loss of either range or intellectual quality.

We do not think there is a single set of Great Books that every educated person must master, and we do not think an inevitable thin survey of the conventional substantive areas—humanities, social sciences and natural sciences—is any longer useful. Nor do we think a loose distribution requirement among departmental courses can convey specifically enough what the Faculty believes to be the 'knowledge, skills, and habits of thought' that are 'of general and lasting intellectual significance.'

Our goal is to encourage a critical appreciation of and informed acquaintance with the major approaches to knowledge, not in abstract but in substantive terms, so that students have an understanding of what kinds of knowledge exist in certain important areas, how such knowledge is acquired, how it is deployed, and what it might mean to them personally.

The main purpose of this curriculum renovation is to try to emphasize the disciplines in general fields in order to achieve an understanding of the universe, society, and of ourselves through critical thinking in its depth and maturity. These goals can be summarized as follows:

Such a Core Curriculum combined with fields of concentration addresses a wide variety of educational concerns and imposes high demands on students. But flexibility and free choice remain.

Core, concentration, and electives are the components of the proposed undergraduate curriculum, and their combination and interaction can yield a significantly improved education. Core areas are related to each other by a common
question: what are knowledge and understanding, and how are they acquired? That different ways of looking at the universe, society, and ourselves overlap to some degree is no disadvantage. These interpretations reflect the true state of learning with its ever-shifting boundaries, and also give students and faculty a greater opportunity for interdisciplinary presentations.

Electives interact with these other elements of the overall undergraduate program in a number of ways. They allow some students to achieve greater depth in concentrations than would ordinarily be the case. . . . Free choice, in combination with core and concentration, is essential to full self-development, which is the primary goal of all education.44

In the proposal, the committee's recommendations have three parts. Part One contains recommendations for the non-concentration requirement in each of the five areas. The primary justification for including foreign cultures in the Core Curriculum is to prevent cultural provincialism. Thus the purpose of a requirement in this area relates to the substance of what is learned, though that substance is meant to contribute to habits of thought that the Faculty considers to be of general and lasting intellectual significance.

Part Two contains recommendations for related degree requirements in expository writing, math, and foreign languages. In addition to reviewing the full set of nonconcentration requirements, the committee was asked to design or designate appropriate courses within each area of the Core,
and to suggest mechanisms for assuring that such courses will be available in the curriculum. Committee members were reluctant to undertake the design and designation of particular courses, believing that it would be inappropriate, and possibly counterproductive, to prescribe details of course content and organization. Rather, they suggested ideal types and a set of criteria for use by the Core Curriculum committees that will evaluate course proposals made by faculty members who wish to teach in the various core areas.

Part Three includes a proposal for the organization of the Core Curriculum committees. It suggests that supervision of the program rests with committees, able to initiate, review, modify, and renew courses offered in each area. The recommendation, therefore, is that the present committee on General Education be abolished and there by constituted in its place a new Standing Committee of Faculty, with six subcommittees.

By and large, it is a well organized curriculum. The key issue of the Core Curriculum is in Part Two, where it is proposed to have suggested ideal types and a set of criteria to evaluate course proposals. If the underpinning of the suggested ideal types and set of criteria is something new, e.g., an integration of the positivist and existentialist approaches to human sciences such as history,
social studies, and psychology, it would be a genuine contribution to the development of undergraduate curriculum. If the justification of educational objectives is in the category of the Tyler Rationale, it also would face the same challenge from Kliebard's criticism as did the Tyler Rationale.

Harvard's new program was scheduled to have a debate on the proposed guidelines on March 14th and April 11th of this year. From a recent report (September 10, 1978, in the Columbus Dispatch), it will start in the fall of 1979. Daniel Q. Haney, as Associated Press writer, comments that the Harvard Core Curriculum seems to gain support from other universities such as the University of Chicago, Northwestern University, and the University of Missouri. These universities appear to welcome the trend and to be working out their own programs. However, not everyone agrees with the movement. Yale, for instance, rejected a proposal for new course requirements, assessing them as too rigid.

It seems that curriculum theories, like a pendulum, swing back and forth between child-centered and subject-centered. Phenix indicates this in the preface of Realms of Meaning: "The educational proposals in the present book are intended to show how knowledge may be used in the curriculum in such a way as to make it unnecessary to repeat the reaction and reform cycles of the past."45
Mauritz Johnson, Jr., emphasizes the difficulty of curriculum reform. He asserts that the noneducationist scholars are more concerned with improving school programs than with gaining increased insight into the nature of curriculum, i.e., the specialists have seemed more concerned with improving the process of curriculum development than with any specific improvement in the curriculum itself, and whatever interest they may have had in organizational theory and the psychology of groups, they have evidenced little concern for curriculum theory.

