

CHAPTER V

ACTUALIZATION AS VALUE FORMATION: IMPLICATIONS FOR CURRICULUM THEORY, CURRICULUM DESIGN, AND A THEORY OF PEDAGOGY

Since the early 1920's, when curriculum development began to emerge as a professional field in its own right, to the present time, educators, theorists, researchers, and a number of national commissions have tried to define curriculum, formulate a theory about curriculum development and actually design various curricula. None of these efforts has been wholly successful; but several of the major problems involved have been fairly well identified and a number of experimental approaches have been proposed. During the 1950's interest in formulating a theory of curriculum and then redefining curriculum within that theoretical context attracted the attention of a number of educators (Taba, 1962; Bruner, 1966; Beauchamp, 1961; and Herrick & Tyler, 1950). Much of their work centers on a discussion of basic issues and defines the characteristics of curriculum theory which addresses those issues rather than actually formulating one. Others have drawn on disciplines outside of education as a means of gaining new perspectives on development. For instance, Macdonald (1965) applied systems analysis to curriculum development; Hughes (1962) used decision theory as a basis for organizing curriculum; and, Griffiths (1964) used a model based on a physical system.

Borrowing models from other disciplines is based on the assumption that they can deal with the problems of education even though they may be based on different sets of data -- an assumption which is usually unwarranted.¹

Curriculum design can hardly be considered apart from curriculum theory, though some educators have set forth a number of useful principles around which a curriculum can be organized. Bruner (1963, p. 17) emphasized the structure of disciplines because it facilitates the transfer of learning and the transfer of principles so that there is a "continual broadening and deepening of knowledge in terms of basic and general ideas". Bellack (1964) has revived interest in organizing the curriculum around classifications of knowledge which depend upon similar modes of thought and language. Foshay (1962) has suggested that modes of inquiry as represented in the various disciplines be the primary focus in curriculum design.

Some theorists, such as Tanner (1966), have expressed the conviction that the complexities of comprehensive curriculum development are too unmanageable to expect any substantial progress. Elliot & Foshay (1963) have even suggested that such attempts are premature and Beauchamp (1961) proposes that we should simply devote our time to constructing sub-theories in preparation for the emergence of more comprehensive theories in the future.

¹We have already discussed the difficulties inherent in such assumptions in Chapter I, where we examined how psychology was developed by borrowing concepts from the physical sciences thereby leading it to a mechanistic and therefore inadequate view of the nature of man.

Although these writers feel that it is premature for a comprehensive theory of curriculum to be developed, some of them have suggested what such a theory should be able to do:

When a comprehensive curriculum theory is built, it will have to take into account not only the learning methods and teaching methods ("strategies of instruction" and the like) but also the knowledge to be learned, the nature of the student who would learn it, and the nature of the societal responsibility shared by teacher and student. For if education is a moral affair before it is a technical affair, then the grounds for moral behavior have to be incorporated in one's theory of educational action (Foshay & Beilin, 1969, p. 278).

The Anisa Model is based on a comprehensive curriculum theory derived from a philosophy of organism and a curriculum design consistent with the theory. The theory not only meets all the criteria expressed by Foshay and Beilin but at the same time deals with the basic issues and problems articulated by curriculum developers and various curriculum commissions. Rather than being premature, such a comprehensive curriculum theory is long overdue.

Curriculum Theory and Learning Competence

Curriculum is what teachers and students do in order to achieve educational goals. If curriculum theory and educational philosophy are to be congruent, then educational goals must be derived from a philosophical base which expresses the "why" and the "how" of the curriculum in

terms of the goals derived from the philosophy.¹

In Chapter I, we presented the view that man is a spiritual being and a philosophical justification for making that assumption. We pointed out how consciousness compels man to a purposefulness that guides his perpetual "creative advance in novelty"--which is both a translation of potentiality into actuality and a progressive extension of potentiality itself. But the actualization of potential also rests heavily on man's social nature. Culture, the primary source of the content of education, is transmissible because man is also a social being. When social relations are disrupted, education is disrupted. Further more, man is a physical being and although his spiritual nature represents a transcendence of the characteristics of mere matter, the body is the vehicle for life and it must be kept healthy and safe. Thus the spiritual nature of man subsumes his social and physical nature. The over-arching educational goal derived from this view of man is to actualize the potentialities of human beings in a way that creates further potentiality and guarantees the emergence of self-images or identities which enable them to take charge of their own destinies, and continue developing throughout their lifetimes. Whatever the actualization process, it must safeguard

¹Kearney & Cook (1960) defined curriculum as "all the experiences a learner has under the guidance of the school." This definition has a number of limitations largely because it specifies no organization derived from philosophical principles nor is it useful for providing operational definitions of objectives that can direct the behavior of teachers and staff. Furthermore, the definition does not shed any light on the relationships among knowledge, meaning, understanding, value, and action, all of which have to be given serious consideration when curricula are being developed.

the human rights of all men and enable them to assume social responsibilities which maintain a social system and environment that supports the productive and peaceful growth of humankind.¹

The essential characteristic of that goal is its concern with process rather than product²--a concern with becoming, rather than with finished essays, completed pages in a workbook, framed paintings, new chemical compounds, legal briefs, or mechanical devices. These latter concerns maintain a consequent emphasis on "producing" people who can in turn produce certain services or goods, such as lawyers, physicians, physicists, or engineers. This is not to say that products and productive people are not important; they are. But focusing on them as the ultimate purpose in life represents what Tillich (1958) would call an "idolatrous concern". It is a betrayal of our spiritual nature that impairs the process of continuing growth and development because it uses energy that could otherwise go into pursuits and activities that will strengthen competence.

¹This represents a brief statement on the "grounds for moral behavior" which Foshay and Beilin indicate should be incorporated into any theory of curriculum. This issue is more fully discussed in the section on moral competence, this chapter.

²"The requirements posed by a process-based curriculum deal primarily with the identification of worthwhile processes to which students should be exposed, the design of instructional strategies that make effective use of the processes, and the realignment of subject matter so that it complements the instructional strategies" (Parker & Rubin, 1966, p. 44). This is the basic challenge which the Anisa Model addresses. However, Parker and Rubin's conception of processes is limited primarily to cognition, whereas Anisa incorporates processes from all potentialities.

Given the educational goal as stated above, a theory of curriculum must explain the how of accomplishing it. Learning competence has already been cited as the chief factor in the release of human potential; "learning how to learn" therefore must be the central focus of the curriculum and theory must explain how "learning how to learn" is achieved. In Chapter III, we presented a definition of learning competence as the capacity to differentiate or break down experience into different units which may then be integrated in new ways to apply to different situations thereby creating new "knowledge" while at the same time effecting a transfer of learning. Learning how to differentiate and integrate aspects of experience well depends upon having a richness of experience to "work with." Experience depends on interaction with the environment. No organism survives in a vacuum; everyone exists in an environment. But all environments are not equally educative. Furthermore, some kinds of interaction with the environment are more likely to facilitate the development of learning competence than others. The function of a good teacher is to help select or prepare the most appropriate environments and provide guidance in the interaction, both to the end of enabling the child to achieve learning competence. Our theory of curriculum, then, must speak to the nature of environment and qualities of interaction with it for the purpose of developing competent learners.

