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**Development as transcendence: An examination of a
phenomenological perspective of how individuals and their
movement change over time**

Oussaty, Janet Mary, Ed.D.

The University of North Carolina at Greensboro, 1987

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**DEVELOPMENT AS TRANSCENDENCE: AN EXAMINATION OF A
PHENOMENOLOGICAL PERSPECTIVE OF HOW INDIVIDUALS
AND THEIR MOVEMENT CHANGE OVER TIME**

by

Janet Mary Oussaty

A Dissertation Submitted to the
Faculty of the Graduate School at the
University of North Carolina at Greensboro
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of the Requirements for the Degree
Doctor of Education

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1987

Approved by

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APPROVAL PAGE

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The purpose of this study was to propose a view of how individuals and their movement change over time through a perspective that views development as Transcendence. This perspective and its ideological framework enlarged upon the progressive view of development as stages or sequences. The study was conducted through an interpretive inquiry of philosophical and curricular readings. The study first examined how each perspective, the transcendental and progressive, reflected the essential nature of time and change. It then explored how each perspective utilized time and change in terms of their respective thinking processes and curricular applications. The view of development as Transcendence offered an all-encompassing vantage point since, in addition to the characteristics of the progressive perspective, movement was viewed as developing in a personally defined/subjective, spiritual/mystical, experiential, and creative/liberal manner. The progressive view of development as stages or sequences offered a limited vantage point since movement was viewed as developing only in an externally defined/objective, concrete/physical, analytic, and bound manner. Meaning-making was not evident. Because of the limitations of the progressive perspective, the

transcendental view was proposed as a means by which individuals and their movement can attain their fullest potential.

DEDICATION

This dissertation is dedicated
in memory of

ELEANOR METHENY

and

JAMES B. MACDONALD

They each transcended personal, ideological,
and political limitations and were therefore
responsible for changing the course
of thinking within their fields.

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The nature of this dissertation topic required a long and arduous journey through unventured territory; its terrain revealed the untried and the uncertain. Along this journey there were people who, individually or collectively, stood by, supported, and contributed toward a venture that offered no guarantees about its outcome, its worth. For operating at what was sometimes great personal and professional risk, I would like to express my indebtedness to the following people.

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CHAPTER I
INTRODUCTION

Physical educators, educators, and developmental psychologists support the notion of individuals extending beyond their limitations and enhancing both their skills and themselves. The literature in these fields of study address the notion of how individuals change over time and also the practices that are best utilized to facilitate this development. The ways in which the developmental process is believed to occur, however, are viewed from differing perspectives. The methods employed within the perspectives also differ. Two ways development are discussed in this paper are from a conventional perspective or from an alternative perspective.

Of the two, a conventional perspective is the more prevalent and is expressed in much of the physical education (Branta, Haubenstricker & Seefeldt, 1984; Corbin, 1973; Espenschade & Eckert, 1980; Haywood, 1986; Hoffman, Young, & Klesius, 1981; Keogh & Sugden, 1985; Roberton, 1984, 1978a, 1978b; Roberton & Halverson, 1984; Thomas, 1984), education (Kohlberg & Mayer, 1972), and child development (Freud, 1930; Kohlberg, 1963; Piaget, 1920) literature. Through this lens, development is viewed as a gradual, step-by-step, linear, and

hierarchiacal process as in stages. The goal of development within this perspective is to attain the highest stage on the hierarchy or what is considered the optimal level of development. The methods which are utilized are grounded in the positivist position of philosophy and are best expressed through the rational thinking process. On the other hand, an alternative perspective is not as prevalent as the conventional and is expressed in some of the philosophy of sport (Canic, 1986; Gallwey, 1974; Herrigel, 1971; Kleinman, 1979, 1970; Kollen, 1981; Metheny, 1968, 1965; Ravizza, 1977; Stone, 1981; Studer, 1977; Thomas, 1983; Watson, 1986), education (Macdonald, 1974; Phenix, 1975; Pinar, 1981; Steinhaus, 1968; Underhill, 1955) and child development (Kegan, 1980; Pearce, 1980) literature. Through this lens, development is viewed as a sudden, leaping, cataclysmic process as in transcendence and transformation. The goal of development within this perspective is to become centered for a complete and authentic existence. The methods which are utilized are grounded in phenomenology and are best expressed through the intuitive thinking process.

The perspective which views development as transcendence and the perspective which views development as stages are not necessarily separate and distinct viewpoints. Some of the writings seem to indicate that the view of development as transcendence enlarges upon the more prevalent or

conventional perspective. These writings suggest that the alternative view is the more encompassing and also the more liberal of the perspectives.

Purpose of the Study

The purpose of this inquiry is to propose a view of how individuals and their movement change over time through a perspective that views development as Transcendence. The study also offers a framework of a curricular ideology for physical education which reflects this view and serves as an outcome of the study. This proposal and its ideological framework enlarges upon the more predominant view of development as occurring in stages or sequences.

Method

The structure of this study is developed through an interpretive inquiry of philosophical and curricular readings from both perspectives, conventional and alternative. The study first examines how each perspective reflects the essential nature of time and change (Benjamin, 1981; Fraser, 1981), then explores how each perspective utilizes time and change in terms of their respective thinking processes (Fraser, 1975, 1981; Wilbur, 1983) and curricular applications. The curricular applications are studied in both education by Kohlberg & Mayer's (1972) Progressive Developmental Ideology and in physical education school programs by some developmental curriculum models and the

motor development literature. The curricular application from an alternative perspective is represented in education. by Macdonald's (1974) Transcendental Development Ideology, but is not evident in the physical education literature. Descriptions of movement experiences which closely emulate Macdonald's Transcendental Ideology are found in the philosophy of sport literature. Based on the findings from the philosophical and curricular readings, the framework for a curricular ideology in physical education is given as one of the study's outcomes.

Definition of Terms

The following terms are utilized frequently throughout the text. Definitions of these terms are given in order to clarify their meanings.

Alternative Perspective

The less common or less prevalent viewpoint of development in the philosophy of sport, education, and child development literature. The methods of investigation utilized by this perspective are grounded in phenomenology and are best expressed through the intuitive thinking process.

Consciousness

A state of awareness which may be implicit or explicit.

Conventional Perspective

The more common or prevalent viewpoint of development in

the physical education, education, and child development literature. The methods of investigation utilized by this perspective are grounded in the positivist position of philosophy and are best expressed through the rational thinking process.

Paradox

Two contradictory aspects of a particular phenomenon that cannot be considered true when viewed simultaneously.

Phenomena

Entities, organisms, or beings that cannot be fully explained.

Phenomenological

A method of viewing phenomena within the context of their world. This method acknowledges the subjective, unique, and momentary qualities of this context.

Transcendence

Going beyond one's limitations or boundaries. It is characterized as rebirth or renewal into a newly integrated state or context. The process is sudden and momentary. The process is also dynamic, nonlinear, and cataclysmic.

Transformation

The creative change that has occurred as a result of transcendence.

Umwelt

The functioning or operation of species in their

respective worlds. The species' ability to operate within their worlds is directly related to their biological orientation (Von Uexkull, 1957).

Significance

The significance of conducting this inquiry is to research ideology that has been upheld in physical education, education, and child development for decades. The research process critically examines the very premises on which many of our physical education teaching-learning practices are based. Through this process, the inquiry uncovers the limitations of an existing ideology and thinking process which influences our teaching-learning practices. Because of the problems and concerns with these limitations, the inquiry proposes the viewing of movement through an alternative perspective and substantiates its claim with a more encompassing and liberal ideology which could enhance our physical education teaching-learning practices. By introducing the latter perspective and questioning the steadfastness of the conventional perspective, the study does not usurp the conventional perspective but instead, enlarges upon it.

The study fills a void in the present understanding of how individuals and their movement change over time. An emphasis on performance toward an externally-based standard, sequential development, and the refinement of technique

currently dominate physical education teaching-learning practices. This emphasis provides a limited portrayal of the human movement experience. Attention toward personally defined, integrative, and meaningful movement experiences is not as prevalent in physical education teaching-learning practices. This focus can provide a more complete portrayal of human movement experiences. Reports of personal, integrative, and meaningful characteristics of the human movement phenomena for the most part have appeared in the philosophy of sport literature. These characteristics, however, have not been structured or framed within an ideology in either sport or physical education. The view of individuals and their movement changing over time as transcendence and an ideological framework for this view can provide a vehicle through which humans can reach their fullest potential.

CHAPTER II

THE NATURE OF TIME AND CHANGE

What then is time?
If no one asks me, I know;
If I wish to explain it to one that asketh,
I know not.