Therefore, the majority of educators, as Johnson sees them, are oriented toward improving rather than understanding, action and results rather than inquiry. Theoretical clarification is needed to benefit curriculum development. This study is based on this presumption. This researcher is convinced that Phenix's curriculum theory has a holistic framework, bringing together both the child-centered and subject-centered, content and process, as a whole. It provides, therefore, a sound theoretical base for future curriculum inquiry.

The synthesis proposed here, based on an analysis of Phenix's thinking may be visualized in the following diagram. This diagram attempts to integrate Macdonald's "A Transcendental Developmental Ideology of Education," which is child-centered, and Bruner's The Process of Education, which is
A - Developmental transaction (Macdonald)
B - Reflective transaction (Macdonald)
C - Symbolics (Phenix)
D - Aesthetic rationality (Macdonald)

Figure 2
A Curriculum Design for General Education
discipline-centered, by using Phenix's Realms of Meaning and Klohr's interpretation of Phenix's curriculum design as the basis.

For Phenix, meaning is the knowledge of understanding. Therefore the purpose of education is to promote the growth of meaning. The meaning in realms of symbolics, empirics, aesthetics, synnoetics, ethics, and synoptics is nurtured by an appropriate discipline started by symbolics. Synoptics and synnoetics are at each end of the spectrum of meanings in order to encompass its entire range. Moreover, Macdonald's dual dialectic is also conceptualized in a symbolic form.

The four dimensions of meaning in Phenix's theory, the experience of self-consciousness, the logical principle, the selective elaboration, and the esthetic expression, are initiated by the first dimension which refers to one's inner life of self-awareness. This comes to agree with Klohr's interpretation of the individual as an agent in search of meaning.

Macdonald's concept of aesthetic rationality is based on Herbert Marcuse's critical consciousness in order to counterbalance technological rationality. Macdonald's method of a dual dialectic tries to incorporate Dewey's concept of transaction in a phenomenological framework.
For the sake of clarity an analogy may be made at this point to Dewey's developmental ideology. That is, if centering is viewed as the long-range developmental goal of curriculum, then process and content may be seen in terms of this goal. 50
NOTES AND REFERENCES


2 Ibid., p. 6.


4 Ibid., p. 83.

5 Philip H. Phenix, "Teacher Education and the Unity of Culture," Teachers College Record, March 1959, p. 338.


9 Ibid., pp. 77-78.


14 Ibid.
15 Ibid.
16 Ibid., p. 232.
20 Ibid., p. 81
27 Hans-Georg Gadamer, Philosophical Hermeneutics trans. and ed. David E. Linge (Berkeley and Los Angeles:

28 Phenix, Realms of Meaning, pp. 40-41.


32 Ibid., pp. 64-65.


34 Ibid.


38 Margaret Masterman, "The Nature of a Paradigm" in Criticism and the Growth of Knowledge, eds. Imre Lakatos and


42 Ibid., p. 11.


44 Ibid.

45 Phenix, Realms of Meaning, p. xi.


47 Phenix, Realms of Meaning, pp. 21-25.

48 This and the above-mentioned interpretation of Phenix's curriculum design are from Klohr's class, Ed. C&F 860, "Fundamentals of Curriculum," in the College of Education's Graduate School at The Ohio State University.


50 Ibid., p. 109.
CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Curriculum development has usually taken an isomorphic approach in its three aspects: knowledge (instruction), man (growth), and institution (schooling). Because of different interests and emphases, there are divisions in this development, i.e., subject-centered, child-centered and social reconstruction. There is no clear cutting edge among these three orientations. In effect, they are closely interrelated. Any new knowledge, such as computer science, changes the whole outlook of society. Moreover, any decision-making in society will inevitably influence either the content of curriculum or the child's psychological development. Curriculum theory is concerned with the historical possibilities which can be implemented in a society only when the values attached to the possibilities within that society can be translated into practice. A curriculum theory terminates when society changes its value systems.

The sequence and order of the curriculum at the high school level, as Schwab observes it, is primarily of
Comtian-positivist orientation. Classroom activity is described by Huebner as the teacher imposing on the child white middle-class values. In recent years, many curriculum theorists have contributed their analyses, observations and criticisms. However, all political-social problems can be reduced to economic problems, such as the energy shortage, unemployment, strikes, tax reform, and inflation. Therefore, political power can be oversimplified as economic power. There are two major economic systems in the world: capitalism and communism. In a capitalist society, the emphasis in economic policy is laissez faire. That is less government control and more freedom--free competition and a free market. The communist economy is more government control and less freedom. Its principal goal is not the free exchange production, but equal distribution.