All living things are genetically endowed with structures that have specific functions which enable them to interact with the environment, and to accumulate and store certain aspects of experience. Storage

always modifies the structures and their functions. This is the fundamental basis of development. Just as the digestive system has certain structural and functional properties in order that food may be broken down and parts of it assimilated, so must there be psychological structures which can assimilate experience and store information. Whereas structures concerned with digestion are relatively unmodifiable by experiences of eating, mental structures or schemas are more plastic. As we have noted, these structures are largely dependent upon experience for their form and the quality of their functioning. The kinds of interaction which fosters development at optimum rates is one which facilitates differentiation and integration of experience at a level appropriate to the child's development in terms of that particular interaction. The quality of the interaction must be such that the psycho-motor-perceptual-cognitive elements are fused with affective-volitional-creative correlates to form attitudes which then guide subsequent interactions with the environment. If the "right" attitudes are formed, subsequent interactions will support the process of releasing potentialities. If attitudes are "wrong", subsequent interactions will be stereotyped, purely repetitious, or the child may completely avoid any subsequent interaction with that particular aspect of the environment which led to the formation of the inappropriate attitudes. In short, out of interaction attitudes are formed. Attitudes are then integrated into values; values are integrated into a system which determines the overall structure of being. The general competence and character of the human being depends upon his system of values.

From this point of view, the Anisa Model can be said to focus on character formation.

The terms "attitudes", "values", and "values system" are used in a wide variety of different ways in behavioral science literature; they reflect a confusing ambiguity found in a large number of terms psychologists use to describe elusive aspects of the phenomenon of man. Only a small sampling of definitions is possible here.

Hebb referred to an attitude as an enduring selectivity in central action. He stated:

At a theoretical level, it seems further that there can be no explanation of learning and problem-solving in any mammal without reference to the persisting central neural influence that sustains activity in one particular direction (1949, p. 141).

Krech and Crutchfield (1968) define an attitude as "an enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspect of the individual's world". Newcomb, Turner & Converse (1959) define an attitude as a concept that "seems to reflect quite faithfully the primary form in which past experience is summed, stored and organized in the individual as he approaches any new situation". Rosenberg (1960) defined attitude as the predisposition to respond in a particular way towards a specified class of objects. Daniel Katz (1960, p. 168) characterized attitudes as:

. . . the predisposition of the individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner. Opinion is the verbal expression of an attitude, but attitudes can also be expressed in nonverbal behavior. Attitudes include both the affective or feeling core of liking or disliking, and the cognitive, or belief, elements which describe the object of the attitude, its characteristics and its relation to other objects

A value is a disposition like an attitude but it is more basic and usually represents integration of a large number of related attitudes.

Rokeach (1968, p. 157) states:

Values are abstract ideals, positive or negative, not tied to any specific attitude, object or situation but representing instead a person's belief about ideal modes of conduct and terminal goals.

While on the one hand values represent ideal means and ends abstracted or distilled from experience, they are more dynamic than attitudes and contain strong motivational or volitional components which create an imperative to act. Because values are higher integrations of attitudes, they are fewer in number than attitudes. A person may have thousands of different attitudes but only a few dozen values.

None of the above definitions seems wholly satisfactory. We have therefore derived definitions of attitudes and values from an integration of the ones just discussed. These definitions are consistent with our theories of development and curriculum as they relate to the overall philosophy of the Model. Attitudes are relatively enduring organizations or complexes of actualized potentialities--psycho-motor, perceptual, cognitive, affective, volitional, and creative--which provide an orientation or predisposition to respond in a particular way to some aspect of the individual's environment. They include an evaluative or judgmental element which clears the way for action. Values are higher-order organizations of related attitudes centering around larger categories of elements of the environment. A value system is composed of all of the values integrated around fundamental aims, purposes, or ultimate concerns.

Thus, attitudes are values in their differentiated form; values are integrations of attitudes;¹ the values system is the integration of all values within the person; it is the character of the person--his identity.

To complete our curriculum theory, we must now present a view of the environment that will bring organization and conceptual clarity to the interaction of the child with it, thereby providing the perspective on what teachers and children do (the curriculum) in order to achieve the overall educational objectives derived from the theory. The environment may be differentiated into three kinds: (1) the physical environment; (2) the human environment; and (3) that aspect of the environment that is unknown or unknowable.² It is not too difficult to think about the human organism's interaction with the physical environment and with the human environment, but it is somewhat difficult to conceptualize interaction with unknowns in the environment; yet, consciousness brings to us an awareness of the existence of things not known. In other words, we can know that something is unknown and sense that it is there, perhaps to be known eventually. Interaction with this environment of the unknown leads to discovery, invention, and self-discovery (self-actualization).

¹Piaget wrote that "when behavior is studied in its cognitive aspects, we are concerned with its structures; when behavior is considered in its affective aspect, we are concerned with its energetics (Piaget and Inhelder, 1969). We might extend this statement by saying that the psychomotor-perceptual-cognitive aspects are concerned with structures while the affective-volitional-creative aspects of potentialities are concerned with "energetics". The former grouping gives structure to the latter grouping and the latter grouping provides energy for the functioning and integration of the former grouping.

²Werner (1959) calls this environment the "supernatural" environment. We hesitate to use this term since it has a variety of other connotations that are confusing to the thesis we are presenting.

As we interact with the physical environment, we develop a body of attitudes and values about material things. These values determine technological competence. Our basic competencies--psycho-motor, perceptual, cognitive, affective, volition, and creative--developing as we interact with the physical environment fuse into attitudes and values on which our technological competence rests. The more these values keep us in touch with material reality the more competent we are technologically. We may call these values material values, and to the extent that they conform to the methods used by science in dealing with the material environment, we may call them scientific values.

A similar process takes place as we interact with other human beings--our human environment. As the basic potentialities are actualized through interaction with the human environment they are organized into a complex of social attitudes and values on which moral competence depends. Again, the more these social values keep us in touch with the reality of humankind, the more competent we are morally.

As we attempt to relate ourselves to the unknown--to interact with the unknown or unknowable environment--actualizing potentialities are structured into religious attitudes and values. These religious values order the unknown world by giving us basic postulates or assumptions about ultimate unknowns, in essence, a search for our niche in the infinite cosmos. The extent to which religious values are free from erroneous assumptions and are in fact relating us to the reality of those unknowns is the extent to which we are spiritually competent.

Thus, through interaction with these three different kinds of environments three different sets of values emerge: material or scientific values, social values, and religious values; and, on the basis of these values three higher-order competences rest: technological competence, moral competence, and spiritual competence.