-St. Augustine

For over twenty-five centuries of thought, the nature of time and change has puzzled philosophers in their quests for knowledge and truth. The investigations can be traced from at least 500 B.C. and extended to modern thought (Fraser, 1978, p. 186). The quandary raised by St. Augustine (353-430) in the above axiom, for example, is reflected again by the curiosity of a twentieth century philosopher, Cornelius Benjamin (1981). In his study of time Benjamin expressed a "conflict between lived time apparently understood and the idea of time as an entity which when critically examined is found to be replete with obscurities and unsolved problems" (1981, p. 3). The nature of time and change has not been clarified in these two thousand years. What has existed is a means of talking about time rather than a means of thinking about time, a language of time rather than an epistemology of time. When we attempt to think about time through the

language that has conventionally been used to talk about it, confusion, contradictions, and paradoxes result.

This chapter is divided into two parts. The first part focuses on an essential nature of time and change through an examination of three characteristics: (a) time as absolute and relational, (b) the order of time as successive and coexistence, and (c) time as constancy and creative change. The second part further examines time and change through a discussion of how these characteristics are utilized by the thinking processes of twentieth century methods of investigation. These methods are selected from two perspectives, conventional and alternative. This examination serves as a grounding for the discussions of the curricular applications of time and change in the remaining chapters.

Characteristics

The nature of the time and change concepts is revealed through an examination of selected characteristics. Time can be characterized by its absolute and relational nature, its successive and coexisting order, and by constancy and creative change (Benjamin, 1981).

Time as Relational and Absolute

The nature of time can be characterized as being both absolute and relational (Benjamin, 1981, p. 5). Relational time reflects our living in time or our being immersed in experience, happenings, or events in time. It exists in the

context of the experience. Relational time could also be described in terms of Schutz's (1967) stream of consciousness which is a constant flow of everyday events. This stream is an individual's internal time consciousness which contains all of the senses and perceptions of the experience. Schutz adds that time consciousness flows at an uneven rate and can therefore be considered heterogenous (1967, p. 45). The stream differs for each individual and can therefore be described as being subjective due to its unique and personal qualities.

Absolute time is the thinking about time or the idea of time. Metaphorically, when we turn back against Schutz's stream of consciousness, we think about or reflect upon the experience in a formal manner. That is, the idea of time is separate or independent of the experience and exists out of the context of the experience. Schutz adds that time in this sense could be identified with a standardization of units evenly spaced and ordered, or as being homogeneous (Schutz, 1967, p. 45). Absolute time then, could be considered objective since humans in a given cultural context work within the same standards of time.

Time as Successive and Coexisting

The order of time is characterized as being both successive and coexisting (Benjamin, 1981). Ordering time in a successive manner involves the discrimination of experiential events or happenings in regard to which event

occurred prior to the other. The ordering can be described as diadic and triadic time. Diadic can be identified as before and after while triadic can be identified as future, present, and past (Benjamin, 1981, p. 6; Fraser, 1975, p. 44).

The order of time as coexisting involves a lack of discrimination as to what event occurred prior to the other. Events can occur simultaneously in time which would not be applicable to an ordering. If we once again utilized Schutz's stream of internal time consciousness, we can speak of time metaphorically as flowing from the future through the present and into the past. Future, present, and past are interrelated in this stream of time consciousness whose blending cannot be discerned or separated.

Time as Constancy and Change

The argument as to whether or not time is constancy or change dates back to at least 500 B.C. to the arguments of Parmenides and Heraclitus (Benjamin, 1981, p. 8; Fraser, 1975, pp. 14, 44). Parmenides viewed the reality of the world as permanence with change only apparent while Heraclitus viewed change as the reality of the world with permanence only apparent (Benjamin, 1981, p. 9). Parmenides and his followers support the concept of "Being" (Capek, 1967, p. 75; Fraser, 1975, p. 14) in their belief that matter can change from one form into another, that something must indeed come from something (Benjamin, 1981, pp. 7, 9).

Benjamin offers a modern example of this concept with the scientific principle of the law of conservation (1981, p. 7). Within the law of conservation, matter changes gradually from one form to another in the appearance of higher and more complicated forms. The principle holds that mass energy "can neither be created nor destroyed" (Benjamin, 1981, p. 7); hence something cannot come from nothing.

Heraclitus and his followers are comfortable with the concept of "Becoming" (Capek, 1967, p. 75; Fraser, 1975, p. 14; Heisenberg, 1958, p. 63; Underhill, 1955, p. 28), since they feel that someone can seemingly both be and not be and that something can indeed come from nothing. Benjamin explains this concept by saying the "Becoming" without some sort of permanence (or Being) would be meaningless (1981, p. 7). Individuals must retain their identity or "Being" while changing, he states, so that others would know the individual has changed. The concept of "Becoming" also utilizes the idea of the origination of new genera or creative change, that something seemingly comes from nothing. Benjamin offers a modern example of this concept of becoming and creative change with the work of evolutionary philosophers. Benjamin states that their work show that "Life" is more than bare matter, yet emerged from it in the temporal process; mind is more than life, yet appeared in the evolutionary scale" (1981, p. 7). It is believed that change involves transcendence in that the entities within the evolutionary

scale grew out of pre-existing levels but are unlike those levels. The entities reach beyond those former states.

Problematic Nature

A closer examination of time and change reveals that the entities used to describe the characteristics can contradict each other and therefore yield a nature that is problematic. The characteristic of time being absolute and relational, for example, reveals time as being both objective and subjective. It is likely that we cannot make our own time and concurrently abide by our culture's time. Another example of a contradiction between entities is the ordering of time as successive and coexisting. A successive order discriminates experiential events by separating one event from another. A coexisting order does not discriminate these events and views them as interrelated. Confusion may result from the realization that events can occur at different times but also influence one another. A final example of the contradiction between entities is in the characteristic of time as constancy and creative change. Confusion may lie in knowing that someone can change while remaining the same and that someone can both be and not be. The confusion that results from these contradictions reflects an indecisiveness as to what time and change are in actuality.

This problematic nature of time and change has existed for over two thousand years, and solutions have not been

formulated in the twentieth century. As Fraser (1978) comments,

At least since Presocratic thinkers, many ideas connected with time have been recognized as paradoxical. Subsequent generations have slowly elaborated many of these ideas in terms of their preferred modes of explanation, yet some of the classical problems have not lost their paradoxical character" (p. 186).

These problems persist in an examination of how twentieth century methods of investigation utilize time and change.

Characteristics as Expressed by Twentieth Century Methods of Investigation

The following examination explores time and change from two perspectives, conventional and alternative. The conventional methods of investigation utilize a rational thinking process through the formal logic of analytic philosophy and through the scientific method of the behavioral sciences. Some alternative methods of investigation utilize an intuitive thinking process through existential-phenomenological insights. An alternative method identified by J.T. Fraser (1975, 1978, 1981) utilizes an intuitive thinking process through the speculative method of existentialism.

Conventional Methods of Investigation

Both formal logic and the scientific method generally

examine one entity of each time and change characteristic. For example, time is viewed as absolute but not as relational. The order of time is viewed as successive but not as coexistence. Change is viewed as constancy rather than as creative change. Thus, the entities of absolute, successive, and constancy are viewed in absence of their opposing entities of relational, coexistence, and creative change, respectively. The following section studies the basic premises from which formal logic and the scientific method operate. Utilizing these premises and examples of their operation, the reader may be better able to understand the time and change concepts within this perspective.

Formal logic. The use of formal logic within analytic philosophy essentially abstracts and formalizes what is actual and informal in an everyday world. This occurs through an application of a pre-determined set of laws to a situation in order to ascertain truth. Formal logic and its laws are based on mathematics (Barrett, 1979, p. 7). In so doing, the application of these laws and their solution is independent of, or unlike, the actual phenomenon of relationships, circumstances, and experiences in their everyday and informal world. By utilizing this approach, relational or lived time, is not examined. The absolute or the idea of time is a more formal representation of experience. It is only absolute time that is examined.

One way in which time is represented in an abstract, formal and absolute manner within formal logic is through the utilization of language (Benjamin, 1981, p. 6). We tend to utilize language, in such a way as to represent the past or future as being present. When we state that the future "is," the present "is," and the past "is," we separate lived time and the idea of time. For example, prominent figures who have shaped our civilization are no longer living and yet they "are" mentioned in the present tense as if they "are" living. In these instances, we separate the lived experience and talk about our conceptualization of the experience. We also tend to utilize language in such a way as to represent experiences that may have occurred in many times such as past, present, and present-past as if they occurred in only one time. An example of this is seen when we try to identify and utilize a single tense throughout a written work. Again, time is represented as absolute and formal since it is not the lived experience. We are limited in our abilities adequately to impart actual experiences. Even if we attempt to utilize different tenses throughout a written work since the experiences occurred in different times, we cannot reveal the actual phenomenon of lived time. That is, language is capable of speaking only one thought or experience at a time (Fraser, 1975) and in doing so, separates thoughts or experiences from one another.