The political-economic pressure not only influences the teacher at work, but also influences the motivations of the child in learning. Educators, from George S. Counts to John S. Mann, have been interested in a radical reform of schooling. A pervasive reason is that Marxist ideology in its fight against conventional morals, seen as the instrument of the ruling class, can be identified with the positivist scientific proclamation that there are no
universal values. The Marxist utopian expectation of an equalitarian society can be identified with the teleological and eschatological character of Jewish-Christian tradition.

Frankfurt School (Neo-Hegelian)

When the Frankfurt School tried to form a critical theory based on a synthesis of the spectrum of Marx, Hegel, and Freud, it appealed to many modern educators in the United States. James B. Macdonald, after reading Haberman's *Knowledge and Human Interests*, says, "During the past year I have discovered a book that might have been written specifically for me at this time, that is, it spoke to me as only a few books can in a lifetime."?

The purpose of critical theory in the Frankfurt School is to reconstruct society based on nonexploitative relations between man and man; and to restore man to the center in the evolution of human society. Following Marx, the critical theorists neither support modern positivism nor metaphysical idealism. The fundamental change they made is to replace the Marxist class conflict with a large context of conflict between man and nature. Nietzsche's "will to power" foreshadowed this development by positing man's independence from external forces. Man as the measure of all things inherently means man as the master of nature. The over-emphasis on man's autonomy paradoxically leads to man's
submission to his own creation. The alienation of man from nature seems an irreversible trend. Habermas' concept of emancipation is not of the Marxist class struggle; it is of a psychoanalytical cognition as a result of self-reflection. ⁴

Habermas' three categories of cognition are the empirical-analytic, the historical-hermeneutic, and the emancipatory. Macdonald has compared each of these categories individually with its corresponding curriculum theory. The empirical-analytic cognitive interest has been associated with the subject matter or disciplines approach. The historical-hermeneutic cognitive interest has reflected the conflict of social issues. The emancipatory cognitive interest can be associated with emerging needs or child centered. ⁵ Macdonald uses three basic cognitive human interests: control, consensus, and emancipation ⁶ to form three curriculum models: linear-expert model, circular consensus model, and dialogical model. ⁷ Macdonald tries to shift Habermas' Knowledge and Human Interests into an article "Curriculum and Human Interests." ⁸ His analysis is successful in its diagnosis, but inadequate in its treatment of current curriculum issues. First, he sharpens the divisions between these three curriculum theories instead of coordinating them, although his intention is to form a rationale that would underlie all activities of curriculum
thinking. Secondly, his strong emphasis on emancipation in regard to child-centered curriculum comes under the criticism of Bruner in the 1960's: "Dewey did mighty service in inspiring a correction. But an excess of virtue is vice." 10

Habermas' concept of emancipation on reflection has been a controversial topic. Hans-Georg Gadamer in his paper, "On the Scope and Function of Hermeneutical Reflection (1967)," indicates the difference between his hermeneutical experience and Habermas' hermeneutical reflection. The hermeneutical experience is not in itself the object of methodical alienation but is directed against alienation. Hermeneutical reflection will not allow itself to be restricted to this function. In other words, Gadamer thinks that Habermas' Marxist critique of ideology is too radical. The emancipatory power of reflection is to set man free in a process of reflection either by way of psychoanalytic investigation or through social liberation. The moot question is "simply whether reflection always dissolves substantial relationships or is capable of taking them up into consciousness." 11 Gadamer acknowledges that Habermas is right to see the critique of ideology as the means of unmasking the deception of language, but he does not think that it is adequate to neglect language as "the medium in and through which we exist and perceive our world." 12
Language has the function to communicate universal concepts in human history. Gadamer writes:

The real question is whether one sees the function of reflection as bringing something to awareness in order to confront what is in fact accepted with other possibilities—so that one can either throw it out or reject the other possibilities and accept what the tradition de facto is presenting—or whether bringing something to awareness always dissolves what one has previously accepted.

Neo-Hegelian research in the methodology of social science especially the method of hermeneutics, is significant in curriculum theory, and future study would be fruitful.

A Dialogue between Chinese Thought and American Education

Phenix is not only interested in the disciplines of knowledge, he is also concerned about social problems. He teaches a course TF 4087Y "Education and Values" in Teachers College. When Habermas sets forth the proposition that knowledge cannot be divorced from human interests, Macdonald automatically agrees with Ubbelohde "that curriculum theory is essentially an attempt to construct a theory of values, whereas curriculum designs are patterns of value judgments."