If attitudes and values do not keep the human being in touch with reality, i.e., there is maladjustment¹ to the environment, competence is impaired; if it is extensively impaired, there will be a profound disturbance appearing in the form of neurosis, psychosomatic disorders and eventually psychosis. Being in touch with reality enables one to be responsible, i.e., makes him have "response-ability". Obviously, the ability to respond functionally is impaired if one is out of touch with reality.² Both mental illness and crime are evidences of what can be called "value-illness". Maslow (1962) says that "the state of being without a system of values is psychopathogenic." Valuelessness is meaninglessness; sense-making perceptions--grasping the relationships among things, is the best antidote to anxiety which is the hallmark of neurosis. If unchecked, neuroses can eventually become psychopathological. In short, successful therapy or recovery from mental illness and successful rehabilitation for those who have been involved in crime and delinquency depends upon a reformulation of attitudes and values--a restructuring

¹Adjustment as used here includes active modification of the environment and not just a passive relating to things as they are.

²Glasser's reality therapy is based on this fundamental notion. See Glasser, William. Reality Therapy, New York: Harper and Row, 1965.

of actualized potential. This depends upon learning and the more competent the subject is as a learner the more quickly he will respond to therapy or rehabilitation. Thus attitude change and value change depend upon differentiating those values which are dysfunctional from those that are functional and reintegrating them into a value system that insures the subject's viability.

The formation of a value system is the structuring of potential as it becomes actualized. The quality of this structuring is so central to the development of character and the continual release of human potentialities that it is unthinkable for educators to avoid the "teaching" of values. The very existence of a school, the contents of the curriculum, the objectives of the school and the way it is organized are implicit statements about values--about how actualizing potential should be formed. Not a word about values as such has to be said, yet values will be "taught". Thus, rather than pretending that school is not the place where values should be formed and that teachers have nothing to do with value formation, we assert that the formation of values and attitudes is, in fact, what education really is, for values, as we are defining them, represent the structuring and functioning of actualized potential.

At this point in time, few people discourage the formation of material or scientific values. Controversy is introduced when we discuss moral values and it becomes even more difficult when we speak of religious values. As we move from matter to living organisms and then to the unknown as categories of the environment, there is less and less cognitive

content that is verifiable and therefore more indeterminacy. When there is indeterminacy there is more room for conflict, dissention, and therefore disruption. If disruption is excessive the atmosphere for learning is destroyed. For this reason we can be sympathetic with those who prefer not to deal directly with the formation of moral and spiritual values within the school setting. Yet, potential conflicts notwithstanding, these issues cannot remain unaddressed for the need is still there and it is very likely that what will fill that void when things are left up to chance, or opportunities for developing in these areas deliberately withheld, will impair the release of human potential.¹

It is important to point out that culture is the great shaper of values in each of us. We do not "start from scratch" in forming values. Much of how we think, feel, and act is transmitted to us through the culture into which we are born. A culture represents the normative values of a given social group and people who belong to the group will

¹The Educational Policies Commission of the National Education Association published a statement on the teaching of moral and spiritual values in reply to criticism that neutrality of public schools leaves a religious gap in the education of young people. (See National Education Association, Educational Policies Commission, Moral and Spiritual Values in Public School. NEA, 1951, p. 100.) The basic controversy over the teaching of religious values in schools is derived from a conviction that no values can be effectively taught without reference to divine sources and different religious groups recognize some divine sources as valid and others as blasphemous or not valid. We cannot fully treat this issue here. (See Maritain, 1955; National Council of Churches, 1963; Phenix, 1965; Pius XI, 1929; Stokes et. al., 1964; Bereday, 1966; Cousins, 1958; and, Dewey, 1934.) Our thesis is that spiritual competence is a higher-order competency that characterizes the self-actualizing person and this is true over and above whatever particular organized religion he may belong to or whatever sectarian belief he may have. To ignore this is both unreasonable and irresponsible; to deal with this issue effectively will require a great deal of time, patience and good will, but ultimately it will have to be dealt with. For further details, see McCluskey, Neil G., S.J., Catholic Viewpoint on Education, (Hanover House) 1959, and Gilbert, Arthur. Major problems facing the schools in a pluralistic society, Theory Into Practice. Ohio State University, 1965, pp. 23-28.

have pressures put on them to conform to those norms. Because of culture's ubiquity, no educational system can operate independently from the homes and the community from which its children come.¹ Some cultures are more suppressive of human potential than others.² For instance, a culture which tolerates discrimination or injustice is more suppressive of human potential than one that is relatively free from institutionalized forms of injustice and discrimination. Such a culture structures the actualizing potentialities of the child into a values system which limits the rate of actualization.

¹This issue is discussed in Chapter VII.

²Margaret Mead's comparison of two cultures provides a clear perspective on how values are shaped by the culture in which one is born. She writes:

Among the Arapesh, a primitive tribe living in the mountains of New Guinea, infants are cherished and protected and are fed whenever they are willing to eat, even though they show no signs of hunger. Throughout childhood an attitude of passive acceptance of food and other requirements is fostered. As a result, the mature Arapesh are a gentle, cooperative people interested chiefly in growing things and seldom showing aggressive behavior, even though life is difficult and food hard to obtain in their rocky environment.

In contrast, among the Mundugumor, a neighboring tribe, infants are carried in harsh baskets that scratch their skins. They are nursed only until barely satisfied, which causes them to suck aggressively and to develop a basically angry attitude toward life. Formerly head hunters, the men of this tribe spend most of their time preying on their neighbors. The women are almost as aggressive and tend to dislike the role of mother. They provide most of the food supply, leaving the men free to fight (Mead, 1949).

Interaction with these three kinds of environments is cumulative in its effects. We store information about the experience that comes to us from this interaction in the form of emerging attitudes and values. Obviously, the experiences themselves cannot be stored; the values that represent experience must be stored, at least in part, through the use of symbolic systems which we then use to communicate with each other about those experiences, to record them for posterity, and also to reinforce and make more comprehensible the attitudes and values that make up our character. Mathematics is the symbol system of science; it provides a means of understanding our interaction with the physical environment and on it rests our technological competence. Human language (French, Swahili, English) is the basic symbol system used to mediate our interaction with the human environment. Without it social values and moral competence could not exist. Finally, the arts (i.e., music, dance, the graphic and plastic arts, and the theater arts) constitute a very open-ended symbol system that mediates our interaction with the unknowns in our environment and underlie the development of religious values and spiritual competence.¹ We should always be suspicious of such tidy

¹This way of viewing the environment and symbol systems is not dissimilar to the scheme presented by Lloyd Warner. He writes: The action situations in which symbols operate are distinguishable by the type of context in which they occur. The immediate social context where the symbolic event occurs, may be in a family, clique, theater, or situation when the individual is alone. Three broad contextual types, the technical, moral, and supernatural, should be distinguished (1959, pp. 481-482).