We know that logic, as with all modes of knowing is not universal in its application. There is a limitation as to what it can affirm or deny. This conclusion is stated by Barrett (1979, pp. 8 & 9) in his discussion of the Wittgenstein, Russell, and Whitehead publication Principia Mathematica (1910). He points out that the purpose of the publication was to utilize logic as the universal way of knowing. Barrett indicates that the authors later changed their premise when the limitations of formal logic were discovered. One discovery made by Wittgenstein was that within formal logic there is a point when logic collapses and the conclusion can be attained by utilizing common sense (Cited in Barrett, 1979).

Scientific Method. The use of the scientific method within the behavioral sciences essentially renders concrete or physical characteristics to elements which could be abstract in nature. As within formal logic, time is also viewed as absolute. The behavioral or applied sciences as we know are based on the physical laws of nature or what has been sought as the "pure" material sciences such as physics. The controlled experiment approach that physicists utilize in their method of investigation has been employed by the behavioral scientists in their fields of investigation. The method emphasizes that which can be learned through the senses--the observable and quantifiable--for the ultimate purpose of control and prediction.

The behavioral scientists, while emphasizing a learning through the senses approach, attribute concrete characteristics to the abstract. Time, for example, is viewed as an aspect of space and as occupying space (Heidegger, 1962). Time is some entity which can be held onto or let go as expressed by the words "saving" time or "losing" time. Time can also be seen and counted via instruments such as clocks. The units of time within these instruments are homogeneous and standardized. They can be utilized in an objective manner. The homogeneous and objective characteristics of time represent what was discussed earlier as absolute time (Benjamin, 1981; Schutz, 1967).

The use of time by behavioral scientists raises an important question. Knowing that learning occurs through the senses and that a sense organ for time cannot be determined, how do we know that time exists through this perspective? Thus, the emphasis the behavioral scientists place on learning through the senses and on what is observable and quantifiable attempts to attribute a concrete and tangible characteristic to some entity that may not actually be here.

Change is viewed as constancy in the way that the behavioral scientists apply the mechanical and physical laws of nature. These laws, according to Fraser (1981), are "regarded as principles of permanence" (p. 585). The

constancy or permanence of change can be seen similarly to the law of conservation discussed in the previous section (Benjamin, 1981). The law states that entities change from one form to another into higher and more complicated forms. The entity that appears now is a derivative of the entity which preceded it. The behavioral scientists are then concerned with what happens now because they believe it influences what occurs later. As a result, the scientists try to control certain antecedents or variables of behavior in order to reduce the likelihood of inappropriate outcomes. This changing process is then irreversible; the scientists cannot change what occurred in the past--the past determines or shapes the future. These changes are viewed by the behavioral scientists as physical properties and are commonly noted in terms of observable behaviors.

The scientific method as it is utilized by the behavioral scientists is limited in terms of how time and change are portrayed. While utilizing the pure sciences as a basis for their investigations and subsequent conclusions, the behavioral scientists view time and change only in terms of physical properties. There is evidence to indicate that at its most essential level, time and change are not concrete and static and are instead abstract and dynamic. Gary Zukav (1979) in The Dancing Wu Li Masters points out that the field of quantum physics does not reveal a physical nature and is instead abstract, complex, and dynamic (p. 66). The

physicist-philosopher Heisenberg (Cited in Koestler, 1972) states that "atoms are not things" and that on the atomic level "the objective world" of time and space no longer exists (p. 55). It appears, then, that the concrete principles of the pure sciences on which the behavioral scientists have based their conclusions are no longer fully applicable. Time and change, as we currently think about their most essential forms, seem to be abstract but indeed real.

Concerns with Conventional Methods of Investigation.

There are limitations as to what any method of knowing can reveal about the uncertainties and problems of the world. The discussion of formal logic reveals that there is a point when the steps of logic collapse and the conclusion may be reached with something "other" than logic, such as common sense (Wittgenstein, in Barrett, 1979). The discussion of the scientific method reveals that there are entities such as time which cannot be revealed through the senses and that scientists are unable to observe and quantify the abstract (Heisenberg, 1969; Zukav, 1979).

Given these limitation, the conventional methodologies of formal logic and the scientific method also have the potential of stretching beyond their basic premises of operation. When stretched beyond the limitations of their basic premises of operation, the methods no longer qualify as viable tools for investigation since their strengths may not

apply in another realm or dimension.

Within the discussion of formal logic, for example, the actual informal world is studied in terms of a formalized world; the conceptions of a formalized world are unlike and do not apply to the experiences of an informal world. The discussion of the scientific method shows that the scientific method utilizes the concrete and tangible to study that which is essentially abstract. It also shows that the scientific method utilizes constancy to study that which may be dynamic and creative (Zukav, 1979, p. 66). Ken Wilbur in Eye to Eye (1983) cautions the reader about the problem that occurs when a method is first stretched beyond its limitations and is then applied in a realm where the method is not fully operational. Wilbur identifies this problem as "category errors" (p. 9). An example of a category error is the utilization of the scientific method to affirm the religious or transcendent (Wilbur, 1983). Wilbur explains that the "data" of "sensibilia" (eye of the flesh) which scientists utilize cannot account for the "data" of "transcendelia" (eye of the contemplation) which is utilized on the spiritual or mystical dimension. One cannot substitute science for religion (Wilbur, 1983). Wilbur points out that when the data of sensibilia, such as measurement, is used to study the transcendent, measurement "becomes subtler and this infinitely more difficult to perform until it becomes,

finally, completely meaningless" (Wilbur, 1983, p. 79).

Wilbur's work implies that if we wish to continue studying the nature of time through the physical sciences and formal logic based on mathematics, we will be unable to view the higher more transcendent realm of time.

Kummel (1981) reaches a similar conclusion in regard to the physical or the natural sciences being inappropriately utilized to study time that exists on a higher realm. Kummel (1981) states that there are two temporal structures, nature and man. He explains that "the structure in one domain cannot be carried over to the other" (p. 54). Thus, Kummel concludes that natural science is "inadequate for a description of the human temporal situation" (p. 54).

The conventional methodologies through logic and the scientific method lend a particular kind of understanding to the time and change concepts. The methodologies do not, however, come to grips with the problematic nature of each time and change characteristic. There are also indications that the conventional methodologies study time on the physical level rather than on the transcendent realm (Kummel, 1981; Wilbur, 1983). These methodologies sometime extend beyond their capabilities by utilizing physical characteristics to identify the transcendent. The use of the physical to explain the transcendent is not an adequate representation of the transcendent or the human temporal situation. The conventional methodologies are therefore

unable effectively to examine time in the human realm.

An alternative methodology does address the problematic nature of time and change by utilizing both entities of each characteristic: time as relational and absolute, time as successive and coexisting, and time as creative change. Time and change are also studied on the level of humans. The alternative methodology acknowledges its limitations in attempting to capture the essence of time and change.

Fraser's Alternative Methodology

Need for an alternative methodology. Fraser (1975, 1978, 1981) proposes the utilization of an alternative methodology to study how humans naturally and universally exist in the world. To study humans in this manner, Fraser suggests that the method utilize teachings from both the sciences and the humanities. By extending beyond the boundaries of the sciences and including the humanities, Fraser believes individuals can gain a more encompassing perspective. Fraser utilizes an alternative method of speculation in his study of a theory of time. Through this method, Fraser is able to come to grips with the problematic nature of time and change and explore a human dimension of time. He states:

The first six decades of this century rejected defensively any trend of thought toward universals which would include but reach beyond the confines of the sciences. The success, in the sciences, of analytic thought and of the experimental method

encouraged in philosophy a flight from potentially disturbing transcendental speculation toward the security of formal argumentation, often without human significance. Though these methods and trends proved to be useful to the artisanry of science, they failed to inspire, illuminate, or unify the various ways man experiences reality in a world where the absence of inspiration, illumination, and a unity of vision are all too painfully evident (1975, p. 3).

Fraser's alternative methodology utilizes an intuitive thinking process. Evelyn Underhill (1955) in her work on Education and Mysticism describes intuition. She states:

...intuition, in bold reliance on contact between the totality of the self and the external world - perhaps too in those strange states of lucidity which accompany great emotion and defy analysis - lies the normal man's best chance of attaining, as it were, a swift and sidelong knowledge of this real (pp 32-33).

The way in which this method and its thinking process can come to grips with the problematic nature of time and hence explore a human dimension of time is by viewing both entities of the time and change characteristics. Fraser indicates that history does not give a rationale for excluding one entity for another. Time "subsumes both" entities (1975, p. 46). He adds:

...the sources of temporality are neither in permanence nor in change alone...nor in the coincidence of appropriate contraries, but rather in the conflicting separateness of certain opposites (1975, p. 46).