When Nietzsche declares that God is dead, what he really means is that the system of value which has its roots in the idea of God has collapsed, and that consequently man has
to create new values for himself instead. It is extremely difficult for philosophers to look for a way of giving philosophical validity to the nature of human values, because values are expressions of existence which are unable to judge existence from a place beyond it. Sartre's statement that man's existence is his essence means that every moment of his existence man creates essence for himself, but there is no transcendent order from which his existence can be criticized. Positivism claims that there is a separation between value and truth. Pragmatism, on the contrary, asserts the unity of value and truth, but the test of truth is its practical value for the achievement of human ends. Thus it leaves no room for any theory of values which relies on the epistemological premise of objective truth, even if historically grounded. Therefore, it is difficult for any theory of values to defend itself from the challenges of both science and ontology. From the side of science, some scientists have agreed to set their researches free from values. Values, they have concluded, are valuations, not the validity of value theories. The attack from ontology is even more serious. The question arises: How can a commandment from beyond existence have any influence on existence? There is an unbridgeable gap between them. Phenix has tried to find a resolution between skepticism and dogmatism, but there are many questions left unanswered.
This leads us to a possibility of dialogue with Chinese culture. Fung Yu-lan, a Chinese living scholar, perceived this possibility after the Second World War when he lectured in the University of Pennsylvania from 1946-1947:

Thus the Chinese sage is both of this world and the other world, and Chinese philosophy is both this-worldly and other-worldly. With the scientific advancement of the future, I believe that religion with its dogmas and superstitions will give way to science; man's craving for the world beyond, however, will be met by the philosophy of the future—a philosophy which is therefore likely to be both this-worldly and other-worldly. In this respect Chinese philosophy may have something to contribute. 16

Chinese culture has usually been recognized as a synthesis of Taoism, Buddhism, and Confucianism, but historically it is not so. Chinese culture has traditionally a unique phenomenon of "tolerance," a concept of diversity in unity and unity in diversity. The different schools of philosophy can co-exist with each other without any contradiction. However, there is a clear differentiation between different schools of thought.

Confucius' thinking had been the dominant element in Chinese education until the 1911 revolution. Traditionally, Confucius thought comprised the canonized content of the curriculum in the government examination. One could study Buddhism or Taoism privately as a hobby, but they were never officially recognized in the traditional education system. Since the 1911 revolution, Chinese education has been purely Westernized, or Americanized, and the Confucius
faced the same destiny that Taoism and Buddhism had faced earlier, i.e., elimination from public education.

What the Confucius School has taught is neither science nor religion but ethics, a kind of knowledge similar to Phenix's synnoetics. The question that confronts us is: Is human life worth living, or rather, can it be and ought it to be made worth living? Confucius believes that men are not much different from each other by nature, but that there is a significant difference in regard to the habits they have formed due to the influence of environment. According to Confucius, the presupposition of "ought" is love (jen), which is built on what man can do—the capability of human essence. Every ethical principle is an expression of man's essential relation to himself, and to others. The content of Confucius' "love" is neither the metaphysical eros nor the theological agape, but a kind of love based on concrete experience. It is similar to the Western concepts of empathy and sympathy—conscientiousness to others. The way to practice love, for Confucius, is comprised of two principles: "chung" which means faithfulness and "shu" which means forgiveness. Confucius has never defined his concept of love. He answered the questions of different persons with different meanings of love in his Analects. He sees life as a piece of music which has both dissonance and harmony. It depends upon how you conduct your
life. We could imagine that he would agree with Buber's *I and Thou*, but he would not think that it is adequate to be looked upon as a guide for life. "I-Thou" is not always right, "I-It" is not necessarily wrong. For instance, a good surgeon's relationship with his patient would be one of "I-It" when in an operating room, but one of "I-Thou" when he visits the patient.

Mencius (371-289 B.C.) has been recognized as the successor of Confucius. His *Works* and Confucius' *Analects* are the main body of *The Four Books* (the Chinese classics). The other two are *The Great Learning*, which can be looked on as an introduction, and *The Doctrine of the Mean*, which describes the method of personal knowledge. Mencius has developed Confucius' love into four categories: love, justice, propriety, and intelligence. He compares these four categories to one's four limbs. Mencius presents many arguments with the other schools of philosophy in his time. He tries to form a universal validity for Confucius' concept of love. His proposition of love is that *all men have a mind which cannot bear to see the miserableness or suffering of other people*. Mencius proclaims that the feeling of commiseration is the beginning of human love; the feelings of shame and dislike are the beginning of justice; the feelings of modesty and yielding are the beginning of propriety; and the sense of right and wrong is the beginning
of intelligence. By nature, man has a sense of right and wrong. Phenix says that "It is the secret of man's unique adaptability."