Warner labels the three kinds of environments out of which these contexts of actions are understood as follows:

. . . the natural environment, the species environment and the environment--imaginary or not--which consists of the threatening, fearful, uncontrolled and rationally unknowable world of nature and man which lies beyond the power of the technical and moral orders where death and disaster are forever present--these being assigned by man to the ritual control of religion and its sacred symbols (Ibid., p. 486).

formulations, for they are always an oversimplification. Language--human speech--for instance, is also essential to relating to the physical environment, and mathematics itself has to be explained initially by the use of words. Man's early technological achievements did not depend upon mathematics as we know it today, although primitive means of measuring and quantifying were no doubt to some extent necessary. The arts themselves depend upon or include language. Poetry and literature are considered among the arts; theater arts, unless restricted to mime, rely on words for their thematic expression. These symbol systems help to determine our relationship to the environment; because they articulate relationships they are sources of meaning. They are inextricably bound up with the values and attitudes that form as a result of our interaction with the environment.

We have presented a theory of curriculum consistent with a theory of development derived from a philosophy of organism. We now turn to a curriculum design generated from that theory of curriculum.

The Anisa Curriculum Design

The differentiation of environment into three categories: the structuring of actualized potential into attitudes and values through interaction with those environments; the three higher-order competencies which are based on them; and, the three basic kinds of symbol systems which are associated with the values of each provide the basis for a curriculum design that is both process-oriented and content rich.

The design of the curriculum follows directly from the curriculum theory. It is divided into three major categories:

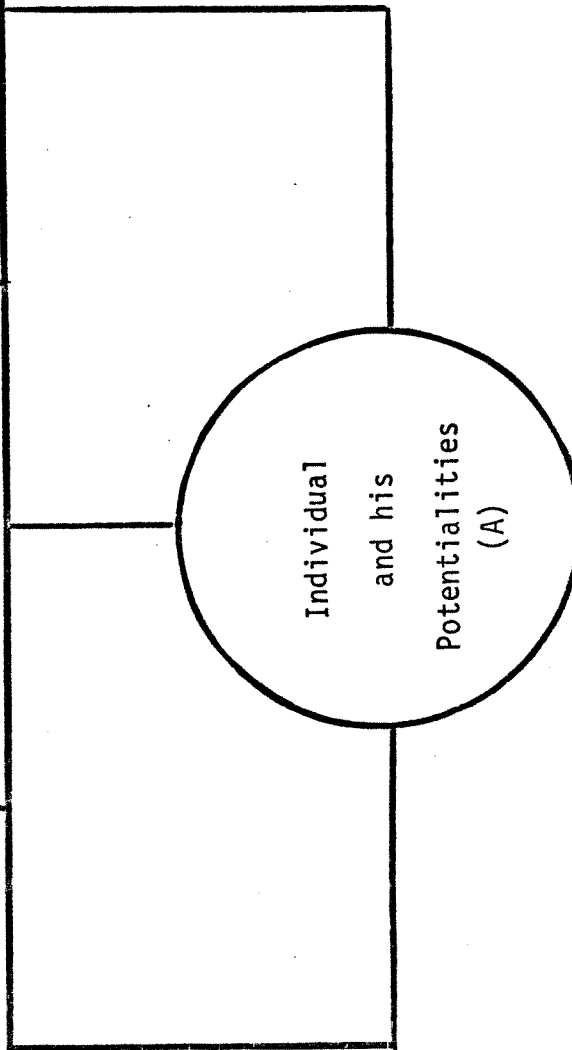
1. Math, Science and Technology.
2. Communication and Human Relations.
3. Art and Aesthetics.

The curriculum design can be more quickly grasped with the aid of a visual representation. Figure one shows the human being (A) endowed with potentialities that are progressively actualized through interaction with three different categories of environment (B). Interaction structures potentialities as they are actualized into values and attitudes relative to each environment (C). Higher-order competencies (D) depend on those values and attitudes and the mediating symbol systems (E) pertinent to each. The curriculum divisions (F) are based on each set of interactions and the related categories of environments.

Technological, moral, and spiritual competencies are based on higher-order processes which involve a variety of differentiations and integrations of the basic powers or potentialities (psycho-motor, perceptual, cognitive, affective, volitional, and creative) as they interact with the three environments. Each higher-order competency is actualized potential structured into a set of values and attitudes. Taking the release of human potential as the basic criterion, we can make a reasonable judgment about the essential values that are required for competence. Values are most functional when they embody an orientation to what "might be" as well as to the way things are. In other words, they contain ideals which are expressed in action, thought and feeling.

ANISA MODEL CURRICULUM DESIGN

(F) Divisions of Curriculum	Math, Science & Technology	Communications & Human Relations	Art & Aesthetics
(D) Higher Order Competencies	Technological	Moral	Spiritual
(C) Values	Material	Social	Religious
(E) Mediating Symbol System	Mathematics	Language	Art
(B) Environments	Physical	Human	Unknown



POTENTIALITIES BECOME ACTUALIZED THROUGH INTERACTION WITH ENVIRONMENT

Technological Competence and Mathematics

Technology has developed from man's interaction with the physical environment which, over time, produced values and attitudes which enabled man to change the physical environment. He then interacted and continues to interact with the changed environment. This alters values and attitudes which enables him to change the environment further. A perpetual cycle of reciprocal transformation of scientific/material values and physical environment is set in motion and we have no reason to believe that it has any end.¹ Technological competence is the actualized potentialities of man structured into a set of values and attitudes which relates man to the physical environment. If these values and attitudes are to produce technological competence they must embody science and the scientific method that has developed in the physical sciences. The essence of the scientific method, broadly conceived, is to break up the sense properties of material phenomena (which may be called secondary qualities) into their underlying elements (which may be called primary qualities) and reconstitute these phenomena in terms of these elements or primary qualities (Hall, 1956). A particular science takes its name from the phenomena or class of phenomena it chooses to investigate. The investigation proceeds on the basis of finding a formal structure within which to

¹It is likely that if man goes on making changes in the physical environment without considering the human element (moral element) of the total environment, the cycle could come to an end with the extinction of the human species. It is this possibility that underlies the present concern, which is essentially a moral concern, for air and water pollution, soil depletion, and radioactive fallout.

reconstitute the phenomena (primary qualities) under investigation. As Hartman points out, "the system in terms of which natural science reconstitutes its phenomena is mathematics. The element into which it breaks up its sense observation are measurable quantities, that is, elements of geometry " (Hartman, 1958, p. 101).

The above definition of the scientific method is congruent with our definition of learning competence. The breaking up of sense properties (secondary qualities) of phenomena into elements or primary qualities is a process of differentiation; reconstituting these phenomena in terms of these elements is a process of integration. For the physical sciences, mathematics has been the system in terms of which primary qualities were reconstituted. An example will make this clearer. Galileo was interested in understanding the phenomenon of motion. His first step was to look beyond the sense perception of moving things--the secondary qualities of the phenomenon. The primary qualities underlying those secondary qualities turned out to be locations, time, and distance which, when reconstituted or integrated in terms of mathematics, defines motion.