Fraser explains the conflict existing between opposing forces is not resolved by the selection of one characteristic for

the other. One entity cannot claim victory over another, nor can a conflict be resolved by the "two forces working together or arriving at a coincidental junction" (1975, p. 46). What Fraser proposes is instead a constant struggle or movement along a continuum which is created by the conflict. This concept of existential tension remains unresolvable as long as there is "life to sustain that force" (Fraser, 1975, p. 444).

This conflict between the bipolar characteristics of time and change is not viewed as contradictory. What was identified earlier as problematic, contradictory, and even a paradoxical nature of time and change through the conventional methodologies, Fraser accepts as a non-contradictory nature in his alternative method. He believes that this conflict should not be viewed as contradictory because it is the way that time and change naturally exist in the world and that this nature "corresponds with our existential awareness of it" (Fraser, 1975, p. 45).

Heisenberg (Cited in Koestler, 1971) similarly emphasizes the need to view both entities of a particular phenomena in order to gain a more encompassing perspective. He specifically refers to the "Principle of Complementarity" which is used to explain the duality of an electron which is both a particle and a wave. He states:

The concept of complementarity is meant to describe a situation in which we can look at one and the same event through two different frames of reference. These two frames mutually exclude each other but they also complement each other, and only the juxtaposition of these contradictory frames provides an exhaustive view of the appearances of the phenomena (pp. 54-44).

Since the alternative method does not view this conflicting and all encompassing nature of time and change as contradictory, it has the capabilities for allowing us to gain access to both entities of the time and change characteristics and explore the transcendent and human realm of time. Wilbur's (1983) work indicates that the rational thinking process as it is used through the conventional methodologies generates a paradox when it view both entities of a time and change characteristic. One example he uses refers to the entities of change. Wilbur (1983) states that within formal logic "you cannot for instance, picture a thing being itself and not being itself at the same time" (P. 18). He explains that a study of the transcendent or the "Ultimate" involves a "coincidence of opposites" according to DeCusa. he adds that in Hinduism and Buddhism, the Ultimate is a "nondual" or a "not two" (p. 18). In other words, the Ultimate "cannot be pictured in logic" (p. 18). Wilbur states:

...If you attempt to translate nondual Reality into dualistic reason, then you will create two opposites where there are in fact none...and that...shows why reason

only generates paradox when it tries to grasp God or the Absolute (1983, pp. 18-19).

The intuitive thinking process of the alternative methodologies does not identify a contradictory status of the time and change characteristics. The speculative method that is utilized by Fraser acknowledges a conflict which exists within these characteristics but identifies this conflict as natural. Since it is natural, both entities need to be viewed in order to gain a more encompassing perspective of time and change (Heisenberg, Cited in Koestler, 1972; Wilbur, 1983). Alternative methodologies are the means to gain such an understanding.

Theory of Time as Conflict. In the following section, a description of Fraser's Theory of Time as Conflict is given. The description includes background information, Fraser's hierarchy of temporal levels, and the existence of transcendence within and among the temporal levels. The section closes with a description of limitations.

1. Background. Fraser's theory of Time as Conflict is a statement about how time naturally and universally exists in the world. In his research for the development of his theory, Fraser saw disparate views of time as revealed through the sciences and the humanities. He uncovered further discrepancies of time when he examined the many disciplines, semantics, and systems of affirmation within the sciences and within the humanities. Contrary to this

splintering, Fraser also realized that time was a dominant feature of the world, of man, and of nature. He decided to use an existing valid theory, the "Umweltlehre" (Von Uexkull, 1957) to formulate a unifying understanding of time, one that integrates the sciences and the humanities, but one that does not sacrifice qualities unique to their disciplines (Fraser, 1981, p. 435).

The use of the "Umweltlehre" as a basis for Fraser's theory of time is a study of species-specific universes (1978, p. 21). It essentially speaks about the "phenomenal world," "cognitive map," for a "self world" of a particular species in their environment. Utilizing Von Uexkull's (1957) work, Fraser identifies the functioning or operation of a particular species in their world as the Umwelt of the species. Fraser explains that the Umwelt's ability to operate within their world is directly related to their biological orientation. This biological orientation, then, in turn influences the ways in which the Umwelts function in their universe. The world of humans, for example, is quite different from the world of amoebas because of their biological makeups. Humans cannot experience the world of the amoeba according to the Umweltlehre principle (1978, p. 20).

Fraser does point out that humans can gain insight into the world of lower level Umwelts through non-experiential

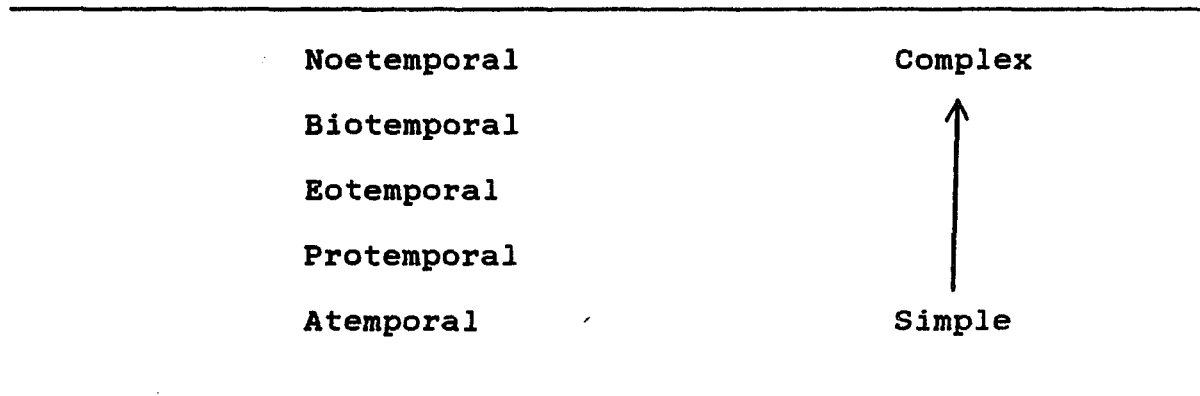
means, through the use of instruments or extensions of their senses (1981, p. xxi; 1978, p. 20). This insight is performed in a formal manner through these instruments, but not phenomenologically through experience. The lower levels cannot gain insight formally or phenomenologically into the worlds of the higher levels because of limitations espoused by the lawfulness of their biological orientation.

The Umweltlehre principle is elaborated further by Fraser (1978, p. 21) in terms of an ordering of these Umwelts and their worlds. The worlds of the various Umwelts are hierarchically ordered in terms of complexity from lower to higher. Each level of the hierarchy has characteristics which discriminate them from other levels; each level contains its own identify. These levels also are "semi-autonomous" in that each level accommodates the principles of the levels beneath it or makes the hierarchy integrative (Fraser, 1978, pp 21, 16). Each level then includes but reaches beyond the level beneath it. These features of Von Uexkull's Umweltlehre principle of being integrative and yet distinctive, Fraser saw as especially helpful to his interests of studying time from both the scientific and humanistic traditions. He decided to utilize this existing valid theory which integrates several worlds of reality without sacrificing qualities unique to their worlds. Fraser adopted this theory and applied temporal characteristics to each level and to its operation.

2. Temporal levels. Fraser utilizes Von Uexkull's hierarchy of five levels of Umwelts. Fraser applies temporal characteristics to each of the five levels and adds the possibility of the existence of a sixth level. Knowing that an Umwelt's ability to function in its world is related to its biological orientation, Fraser decided that the Umwelt's temporal awareness would also be related to its biological orientation and its place on the hierarchy. Thus, the temporal orientation of humans would be quite different from the temporal orientation of amoebas.

Fraser's hierarchy of temporal levels (see Figure 1) and their characteristics proceed in order of their complexity. At the most simple level of the hierarchy, the identification of time does not exist. Fraser calls this level the "atemporal" level. At the most complex level of the hierarchy is the temporal orientation of humans which Fraser calls the "noetemporal" level. Within this hierarchy, three other temporal levels are identified. The protemporal level immediately follows the atemporal level and is best noted for its physiological characteristics. Following the protemporal levels is the eotemporal level which is noted for its physical characteristics. The biotemporal level follows the eotemporal and is noted by the existence of living things in nature (Fraser, 1978, pp. 23-24).

Figure 1. Fraser's hierarchy of temporal levels



The characteristics noted on the atomic, the physiological, the physical, the biological, and the human realms, respectively, are described further by Fraser in terms of their capacities for attention and the degree of causation which exists in their respective worlds (1981, pp. 1, 438). The capacities for attention increase along the hierarchy, and the degree of causation decreases along the hierarchy. Fraser's descriptions of the temporal levels follow.