Whether human nature is good or bad has been one of the most controversial questions in Chinese philosophy. When Mencius says that human nature is good, he really means that in the nature of man there are both good and evil elements. The task of education is to elicit, and to be conducive to the development of the good elements in man. Ethical teachings are to fulfill human potentialities, but they are not compulsions. The growth of man's essential nature needs time and disciplines. Mencius gives two metaphors illustrating this situation. First, he explains that human essential goodness is like a diamond in the rough. It needs a lapidary to cut and polish it. This means education is a task involving cultivation, but not imposition. The second metaphor he uses is that personal growth is like planting. It needs care and patience. There is the story of the man of Sung who worried about the slow growth of the plants in his field so he went out to the field at night, pulling up on all the tender young shoots to help them grow. Unfortunately the next morning he found all the plants withered and dying. What Mencius draws from this story is that very few teachers can help the child without helping the child to grow. This means that most of the time
the help is not only useless, but even harmful in deterring the growth of the child. Another group of teachers may conclude that since helping to grow is not right, they simply stop cultivating.

Mencius' Works are mainly concerned with the political issues of his time. There were two political philosophies; one was that of Yang Chu an individualist, the other was Mo Tzu a collectivist. Mencius speaks against both of them. Yang Chu's theory opposes human love and righteousness, Mo Tzu's principle of equalitarianism offends man's uniqueness. Mencius' criticism of politics is similar to Buber's today. "With the former man's face is distorted, with the latter it is masked." Mencius has a strong belief in man's uniqueness. It is man who leads the political system, not the other way around.

Mencius' political conviction, theory of knowledge and nature of man may afford a foothold for dialogue with present curriculum theory in the United States. However, it needs time to reevaluate and to reconstruct some fundamental ideas both in the West and in the East. It cannot be accomplished by a single person overnight. It is worthwhile to quote Fung's comment on Mencius as an ending of this research:

Confucius had limited himself to its application to the self-cultivation of the
individual, while by Mencius, its application was extended to government and politics. For Confucius, it was a principle only for 'sageliness within,' but by Mencius it was expanded to become also a principle for 'kingliness without.'20
NOTES AND REFERENCES


5 James B. Macdonald, pp. 290-93.

6 Ibid., pp. 289, 292.

7 Ibid., pp. 292-93.

8 Ibid., pp. 288-91.

9 Ibid., p. 289.


In an interview with Phenix on July 26, 1978, at Teachers College, Columbia University, the writer raised the question about a definition of the expression "universal good" in his book, *Education and the Common Good*. He frankly answered, "I cannot define it."


Fung's translation of *jen* is "human-heartedness."


Fung, p. 76.
APPENDIX A

LIST OF PUBLICATIONS - P. H. PHENIX
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"The Lord Commanded Me." Friends Intelligencer, 10/7/39, pp. 648-49.


Book Reviews: E. L. Allen, 6 Booklets on Barth, Berdyaev, Brunner, Jaspers, Maritain, Niebuhr. The Humanist, 1953, No. 4, p. 189.


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Mortimer Ostow & Ben-Ami Scharfstein, The Need to Believe, Ibid., pp. 245-47.


H. M. Kallen, Secularism is the Will of God. Jour. of Phil. Vol. LII, No. 19, 9/15/55, pp. 523-


"Putting the Pieces Together," The Intercollegian, September 1959, pp. 7-9.

"Can Student Individuality and Creativity Be Maintained in the Face of Pressures for Conformity?" Ch. 6 in Current Issues in Higher Education, Association for Higher Education, 1959, pp. 102-106.


Arabic Translation of Education and the Common Good. 1966.

Arabic Translation of Philosophy of Ed. 1965.


BIBLIOGRAPHY


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"What Happened to Progressive Education?" Teachers College Record 61 (Oct. 1959).


... "Curriculum Theory as Intentional Activity." Paper discussed at the Curriculum Theory Conference in Charlottesville, Va., October 1975.


"Key Concepts and the Crisis in Learning," Teachers College Record 58, No. 3 (December 1956): 137-43.


"Teacher Education and the Unity of Culture." Teachers College Record, March 1959, pp. 337-43.