Lower-order phenomena such as inert matter have relatively little indeterminacy in the way one bit of matter is related to another. Causality, relating events in terms of cause and effect, is the basic conceptual scheme used by the physical sciences. The mechanistic, atomistic tradition of Newtonian physics has been effective as a means of dealing

with that aspect of the environment.¹ To the extent that human beings are material (i.e., their bodies) many aspects of the physical sciences will be applicable. Biochemistry is a good case in point. However, mathematics as a system is unable fully to explain matter when a higher-order principle is introduced, namely life. Life introduces indeterminacy into the organization of matter. And when one reaches the highest level of organization, man, who is not only alive but has consciousness and subjective aim, the greatest amount of indeterminacy exists and different frames of reference then have to be used.

In the natural sciences, the method of finding out the causal relationship among events is to: (1) state the problem (i.e., become interested in finding out an unknown cause to an observed event); (2) form some tentative hypotheses about the nature of the cause; (3) set up an experiment which would test it out; (4) collect data from the experiment; and, (5) analyze the data and draw a conclusion through a process of inductive inference.²

¹Newer conceptions of the nature of matter continually replace the older ones. Each new effort is an attempt to get beyond secondary qualities to the primary qualities. The following statement of Einstein reflects that ever-present effort:

We cannot build physics on the basis of the matter-concept alone. But the division into matter and field is, after the recognition of the equivalence of mass and energy, something artificial and not clearly defined. Could we not reject the concept of matter and build a pure field physics? What impresses our senses as matter is really a great concentration of energy into a comparatively small space. We could regard matter as the regions in space where the field is extremely strong. . . there would be no place in our new physics for both field and matter, field being the only reality (Einstein and Infeld, 1942, pp. 240-241)

²Most of the cognitive processes, defined by Piaget as operations, are related to the aspects of cognition which deal with the physical sciences. There are, however, many other kinds of cognitive operations involved in human relations and aesthetics which Piagetian operations do not address directly.

In the broader sense of science, defined as systematized knowledge, any phenomenon can be the object of scientific investigation, whether it be atoms and molecules, a melody, a prayer, a moral value, or hallucination. In this sense, a moral science will no doubt emerge when we find a means of breaking down secondary qualities underlying human relations into their underlying primary qualities and then finding a formal structure which can order these primary qualities into some conceptual scheme where we can account for the relationships among them. The function of a science is to account for things, to bring order out of disorder.¹

Since our present public schools system and Western society in general have a reasonably well-developed means of transmitting scientific values, we shall not go into further detail in the area of technological competence except to express the point that science and its methods are not very well integrated into other aspects of the curriculum in traditional schools, nor have we found a way to introduce science to the pre-schooler as effectively as we might.

Moral Competence and Language

We define moral competence as actualizing potential organized into attitudes and values in the service of others and the social group or

¹Order increases the possibilities of survival; understanding how to bring it about therefore is of critical importance to our survival. Art, which we loosely defined as the symbolic system underlying the development of spiritual competence, is motivated by the hunger we have to make order out of chaos, or order out of the unknown. The artist tries to foresee or sense the order of the unknown. Millions of years of evolution have created in us the capacity to respond to form. It underlies what we call the beautiful and is an essential aspect of any aesthetic experience. Art therefore has intimate connections with science.

community to which one belongs. The value system guides and directs behavior. Traditionally, we have used a wide variety of terms to label moral behavior: helpful, courteous, respectful, mannerly, kind, supportive, just, compassionate, sympathetic, etc. From this point of view we can describe moral development as the acquisition of virtues.¹

The function of moral competence is threefold: (1) to enable one to relate to other human beings in a way which draws out or facilitates the release of their potentialities; (2) to stimulate a reciprocity such that others help to draw out one's own potentialities; and, (3) to sustain a social order in ways that release the potentialities of the society as a collectivity. Social groups as well as individuals have potentialities which must become actualized through the same dual process of differentiation and integration. Societies are differentiated into institutions which have to be integrated around a central purpose. Such a social system is sustained by its values and attitudes which are its culture--its social identity. The culture, in turn, is transmitted to the oncoming generations and helps to shape the value systems of the individuals born into it.

Among the basic ideals which undergird moral competence are the oneness of mankind, useful work as a personal expression of social responsibility,

¹The word virtue comes from Latin virtus, which means strength or bravery. It is not far from our conception of an actualized potentiality being a power (strength). We call it a virtue when that power or strength is in service to others. Plato classified the four cardinal virtues as justice, temperance, prudence, and fortitude. Christian scholastic moralists added faith, hope, and charity. All of these virtues are opposed to the "seven deadly sins" which no doubt represent moral incompetence.

commitment to the kind of democracy which provides for self-determination of the collectivity and safeguards the human rights of all who belong to it through the provision of just laws and their enforcement, provision for the maintenance of integrity of the social unit into which children are born so that their growth and development can be fostered.

The expression of these ideals flows from a concern for others. That concern depends upon awareness or insight into other peoples' feelings and conditions and implies an ability to know or sense what those feelings are and to provide assistance or help that is appropriate. A concerned individual who is also unaware may express his concern in a way that turns out to be an imposition rather than a service. A morality of concern and awareness will always require decision-making which must depend upon moral reasoning. Since the functioning of a social group cannot be random, there must be rules and laws to which group members must adhere. Understanding the nature of rules and regulations and the ability to obey them as a means of serving oneself and the social group is essential to social order. Finally, the value system presupposes the capacity to control one's own behavior so that injustices are redressed by group action rather than by individual aggression.

Piaget (1965) examined moral development in children and identified two basic stages:

1. Heteronomous stage (characterized by egocentrism on the part of the child and unilateral respect for authority).
2. Autonomous stage (when the child can judge good and bad on the basis of motive and social context by applying moral reasoning).

Somewhere between the two stages, the child learns to communicate, and comes into close contact with children of his own age group. By sharing opinions with them on an equal basis, he begins to differentiate himself from others in the group and can begin to understand their point of view. This stage is important to the development of mutual respect and provides the link between heteronomy and autonomy. Kohlberg's (1963) formulation follows the same basic progression from heteronomy to autonomy but breaks the progression down into six stages of moral judgment.