- Atemporal Level -- The atemporal level is characterized as somewhat chaotic in that everything occurs at once. A passage of time, therefore, cannot be determined as in the functioning of atoms. There is no capacity for "attention," and causation has no meaning since space and time are not distinguishable (Fraser, 1978, p. 23; 1981, p. xxv; 1975, p. 436).

- Prot temporal Level -- The prot temporal level contains a controlled randomness; its entities are countable but not orderable. Physiological entities operate on this level. Causation has some meaning as reflected by the laws of probability which commonly operate on this level (Fraser, 1975, p. 436; 1978, p. 23; 1981, p. xxiv).

- Eotemporal Level -- The eotemporal level contains both countable and orderable entities forming the concept of successive time or a diadic relationship of before and after. Physical nature operates on this level. This level, however, does not contain a preferred direction of time and is characteristic of cyclical and seemingly immortal entities. The eotemporal level operates on the action-reaction principle of deterministic causation. Since there is no direction, the action and reactions or causes and effects are interchangeable (Fraser, 1978, pp. 23, 24; 1981, p. xxxiii).

- Biotemporal Level -- The biotemporal level contains countable and orderable entities with the addition of a "present." Animals operate on this level. The addition of a present formulates a triadic sense of time. A preferred direction is introduced to the triadic by way of the future, present, and past and is characteristic of linearity and aging. Causation on this level has direction and is related to the needs (present) that are directed toward the goals (future) of the Umwelt (Fraser, 1975, pp. 436-7; 1978, p. 24; 1981, p. xxxii).

- Noetemporal Level -- The noetemporal level contains the characteristics of the aforementioned levels but extends them into a larger context. Humans operate on this level (1981, p. xxxii; 1978, p. 24). Though humans contain the characteristics from below, they also operate with intentionality and free will. Intentionality allows humans to separate the causation or connectedness, which operates on the biotemporal level, from the needs and goals of the Umwelts (Fraser, 1975, p. 438; 1978, p. 24). The opportunity that exists for humans to act with intentionality on their future also illuminates their capacity of free will. By having the capacity of free will and the ability to act on their future, humans can select the order and content of their time (1975, p. 439). The use of free will to expand the future and the use of the intentionality to attend to the future represents free will and intentionality working in conflict with one another in an existential tension. This tension operates, then, within and among levels in a horizontal and vertical fashion. Fraser points out that this tension from the lawful constraints of the levels below and conflicts within the human level leads to an increase in the quantity and kinds of situations in which the expected and the encountered might differ (1975, pp. 441-2), thereby granting a limitless array of possibilities from which humans can experience their world. The physical world "is the most

restrained level with the least freedom" (Fraser, 1981, p. xli).

While applying temporal characteristics and the capacities for attention and causation to Von Uexkull's Umweltlehre hierarchy, Fraser also utilizes the principles of operation of the Umweltlehre in formulating his theory of "Time as Conflict." From the Umweltlehre, Fraser states that Umwelts cannot experience the world of other Umwelts (1978, p. 20). He also states that the levels are semi-autonomous, meaning that each level contains characteristics unique to its level but also contains principles of lawfulness from below (1978, pp. 21, 16). Knowing these principles, Fraser concludes that it is possible for humans to experience atemporal phenomena since humans do possess these characteristics, but on the human realm, not on the level of atomic life. It is possible, for example, for humans to be immersed in experience and not be aware of the passage of time. Humans, in this sense, experience time in an atemporal manner.

Fraser also concludes that because of the lawfulness of the levels below the human Umwelt, the principles through which those levels operate, such as determinism and probability, cannot lend insight into the human Umwelt. It is not possible, for example, to utilize the laws of probability which operate within mathematics and statistics to gain an understanding of the human Umwelt. Fraser states:

No matter what sleight of hand one applies to numbers or how sophisticated an exercise one performs with them, they cannot be made to lead to valid statements about biotemporality and above, for they do not image the essential properties of these Umwelts (1975, p. 440).

3. Indications of Transcendence. Fraser's theory of Time as Conflict is considered to be both lawful and creative. The relationships among the levels hold the structure together in a nested fashion, and while each level is restrained by the principles beneath it (lawfulness), it also possesses new and unique degrees of freedom (creativity) (1981, p. xxx). In other words, Fraser states that each level includes but reaches beyond the level beneath it, or transcends that level. Fraser holds that this transcendence is a creative or new reconstruction of the lower level in that the new level suddenly renders characteristics out of the pre-existing that are unlike the entities of the lower level. He states that transcendence involves the "revolutionary new use of already existing structures" (1975, p. 441). An illustration of transcendence could be the moment that the human mind first transcended life. Humans initially learned of life through sense impressions of matter and then must have generated new images that did not correspond to these impressions yielding what is believed to be the first creative thoughts. Fraser's theory explains that matter itself could not have created these images

because of the lawful constraints of its Umwelt and its inability to offer insight into the upper Umwelts.

Fraser's contribution to the study of time and change through an alternative methodology is both lawful and creative and also comes to grips with the problematic nature of time and change by recognizing the existential tension between its bipolar entities. Fraser also attends to a higher temporal order that is unique to humans. From his explanation of the temporal levels, we can see that the physical and successive use of time that exists in the conventional methodologies operates on the lower temporal levels within Fraser's theory. This conclusion is consistent with the findings of Wilbur (1983) and Kummel (1981). Fraser further indicates that the lower temporal levels operate in a deterministic manner while the higher temporal order is more liberating because of the human capacity for free will and intentionality. Fraser also attempts to study humans as they naturally exist in the context of their experience or "phenomenal world" (Fraser, 1978, p. 21). The conventional methodologies, however, study humans in a formal sense or out of context with conceptions of the experience.

4. Limitations of Fraser's alternative methodology.

The primary limitation of Fraser's alternative methodology is its inability to capture the essence of an experience because one Umwelt cannot study the phenomenal world of another. The discussion of Fraser's theory reveals that humans study the

lower Umwelts formally and not phenomenologically. His theory also reveals that the lower Umwelts do not have the ability to study humans either formally or phenomenologically. The problem in attempting to capture the essence of an experience also occurs because of the inability of the human Umwelts to study themselves (Fraser, 1975). To study a particular phenomena, one needs to become the phenomena; when one becomes the phenomena, one cannot study the phenomena. As Fraser points out, "We miss the platform from which we might behold the complete phenomena of man" (Fraser, 1975, p. 443).

Summary

This chapter studies the essential nature of time and change through an examination of their characteristics from both a conventional and alternative perspective. How each perspective utilizes these characteristics through their respective thinking processes and methods of investigation are then studied. Figure 2 illustrates this structure with the headings of the essential nature and twentieth century methods of investigation. As Figure 2 indicates, the conventional perspective views only one entity of each time and change characteristic: absolute, successive, and constancy. The alternative perspective, on the other hand, views both entities of each time and change characteristic: absolute and relational, successive and coexistence, and

creative change (Benjamin, 1981).

Figure 2. The nature of time and change

CONVENTIONAL		ALTERNATIVE
The Essential Nature of Time and Change		
absolute	TIME	absolute & relational
successive		successive & coexistence
constancy	CHANGE	creative change
Utilization of Time and Change Concepts Through Twentieth Century Methods of Investigation		
rational	THINKING	intuition
contradictory;		non-contradictory
concrete, tangible	TIME	abstract, intangible
linear, hierarchical	CHANGE	nonlinear, creative (evolutionary philosophers
(physics)		(quantum physics)
applicable to lower temporal order of nature & animals = deterministic	TOOLS	applicable to higher temporal order of. humans = free will & intentionality
out of context	EXPERIENCE	In context

As figure 2 indicates the rational thinking process of the conventional methodologies views both entities of a characteristic as contradictory while the intuitive thinking

process of an alternative methodology views both entities of a characteristic as non-contradictory. As a result of this contradiction, conventional methodologies can utilize only one entity of each time and change characteristic, and these entities are viewed as concrete and tangible. Change is linear and hierarchial, similar to the law of conservation. The tools utilized by this perspective are applicable to the lower temporal order of animals and nature (Fraser, 1975, 1981; Kummel, 1981; Wilbur, 1983). The temporal order of nature and animals reflects a deterministic character as the capacity to select the order and content of time is not available (Fraser, 1975). Experience is viewed formally and out of context.

In viewing both entities of the time and change characteristics as non-contradictory, time can also be viewed through the alternative methodology as abstract and intangible. Change is nonlinear and creative, similar to the principles of evolutionary philosophers. The tools utilized by this perspective are applicable to the higher temporal order of humans (Fraser, 1975, 1981; Kummel, 1981; Wilbur, 1983). The temporal order of humans reflect a liberal character as humans have the capacities of free will and intentionality to select the order and content of their time (Fraser, 1975). Experience is viewed informally and in context.