The emergence of moral competence depends upon the child's experience with his social environment. While in school, teachers play a critical role in guiding the social interaction of children to that end. Following is a brief summary of practical suggestions to help teachers assume that role competently. In the first instance, there have to be rules and regulations which children become aware of, learn to understand, and obey. Making the basic rules very clear is a great help. However, it is important for teachers to do more than simply reinforce rules and regulations. Children should have the opportunity to discuss, question, and even propose revisions in rules and regulations. The social group itself and the way it operates becomes a source of experience for developing moral reasoning and understanding the roles that courtesy and kindness play in maintaining a cooperative spirit and group cohesion. The modeling studies which we have already cited indicate the importance of the teacher as a model. Furthermore, the way a teacher interacts with other students may cause them to be accepted as models. Modeling may be used to demonstrate

the consequences of particular behavior, the understanding of which is important in moral reasoning. Children are less likely to imitate models who are punished for their action and more likely to imitate those who are rewarded. Modeling experiences can also take the form of role-playing or dramatics, but such experiences are usually more efficacious if they are a part of an actual social situation in the classroom. Teachers should also be aware that while competition has its advantages for increasing interest on some levels, it is not as effective as teamwork or cooperation in developing a sense of moral values. In this regard it is useful to know that if rewards are given to the whole group, cooperation is more likely to take place than if rewards are given to individuals for superior performance. Pitting children against each other in competition can have many deleterious effects (Deutsch, 1960). Teachers who know how to facilitate communication among group members can add an important dimension to social interaction which undergirds the development of moral competence. Studies have shown that cooperation is facilitated by the opportunity to communicate (Loomis, 1969). Furthermore, children begin cooperating with others at about the same time they learn to speak. Language is the basic symbol system which mediates the interaction; it therefore plays a critical role in the development of moral competence. Because the oneness of mankind is a fundamental value of moral competence, it is imperative that children grow up with others with racial and ethnic backgrounds different from their own. This principle is so fundamental to the stability of social evolution that no responsible school system of the future dare

ignore it. Without such first hand experiences, children cannot appreciate diversity among the human species and experience the development of moral reasoning devoid of racism and other kinds of social prejudices. Obviously, this also means that all materials used in the classroom and members of the staff must reflect this oneness of mankind. The oneness of mankind remains an abstraction without an energizing force--love. If schools and educational systems are not places where children learn how to love and be loved, there is no hope of moral excellence. To be unloved is to have one's potentialities suppressed, for love is a powerful means of drawing them out; to be unable to love is to be the agent of suppressing the potential of others and inhibiting one's own development. The cohesive power of love is the primary means of survival for creatures who are social by virtue of their biological nature. Montagu (1956, pp. 69-70) elaborates on this fundamental truth:

From the very outset interrelatedness is the state which confers survival benefits upon the interacting organisms; it is the state of interrelatedness which the organism strives to maintain; and any interference with that state, howsoever it may have come about, constitutes an interference with the healthy development of the organism. The evidence indicates beyond any shadow of doubt that all human beings everywhere are similarly constituted in their desire to love and be loved. There is no evidence whatsoever that human beings are born with any individual or group antagonisms as part of their innate structure. Human nature is fundamentally the same everywhere; it is only its secondary or cultural expression which differs

Although language is the primary symbol system underlying the emergence and formation of the value system on which moral competence depends, it pervades the values systems of technological and spiritual competence as well. We have already shown language acquisition

to be assigned to a critical period which begins at about 18 months of age through age two; development, however, continues through a sensitive period that extends to the age of 8 or 9. The capacity for language underscores the social nature of man and makes him unique among all living creatures. His capacity for language makes possible the transmission of culture from one generation to the next and insures the accumulation of knowledge. Culture is thus cumulative and therefore perpetually transformed, thereby expressing the progressive release of the potentiality of social groups. Language is one potentiality that is an indispensable factor in the release of all other potentialities.

Language has three main aspects: phonology, syntax, and semantics (McNeill, 1970). Phonology refers to the sound features of language. Syntax concerns word order or sentence structure and the rules for transforming the order (from a declarative sentence to a question, for instance). Semantics concerns meaning. Between the sound and the meaning stands the structure or syntax of language. Linguistic competence therefore involves knowledge of rules that structure sounds into meaning thereby making communication possible. Linguistic competence is the ability to generate an infinite number of sentences expressing an infinite number of ideas because of a knowledge of what Chomsky and those working with transformational grammars call the "deep structure" of language (Chomsky, 1965). The phonetic organization of sounds that are spoken reflects the surface structure of language. Surface structure is "what we speak". It is what Chomsky calls linguistic performance. The quality of that performance

depends upon the knowledge of the structure (syntax) of the language, which he calls competence. Deficiencies in the ability to apply this knowledge make communication unclear and ambiguous. Once the deep structure of the language becomes operational within the child, it is possible for him to generate an infinite set of subject-predicate combinations transformed into the phonetic arrangements of surface structure through the application of syntactic, morphemic, and phonemic rules, thereby expressing some intended meaning. For example, the meaning conveyed by "the ball hit me", can also be conveyed by another surface structure that is different but which reflects the same deep structure, namely, "I was hit by the ball" or "it was I who was hit by the ball".

Achieving high levels of performance depends upon hearing a significant number of sentences which express all the basic syntactic, morphemic, and phonemic rules. Not being in the presence of a social environment where one can hear languages spoken in a way sufficiently differentiated to reflect all of these rules for transformation will decrease the quality of linguistic performance.

We have broken down the three basic areas of phonology, syntax, and semantics into subprocesses and have begun to explore their implications for education. The work of linguists in this area is relatively recent and much work remains to be done before we understand how to apply the knowledge gained from recent breakthroughs in linguistics to the educational system.

Writing is language in visual form; reading is the translation of visual symbols or a code back into sound--human speech. Speech, reading,

and writing therefore have intimate connections which are imperfectly understood. The capacity for language is a biological given. There is no known case of anyone failing to learn how to speak. There are, however, a large number of children failing to learn how to read and write. One of the difficult tasks lying ahead is conceptualizing the relationship among the three and identifying the processes by which language acquisition can be related to subsequent encoding and decoding of those sounds in visual form. At the present time there exists no well-defined theory about how a child learns how to read or how to handle reading disabilities, generally referred to as dyslexia (Wagner, 1971). Recent work, however, points to the role of differentiation and integration in relating patterns of visual symbols (letters and words) to meaning (Kolars, 1972).

Spiritual Competence and Art

As the basic potentialities of the human being are actualized through dealing with the environment of the unknown, they are structured into religious¹ attitudes and values on which spiritual competence rests. Since concrescence is the "creative advance into novelty"--an advance into the unknown--religious values are like pioneers on the frontier of expanding psychological territory. Spiritual competence is the capacity to accept the ultimate unknowns and accommodate oneself to destiny actively rather than passively by growing towards those ideals conceived by the human being as he contemplates those ultimate concerns. This contemplation flows from his awareness on the one hand of all of

¹Religious is used here in a generic sense and refers to man's search for unity and order in the universe and where he fits into that order, much of which cannot be known.

the ultimate unknowns and an acknowledgement on the other hand of his yearning to find his place in the cosmos. Spirituality is thus a "looking to the future and the ideal" (Santayana, 1962, p. 188). The activity inspired by religious values, as we are defining them, is approaching the unknowns in the future through the construction of ideals. Adherence to the ideals exercises its influence on human relationships and illumines the quality of moral competence; furthermore, such ideals determine how the powers released by technological competence are used. In other words, one's religious values are one's interpretation of life. In the absence of any religious content, interpretation will be derived from social concerns or material concerns as expressed in science. But science has only the power to confer probability upon its own conclusions; it cannot, by itself, construct those ideals from which is generated the certitude on which altruism necessarily depends. On the other hand, an obsession with the unknown and the mystical experiences which can surge within the human being in the wake of such obsessions can suppress reason, and entangle the value system in a web of superstition that inhibits one's capacity to remain in touch with reality.¹

Santayana made the observation:

The mystic smiles at science and plays with theology, undermining both by force of his insight and inward assurance. He is all faith, all love, all vision, but he is each of these things in vacuo, and in the absence of any object: . . .

¹The statement of Einstein quoted earlier is addressed to the need for a balance between the natural sciences and religion. If both are concerned with truth, they cannot contradict each other.

. . .the feelings which in mysticism rise to the surface and speak in their own name are simply the ancient, overgrown feelings of vitality, dependence, inclusion; they are the background of consciousness coming forward and blotting out the scene. What mysticism destroys is, in a sense, its only legitimate expression. The Life of Reason, in so far as it is life, contains the mystic's primordial assurances, and his rudimentary joys; but in so far as it is rational it has discovered what those assurances rest on, in what direction they may be trusted to support action and thought; and it has given those joys distinction and connexion, turning a dumb momentary ecstasy into a many-colored and natural happiness (Santayana, 1962, pp. 188-190).

Through systematic examination of anthropological and psychological data concerning "religious experience", a number of common elements have surfaced. Each one of them represents a religious value;¹ all of them taken together form a value system on which a spiritual competence depends. Among these elements are faith; reverence for life; the formation of a belief system--an integrated set of assumptions about the unknown environment related to ultimate concerns, which may transcend reasoning but not oppose it; an acceptance of death as a natural part of life; and, meditation--reflection on the purpose of life and its relation to personal destiny. In the following passages, we explore one of these, faith, in greater detail as a means of demonstrating the richness and indispensability of the formation of religious values and the development of spiritual competence.

¹Warner (1959, pp. 490-494) in developing a theory and method for the study of symbolic life, particularly as it relates to religious values observed that "man's sense of what he is cannot ever depend solely on rational thought; too much is left out of what we know. . . .those who have faith may be on more solid ground in their understanding of reality than those who cannot find a way to believe. What they feel in their thinking may refer to a larger reality--mystical and supernatural or not--which speaks of truths beyond the present power of scientific thought. That this may be so should do no more than make the scientist truly humble and deeply respectful for other kinds of knowing; it should in no way influence him to abandon or reduce his efforts to know and understand."

The central value underlying spiritual competence is faith, which we define as the process of forming and sustaining an orientation to the unknown which eventually culminates in an active set of ultimate concerns (Tillich, 1958). These concerns always involve the unknown if they are to be truly ultimate. They provide a perspective on life which can, if free from conflicts, function as a powerful force in all other developmental processes. They involve the human being deeply because they concern his own future destiny and purpose. It is that involvement which creates transcendence and enables the human being to experience himself as first a spiritual being, then as a moral being, and then finally as a physical being.¹ Faith thus nourishes the courage to be; courage is the capacity to utilize the energy of ontological anxiety to affirm one's being by taking action in the direction of fulfilling one's destiny. Such affirmation places man in a state of transcendence. William James stated that "faith is the readiness to act in a cause the prosperous issue of which is not certified to us in advance. It is in fact the same moral quality which we call courage in practical affairs " (James, 1956, p. 90). Allport defines faith as "man's belief in the validity of some good (value). Desires, however, are not merely pushes from behind (drive-ridden). They include

¹If man regards himself first as a physical being and that view takes priority over the moral and spiritual aspects of his being, his time, energy, and dominant values will be concerned with meeting physical needs and desires and when these are uncontrolled, they lead to greed, avarice, selfishness, and all other forms of egocentrism.

. . . complex, future-oriented states . . . some sort of idea of the end is always bound into the act [of faith] itself. This inseparability of the end from the course of striving we call faith" (Allport 1966, p. 149). John Dewey (1934, p. 33) represents faith in a similar manner as "the unification of the self through allegiance to inclusive ideal ends, which imagination presents to us, and to which human will responds as worthy of controlling our desires and our choices."

Through faith, the unknowable is translated into the unattainable -- those "inclusive ideal ends" after which we strive. Ideals, though unattainable, influence the directions our efforts take; they are goals and therefore reflect intention. Jacques Maritain (1943) has observed that "the spiritual activities of the human being are intentional activities; they tend by nature toward an object . . .".

From a developmental point of view, faith has its beginnings in trust and therefore heavily depends upon having trustworthy parents or caretakers.¹ The first sign of faith is love; in an atmosphere of trust, the child is able to reach out, to approach, to come close to the mother, who, after all, represents an unknown to the newborn child. Since the child is totally helpless and dependent, he has no alternative but to rely on his parents until his interaction with them teaches him to mistrust. When the child views the world with distrust, he withdraws rather than explores. The next developmental manifestation of faith is

¹Eric Erikson's developmental theory specifies trust vs. distrust as the first developmental stage the child goes through. If he learns to distrust or mistrust others during those first few months, it is highly probable that this will color his view of the environment for the rest of his life. Where there is no faith, there is no freedom to love.

curiosity. All living creatures explore their environment because there is survival value in coming to know the environment and the only way to become acquainted with it is to explore it. Curiosity and exploratory behavior are impaired if faith is weak because one has learned to mistrust rather than trust. Einstein referred to the enjoyment of seeing and searching as the "holy curiosity of inquiry." The verbal expression of curiosity is asking a question. It is instructive to note that young children learn the grammatical form of a question very early in their acquisition of language. Questions are one of the basic grammatical transformations discussed by linguists. At the outset they are simple in the extreme and in this respect resemble negation. Rising intonation and the use of one of a few Wh-words are the only interrogative devices. Nonetheless, even very young children distinguish between yes-no and Wh-questions, asking, for example, both "see cat?" and "what doing?" Children comprehend the adult's structure of Wh-questions before they can produce such structures themselves. Asking questions is the linguistic expression of faith in the form of curiosity. In the natural sciences, faith and curiosity sustain the search after an unknown cause which was triggered by some interesting or problematic event. Faith translated into methodology becomes the hypothesis, for without any curiosity, who would even want to articulate a hypothesis or carry out an experiment? To say, then, that faith has no place in education is tragically absurd. It is the animating principle underlying scientific inquiry and is a moral prerequisite for social unity. For these reasons, spiritual values must have the highest priority in education; to give them no conscious priority as we do in public schools today, will keep our schools places of drudgery, where potentialities are suppressed.