CHAPTER III

THE CURRICULAR APPLICATION OF TIME AND CHANGE FROM A CONVENTIONAL PERSPECTIVE

Educators utilize the concepts of time and change within their examination of the phenomenon of development. Educators concern themselves with how individuals change over time and with what factors influence this development. By knowing the principles of the developmental process, educators believe they can better facilitate development through their teaching-learning practices. One way in which development is utilized in curriculum from a conventional perspective is through the "Progressive Developmental Ideology" (Kohlberg & Mayer, 1972). Physical education curricula is consistent with the Progressive Developmental Ideology in the way that some curricular models are organized around developmental themes, in general, and also the way in which motor development is studied and utilized, in particular. This chapter examines development from a progressive standpoint and also the consistency with which motor development utilizes this ideology.

Education

A conventional perspective in education is expressed by Lawrence Kohlberg and Rochelle Mayer (1972) in their publication "Development as the Aim of Education." They offer a Progressive Developmental Ideology which is based on the tenets of cognitive-developmental psychology and interpreted in an educational context. Their work is selected for discussion because Kohlberg & Mayer (1972) explicitly apply the interactionist framework of cognitive-developmental psychology to teaching-learning practices. In their article, Kohlberg and Mayer (1972) point out that while educators have commonly measured the effectiveness of certain methods and programs by the outcomes, little thought has been placed on the significance or worth of these outcomes. By incorporating development as a significant outcome of the educational process, the methods employed could then be evaluated in terms of their viability to those ends (pp. 449-450). Kohlberg and Mayer, in their discussion, further portray three developmental models which have been utilized by educators and educational psychologists: the child-centered, the culture-centered, and the interactionist models. The authors select the interactionist model and utilize it within the ideology (1972, p. 454). Kohlberg and Mayer's (1972) proposal for developmental criteria as the aim of education, and the use of the Progressive Developmental

Ideology as a means for achieving those ends, is elaborated in the following section.

Progressive-Developmental Ideology

Development from a progressive standpoint involves an interaction between the individual and the environment. What is learned is "created" as a result of this interaction. The process is a gradual one; it proceeds in a step-by-step, linear, and hierarchical fashion (Kohlberg, 1970). Changes in behavior as a result of this process are called "stages" of development (Kohlberg and Mayer, 1972, p. 486). The aim is to attain the highest stage or what is considered optimal development (Salkind, 1985; Kohlberg and Mayer, 1972). Kohlberg and Mayer's Progressive Developmental Ideology originates from the cognitive-developmental psychology as professed by Piaget (1960) with its interactionist framework first being introduced to education by Dewey (1938). Unlike other models that endorse a child-centered approach or a culturally-centered approach, the Progressive Developmental Ideology supports an interaction or a dialectic between the culture and the individual (Kohlberg and Mayer, 1972). The process of development is explained through a description of (a) the "dialectic" or interaction between the individual and the environment, (b) the changes of behavior which result in "stages" of development, and (c) the aim of this development which is "optimal."

Dialectic. The dialectic or interaction between the individual and the environment "forms the essence of development" (Salkind, 1985, p. 185).

Figure 3. The dialectic

Individual <-----> Environment

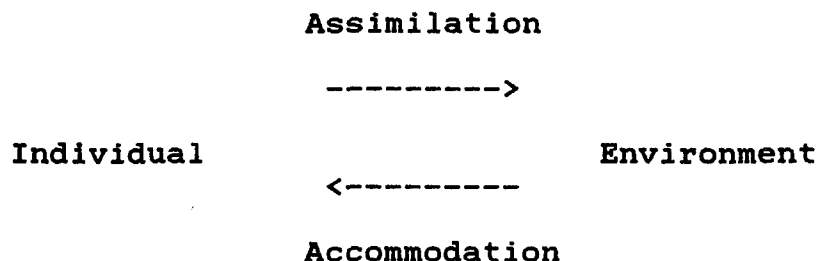
The dialectic or interaction as illustrated in Figure 3 operates on Piaget's principle of adaptation (Piaget, 1971; Salkind, 1985). The more the individuals' knowledge is elaborated and structured, the more versatile individuals become in their ability to adjust to situational demands. The more elaborate and differentiated the internal structure is, the better chance individuals have to survive.

The interaction between the individual and the environment in this dialectic is unlike the environmental stimuli in the culturally-centered approach and the genetic unfolding in the child-centered approach. The stimuli from the environment which exists in the culturally-centered approach is not stimuli until individuals act on it and accommodate it within their structures of previous knowledge in the interaction or dialectic approach (Salkind, 1985, p. 190). The action of the individual on the environment as a result of genetic unfolding in the child-centered approach is instead a result of the individual's

maturation and internal structuring from previous interactions with the environment or assimilating the environment in the interactionist or dialectic approach (Salkind, 1985, p. 189).

Thus, what Piaget has termed assimilation and accommodation in his principle of adaptation can be applied to this model. In Figure 4, the arrow signifying the stimuli from the environment to the individual modifies the individual's internal structure and represents "accommodation." The arrow signifying the individual's action on the environment represents "assimilation" because the individual attends to and interprets the environment in terms of previous knowledge. The individual's development, then, is not so dependent upon the individual's structure of previous knowledge where the stimuli is assimilated (Kamii and DeVries, 1977). Thus, educators focus on the development of this internal structure by providing worthwhile experiences to enlarge upon that structure.

Figure 4. Assimilation and accommodation



The individual's internal structuring of maturation and experience evolves through a process Piaget terms "constructivism." The individual's regulation of the components of maturation and experience is called "equilibration." The disequilibration or conflict of these same components serves as the impetus for development (Salkind, 1985, p. 193). By resolving this disorganization or conflict, the individual develops or reconstructs the internal structure. A qualitative change results, and the individual attains a state of equilibrium (Flavell and Wohlwill, 1969; Inhelder, 1971; Pinard and Laurendeau, 1969; Salkind, 1985, pp 186-187). If there is too much stress, however, the individual cannot resolve this organization; if there is too little stimuli, the individual is not likely to attend. Educators, then, attempt to provide stimuli that is "just right" in proportion -- not so much as to cause anxiety and not too little as to cause boredom.

Stages of development. The qualitative change that results from this conflict is known as a stage of development. The internal structures and their restructuring as described by Piaget are reflected in overt and observable changes of behavior; they are indicators of this internal structural change and resultant stage of development (Salkind, 1985). The new behavior is qualitatively different from the behaviors exhibited in the preceding stages. That is, the new behavior is not just an extension or elaboration

of the old, but is indeed new (Falvell and Wohlwill, 1969; Inhelder, 1971; Pinard and Laurendeau, 1969).

These stages are characterized as generalized behavior changes that occur in a sequential order which are hierarchical in nature, and movement through these stages is unidirectional and irreversible. The process is the same for all individuals, or is recognized as being universal. A characteristic of stages is hierarchical incorporation. That is, each stage grows out of the preceding one (Falvell and Wohlwill, 1969; Inhelder, 1971; Pinard and Laurendeau, 1969). The stages within this hierarchy are distinct and yet interrelated (Salkind, 1985, p. 192). Each stage subsumes the characteristics of the earlier one which reflects interrelatedness, and they form a hierarchy. These internal structures increase in complexity (Salkind, 1985, p. 184), reflecting a distinctiveness when progress is made through the hierarchy (Piaget, 1960, pp. 13-15).

The sequential, unidirectional and irreversible order of the hierarchy means that each stage proceeds in a forward direction; there is generally no skipping of stages (Salkind, 1985, p. 194) or reverting backwards by more than one stage. Within this forward process, Kohlberg and Mayer (1972) point out that "each stage stems from the previous one and prepares the way for the subsequent stage" (p. 458). Pinard and Laurendeau (1969) and Inhelder (1971) explain that because each stage grows out of the previous one, the

order cannot be changed and is considered intransitive. The status of the later stages in terms of completeness, then, is dependent upon the development of the earlier stages (Salkind, 1985, p. 195). Thus, "structural wholeness" is an important characteristic of stages (Flavell and Wohlwill, 1969; Inhelder, 1971; Pinard and Laurendeau, 1969). As stages develop, they do so gradually. That is, the behavior changes which are consistent with a particular stage do not occur or integrate all at once. Piagetians identify this lag as horizontal decalage. There are also transitional periods between stages which allow for behaviors of one level to mix with the beginning behaviors of the next stage.

The process is the same for all individuals, or is recognized as being universal (Kohlberg and Mayer, 1972, p. 486). This process, however, allows for individual differences in terms of age, rate and pace. Individuals may move through the stages at different points in time, at different ages, a fact which suggests that the stages are age-related and not age-determined. Individuals may also move through the stages for different durations of time, thereby progressing at their own rate and pace. All individuals, however, pass through the same stages and in the same order or sequence.