As we have noted, each set of values emerging out of interaction with one of the categories of the environment has an accompanying symbolic system to assist in developing and maintaining the corresponding higher-order competency. Spiritual competence, which rests on religious values is made expressive through the arts. Tanner (1971) observes they are the "transfiguring language" of our ultimate concerns:

Because we human beings are so made, and the world we each inhabit for a few decades is so made, we have inevitably through the ages been impelled to find some transfiguring language of the imagination with which to make articulate our deepest feelings and responses. And this language we call the arts. They may be thought unnecessary, yet they are essential. They transcend all barriers of distance, age, race, or creed; they make possible the impossible, and reconcile the irreconcilable! They celebrate the truth that man cannot live by bread alone. Through their 'heavenly alchemy' we are shown our own divinity.

Divinity is the label we give to the ineffable quality of the force that sustains order in the universe. Order in the universe is axiomatic; and consciousness compels us to find out as much as we can about that order and how we can fit into it. Art is the expressive articulation of that yearning for order and its embodiment in ideals; it is meditation given external form. So fundamental to our nature is the quest for order that particular expressions of order is aesthetically pleasing to us. Such expressions we call beautiful; and then we are willing to equate beauty with truth. Thus art activities and aesthetic experience are indispensable to the maintenance of spiritual values.

Burnett (1970) in discussing Whitehead on the aims of schooling writes:

A nation or culture which wishes to preserve and advance its greatness cannot long survive without individual artistry on a broad front: for, in Whitehead's view, artistry is much more than mere appreciation and individual indulgence -- it yields a vision of finer things and that vision serves to organize the labors of men in such a fashion that thought and action move to their end with no wasted energy

Art and aesthetics then should be at the core of the curriculum of any educational system. In most of our schools today, they are on the periphery of the curriculum or are not present at all. And frequently when they are present they are "taught" without a balance between product and process. All of the basic potentialities identified by the model can best be developed in the early years through participation in the creative activities of art and the assimilation of aesthetic experience. A pre-school, daycare center, or elementary school which does not heavily emphasize art and the aesthetic aspect of the curriculum is making a grave error. Music, dance, theater arts, visual and plastic arts, poetry and literature elicits psycho-motor, perceptual, cognitive, affective, volitional and creative responses more effectively than other means. The arts both as content and process are the best investment for the early years particularly.¹ Without the arts, the heart of education is empty and the schooling experience is likely to be sterile and self-alienating. William Schuman has presented a position consistent with our view:

¹For a fuller discussion of the arts in education, see Jordan, Daniel C. The Arts -- Neglected Resources in Education, Hecht, J. (Ed.) Controversies in Education. New York: W.B. Saunders. 1973, in press.

More often than not, the arts are generally considered as avenues for emotional expression and the artist, as a person who is able to express himself only in emotional terms. In consequence, educators have assigned to artists the emotional provinces of man, and the schools have been given the intellectual territory. This has created an illogical dichotomy in which training and perception in the arts are minimized and left largely to chance while practical instruction in the intellectual disciplines is a recognized responsibility. Our blindness to the importance of arts means a half of man's potentiality is consigned to an educational vacuum (Schuman, 1968, p. 11).

For educators not to grasp the vitality, the spirituality, and the intellectuality of art as central to an educated man is to ignore the measure by which our civilization will be judged (Ibid, p. 13).

The Creation of Personal Identity

In the previous sections we discussed at length three types of environment and three kinds of higher-order competencies which rest on the value systems which are formed by interaction with those environments. There is yet a fourth kind of environment: the self. Everybody is a part of his own environment -- a part that can never be escaped and the interaction with which should result in the formation of attitudes and values that creates a sense of acceptance and self-confidence. The human being, himself, represents in microcosm all three environments: his body is material, he is human, and he is endowed with many potentialities -- an infinitude of unknowns in themselves, a future that is unknown, and the mystery of his own mortality. The three value systems based upon the three different types of environments are integrated into the emerging

self as one interacts with his own self as environment. We call the process of self-emergence individuation. The resulting unique, individual values system is the structural and functional reality of personal identity. Various terms are used in the literature to express that identity, such as self-image, or self-concept, but these are incomplete in their definition and the labels are misleading. A self-image seems to be largely a perceptual orientation to the self as environment whereas self-concept appears to be limited to a cognitive orientation. Self-esteem refers to the more affective aspects of self-image or self concept. The definition of the self, logically derived from our philosophy of man and our theory of development, is the dynamic being in process -- in concrescence. As the self interacts with the three external environments potentialities become actualized and are structured into three basic value systems which are integrated in the process of individuation -- the process of valuing self and developing "self-competence", or what Allport would call the proprium and its functional autonomy (Allport, 1955). If these integrated value systems relate the human being to all levels of the environment, including his own self, in ways which keep him in close touch with reality on all those levels, the person is maximally effective and his effectiveness -- his competence, is his source of confidence and courage for further growth and development.

All perceptions, thinking, and feelings are filtered through and organized or influenced by the individuating self, or as Jung would call it, the transcendent self. It is an ever-present determiner of behavior and it comes into being largely by the kind of feedback it has from the social environment. One of the most devastating experiences to functional and healthy identity is being made to fail when it is not

one's fault, yet be held accountable for it. This kind of injustice leads to incompetence because it builds identity on distortions of truth.

The creation of personal identity is character formation; it is the unique structuring of actualizing potential in the form of a values system that relates us to all environments. If the process of becoming -- concrescence, individuation -- is relatively unimpaired, a spiritual being emerges. Aspiring to be in charge of translating potentiality into actuality is to accept responsibility for determining one's own destiny. Man cannot be understood apart from this inner pressure to become. Modern psychologists have begun to recognize the crucial role it plays. Maslow (1962) states:

For one thing, it looks as if there were a single ultimate value for mankind, a far goal toward which all men strive. This is called variously by different authors, self-actualization, self-realization, integration, psychological help, individuation, autonomy, creativity, productivity, but they all agree that this amounts to realizing the potentialities of the person, that is to say, becoming fully human, everything that the person can become.

To accept life fully means to sense the ultimate rightness and goodness of becoming. It is the mark of the educated man.

This process of the good life is not, I am convinced, a life for the faint-hearted. It involves the stretching and growing of becoming more and more of one's potentialities. It involves the courage to be. It means launching oneself fully into the stream of life. The deeply exciting things about human beings is that when the individual is inwardly free, he chooses as the good life this process of becoming (Rogers, 1961, p. 196).

The design of curriculum must therefore parallel a design for living that springs from an interpretation of life that holds it in awe, a mystery of ultimate beauty.

A Theory of Pedagogy

A theory of pedagogy based on the Anisa Model can now be concisely defined: to teach means to prepare or arrange environments and guide the child's interaction with them for the purpose of developing learning competence, thereby facilitating the structuring of potentialities as they are actualized into attitudes and values which constitute the structural and functional reality of personal identity in ways that guarantee its continual development. This definition is consistent with the philosophical basis of the model, its theory of development, its theory of curriculum and curriculum design. Every teaching behavior and attitude can be analyzed in these terms. They introduce conceptual clarity to both the act of teaching and the preparation of teachers.

A comprehensive program for the preparation of the differentiated staff advocated by the model is being fully developed in accordance with our theory of pedagogy.