Optimal development. Though all individuals move through the same stages and in the same order, movement toward the upper states is not inevitable (Kuhn, Langer, Kohlberg and Haan,

1971). The task of educators, then, is to facilitate the eventual attainment of the highest stage of development (Kohlberg and Mayer, 1972, p. 454) or foster the optimal development of each individual through planned intervention techniques (Kohlberg and Mayer, 1972, p. 489). It has been pointed out in the developmental literature, that while some may reach the highest stage without planned intervention, the probability of this occurring is low. Only half of all adults reach Piaget's highest stage of formal operations (Kohlberg and Mayer, 1972, p. 486), for example. This planned intervention is not intended to accelerate or speed development toward the highest stage, but to assist individuals at their own level and pace so that they may develop more fully and optimally (Kohlberg and Mayer, 1972, p. 489). Since optimal development is not inevitable, well planned experiences are incorporated by educators within the teaching-learning environments.

Physical Education

The interest educators express in incorporating development as the aim of education is shared by some physical educators. There are physical education curriculum models which are organized around developmental themes (Gallahue, Werner & Luedke, 1975; Hoffman, Young & Klesius, 1981; Melograno, 1979) in each learning domain. There are also programs (Logsdon, Barrett, Ammons, Broer, Halverson,

McGee, and Robertson, 1985) which utilize an understanding of motor development in their teaching-learning practices.

While some physical educators focus on the development of all domains of the learner as in the curricular models, other physical educators are primarily concerned with the individual's motor development.

Both the curricular models and the programs which incorporate an understanding of motor development focus on how individuals and their movement change over time and the factors which influence those changes. The physical educators who utilize the models and programs are interested in the commonalities of patterns which appear over time as well as the individual differences in rates of development (Jewett & Bain, 1985). They are also interested in how they can facilitate development. The developmental themes within the curricular models and the intra-task motor skills within motor development are based on the work of cognitive-developmental psychology. They are both designed to determine whether or not development has occurred in physical education classes. The way in which motor development is studied and utilized offers a clear and substantive account of the developmental process and its consistency with the Progressive Developmental Ideology (Kohlberg & Mayer, 1972). A discussion of this developmental process can be applicable to curricula which are organized around developmental themes and curricula which are organized around activity units such

as games, dance, gymnastics.

Physical education curricula through the utilization of an understanding of the developmental process within motor development are consistent with the Progressive Developmental Ideology of education (Kohlberg & Mayer, 1972). There is a general consensus among authors in physical education that development is a result of the interaction or dialectic between the individual and the environment (Branta, Haubenstricker and Seefeldt, 1984). These authors also view motor development as a gradual, step-by-step, linear and hierarchical process, similar to the process described in the Progressive Developmental Ideology. The aim of development is also the attainment of the highest or optimal level of development. The final point that physical educators share with educators in regard to this ideology is that development is not inevitable and depends on well planned intervention techniques (Robertson and Halverson, 1984).

Selected works in physical education portray this developmental process. The works of Haywood (1986), Keogh (1985, 1977), Thomas (1984), Robertson (1984, 1978a 1978b) Robertson and Halverson (1984), Corbin (1973), Branta, Haubenstricker and Seefeldt (1984), Espenshade and Eckert (1980), and Weiss (1985) offer an application of this ideology in their discussion of the developmental process and recommended practices for facilitating this development. The

process of motor development is explained as (a) a "dialectic" or interaction between the individual and the environment, (b) developmental sequences, and (c) the aim of "optimal" development.

Dialectic

Physical educators generally agree that development is a result of the interaction between the individual and the environment as espoused by the Progressive Developmental Ideology (Kohlberg and Mayer, 1972). Roberton and Halverson (1984), Branta, Haubenstrucker, and Seefeldt (1984), and Thomas (1984) for example, specifically mention that behavioral or structural changes are a result of this interaction. Roberton and Halverson (1984) further state that development does not occur "solely through features within the individual ... or through features solely outside the individual," but through the "unique coincidence of each acting upon the other" (1984, p. 2). Branta, Haubenstricker, and Seefeldt (1984) discuss the influence of internal and external functions on the effectiveness of movement performance.

The accumulation of these interactions over time contributes toward a child's current state of development or "readiness" (Roberton and Halverson, 1984) and consequently a contribution toward the child's ability to adapt to the demands of the experience (Piaget, 1971). The interaction, then, is not comprised of only what is experienced today, but

all that has been experienced within the internal structure of the child, which then contributes to the elaboration and differentiation of the structure over time.

Robertson and Halverson (1984) stress the notion that the internal state can be detected only by observing outward behavior. By observing outward behavior, physical educators could be providing opportunities for the learner's internal states to be "acting upon and being acted upon by the environment" (p. 3). The physical educators can facilitate this by "sequencing these encounters" for and with the learner. Though the learner's past interactions cannot be changed nor can their genetic makeup be altered, teachers can utilize the learner's "present state of readiness as a guide for building future readiness" (p. 3).

Developmental Sequences

The order of changes both within motor skills or between motor skills that result from the learner's encounters with the environment are considered developmental sequences. The term developmental sequences is utilized to identify those qualitative behavior changes that occur over time but do not meet the criteria for "stages" (Haywood, 1986, p. 17). Motor development researchers focus on developmental sequences and the validation of these sequences in terms of the learner's performance of intra-task motor skills. Intra-task sequences are "changes that occur within a given skill until that skill is mastered" (Robertson and Halverson, 1984, p. 41). The

validation of developmental sequences within these motor skills stems from the use of some of the criteria of stage theory from developmental psychology. Researchers such as Robertson and Halverson (1984) test whether or not motor skills appear in an orderly, sequential and hierarchical manner. Robertson has specifically tested for the intransitive and universal aspects of classical stage theory (Robertson, 1978a) in selected intra-task motor skills. Researchers also study inter-task skill development which are sequences "made up of different skills ordered along a timespan" (Robertson and Halverson, 1984, p. 41). Work on inter-task skill development, however, has not been validated and is treated atheoretically. Robertson and Halverson (1984) for example, consider their sequencing of foot locomotion as an hypothesized order or their "best guess" (1984, p. 41). The research findings as to whether or not the developmental sequences of intra-task motor skills are indeed stages remains inconclusive. Consequently, Robertson and Halverson (1984) state the field of motor development does not have overall stages of development as there are overall stages of cognitive development in the field of psychology. There is, however, a consensus among researchers that motor skill development appears in an orderly and sequential manner (Bayley, 1934; Branta, 1981; Haywood, 1986; Koegh and Sugden, 1985; Robertson, 1978a; Seefeldt, 1972; Wild, 1938; and Williams, 1980) which is termed developmental sequences.

There is doubt as to whether or not there is strict adherence to classical stage theory in terms of invariance and irreversibility of the order of intra-task sequences (Branta, Haubenstucker, Seefeldt, 1984; Seefeldt and Haubenstucker, 1982). Hence, developmental sequences are not considered stages of motor development as yet, but are indicative of the possibility of stages. Research is being conducted through long-term or longitudinal evaluation as a means of gaining validity for a stage theory of motor development (Robertson, 1984, 1980, 1978a).

The interest the motor development researchers have in the study of developmental sequences and the validation of the existence of stages was influenced by the work of Freud, Piaget, and Kohlberg in developmental psychology and as well as the work of forerunners in motor development such as Bayley (1936) and Wild (1938). The early works (Bayley, 1936; Shirley, 1931) determined the ages in which the achievement of developmental sequences occurred (Espenschade & Eckert, 1980). They formulated normative scales and based their findings on quantitative measurements. The qualitative aspects of motor skill development and stage-like sequences were conducted in later works (Deach, 1951; Robertson, 1977a; Seefeldt, Reuschlein & Vogel, 1972). One pioneer in particular, Wild (1938), laid the foundation for future examination of intra-task development of sequences from two approaches: the total body configuration and body

components. Much of the work on the identification of intra-task sequences is through the total body configuration approach (Deach, 1951; Gallahue, 1982; Haubensticker, Branta, & Seefeldt, 1983; Seefeldt & Haubenstricker, 1972; Seefeldt, Reuschlein & Vogel, 1972; Williams, 1982). The total body configuration consists of the viewing of all of the body's components as one whole; it is believed that the components together reflect one developmental level. There are also researchers who study intra-task sequences through the component approach (Clark & Phillips, 1985; Halverson & Williams, 1985; Robertson, 1978b; Robertson & Langendorfer, 1980). The component approach consists of the viewing of individual body components; each component of a particular skill can then be classified at different developmental levels.

Intra-task sequences are used to examine the consistency of motor development research with the Progressive Developmental Ideology. The intra-task sequences are indicative of generalized behavior changes that occur in a sequential order. These behavior changes are hierarchical in nature, and movement through these stages is unidirectional irreversible (Kohlberg and Mayer, 1972). An individual who has attained a higher level within an intra-task sequence is assumed to have already achieved the lower levels indicating a hierarchy. This implies that individuals who have achieved differential trunk rotation of the overarm throw, for

example, also have available within their internal structure, or repertoire, block rotation, and forward and backward movements of the trunk. Evidence for this hierarchy can be seen when an individual who is overwhelmed by the challenge of a task regresses to an earlier behavior or level (Robertson and Halverson, 1984) within the intra-task sequence.

Though the order of appearance is likely to be the same for all individuals, the sequences within intra-task motor skills occur at different times, ages, and rates (Branta, Haubenstricker, and Seefeldt, 1984; Robertson, 1978; Robertson and Halverson, 1984; and Thomas, 1984). The influence of practice on the acquisition of motor skills contributes toward the variability among individuals of the same age (Robertson, 1984, p. 58). Some individuals may acquire a particular sequential level within an intra-task motor skill when it is first introduced. Others may acquire the skill after considerable time and practice. Individuals who attempt the acquisition of motor skills also learn these skills at their own rate (Robertson and Halverson, 1984). Members within a given class then are likely to progress at different rates as well as working at different levels even though they may be close in age. The variability of the class in terms of individual rates of learning and their ages present a multitude of factors for teachers to consider even though their sequences appear in the same order.

The acquisition of intra-task motor skill sequences is not a given, and progress through these stage sequences does not occur automatically. Physical educators, then, can be facilitators of this development as educators in the other domains of learning. Physical educators can also utilize an individualized approach to this development knowing that development of motor skills occurs at different levels, rates, and ages (Robertson and Halverson, 1984).

Optimal development.

Physical educators utilize teaching strategies for the purpose of facilitating the acquisition of the highest or optimal level of development in the learner. Teachers can facilitate further development as well as broadening and enriching "the child's encounters at the child's present stage of development" (Robertson and Halverson, 1984, p. 5). By broadening and enriching these experiences, teachers hope to facilitate the elaboration and differentiation of the internal structure. The child would then have more options available in order to adapt to environmental demands. Optimal development can occur when teachers offer a wide variety of experiences (Weiss, 1985) so as to elaborate on this structure and also accommodate individual differences in terms of ages, levels, and rates.

The learning experiences are also designed to challenge the learners at their appropriate level so that they may advance. The challenge, as explained in the Progressive

Developmental Ideology (Kohlberg and Mayer, 1972), is meant to cause "disequilibrium" in the internal structure. The resolution of the conflict would result in equilibrium and the arrival at the next level. The challenge would not be so great as to cause the individual to regress to a lower level nor so easy that the individual would not develop further.

Physical educators implement their teaching strategies by utilizing the principles of the developmental process just described. The teacher first determines the developmental level of the child by observing the child's outward behavior which is believed to reflect the child's internal structure. The teacher then employs an appropriate challenge at the developmental level with a task which also accommodates the learner's rate and age. The teacher evaluates whether or not the challenge was appropriate by the resultant outward behavior which may be different from earlier behaviors (Robertson & Halverson, 1984; Weiss, 1985).

Some teaching strategies that are consistent with the progressive framework and are utilized by physical educators are: (1) developmental task analysis, (2) equipment design, and (3) goal setting. Developmental task analysis, as formulated by Herkowitz (1984, 1978), designates environmental factors in relationship to the child's developmental level. It is believed that the environmental factors can enhance or inhibit the acquisition of a motor skill. Developmental task analysis charts are organized with

a listing of environmental factors for a motor skill. For the motor skill of striking, for example, the environmental factors of speed of the ball, size of the ball, size of the implement are listed. The chart also designates the degree of complexity of each one of these environmental factors on the acquisition of the motor skill, from simple to complex. The teacher can utilize this chart in order to simplify the task for the learner or make the task more complex. When a child consistently strikes a suspended ball while exhibiting block rotation of the trunk, for example, the teacher may decide to adjust the environmental factors to a more complex level so as to challenge the child further. An environmental factor at a more complex level could be a tossed ball rather than a suspended ball. The teacher would observe whether or not the child continues to contact the ball as well as exhibit block rotation of the trunk.

Another strategy is the use of equipment design by physical educators. Herkowitz (1984, 1978), for example, suggests selecting equipment and varying the equipment so as to accommodate the size and growth characteristics of students. Rungs of a ladder could be arranged at varying widths, for example, so as to accommodate differences in height and length of leg and of climbing ability.

Goal setting is a third strategy utilized by physical educators and is also utilized within equipment design and developmental task analysis. Goal setting is a method which

challenges the learner by eliciting or bringing out desirable movement responses. Goal setting was first made explicit by Halverson in 1966. At that time, she recommended incorporating goals "to stimulate the emergence and practice of movement patterns" (p. 47). If a child does not utilize arm movement in jumping for height, the teacher may hold a ball overhead as a goal and ask the child to "reach for the ball." The child then is likely to incorporate the necessary arm movement as impetus for the jump for height.

Summary

Physical education is consistent with the Progressive Developmental Ideology in the way that motor development is studied and utilized. As Figure 5 illustrates, development is viewed in both education and physical education as occurring in a dialectic, and the changes are identified as developmental sequences. The goal is optimal development.

There is a consensus among the physical educators that development occurs as a result of an interaction or a dialectic between the individual and the environment (Branta, Haubenstricker, and Seefeldt, 1984; Robertson and Halverson, 1984; Thomas, 1984). Based on Piaget's principle of adaptation, the more elaborate and differentiated the internal structure is, the more versatile or adaptable the individual becomes. Physical educators consequently design a variety of movement experiences (Weiss, 1985) in order to

elaborate and differentiate this internal structure. The individual, it is believed, would be better able to respond to situations in the environment, situations that are both planned and unplanned.

The development of intra-task motor skills as a result of this dialectic between the individual and the environment occurs in an orderly and sequential manner. This progression is believed to be hierarchical, and its order is believed to be the same for all individuals and universal (Bayley, 1935; Banta, 1981; Robertson, 1978a; Seefeldt, 1972; Wild, 1938 Williams, 1980). Though the order of appearance is likely to be the same for all individuals, individual differences in terms of ages, rates and physical characteristics are acknowledged (Branta, Haubenstricker and Seefeldt, 1984; Robertson, 1978; Robertson and Halverson, 1984; Thomas, 1984).

Progress through the hierarchy of intra-task motor skills does not occur automatically. As a result, physical educators implement teaching strategies to facilitate optimal development through these sequences (Robertson and Halverson, 1984). Some strategies which have been designed are developmental task analysis, equipment design, and goal setting (Halverson, 1966; Herkowitz, 1978). These strategies have been designed appropriately to challenge the learner; the challenge would not be so great as to cause anxiety nor would the challenge be so little as not to stimulate development.

Figure 5. The curricular application of time and change from a conventional perspective

Utilization of Time and Change Concepts
in Education through the Study of the
Phenomenon of Development
Education
"Progressive Developmental Ideology"

DEFINITION	Development is a gradual, step-by-step linear and hierarchical process
PROCESS	
(1) INTERACTION	Dialectic
(2) DEVELOPMENT	Stages (resolvable conflict)
(3) AIM	Optimal Development
<u>Physical Education</u>	
Consistent with the "Progressive Development Ideology"	
DEFINITION	Development is a gradual, step-by-step linear and hierarchical process
PROCESS	
(1) INTERACTION	Dialectic
(2) DEVELOPMENT	Developmental Sequences (resolvable conflict)
(3) AIM	Optimal Development

CHAPTER IV

THE CURRICULAR APPLICATION OF TIME AND CHANGE FROM AN ALTERNATIVE PERSPECTIVE

The significance of the developmental process discussed in the previous chapter is shared by educators who view development through an alternative perspective. These educators also concern themselves with how individuals change over time and how they can encourage this development. One approach in education is described through the "Transcendental Developmental Ideology" (Macdonald, 1974). An approach in physical education which is consistent with the Transcendental Developmental Ideology is not evident. Movement experiences, however, which closely resemble the Transcendental Developmental Ideology, appear in the philosophy of sport literature. This chapter examines development from a transcendental standpoint and also the way in which movement experiences within the philosophy of sport literature appear to emulate this ideology. This ideology could serve as a framework for the design of these movement experiences in physical education.

Education

An alternative perspective in education is expressed by

James Macdonald (1974) in his publication "A Transcendental Developmental Ideology of Education." Concerns for the limited way in which the "Progressive-Developmental Ideology" (Kohlberg & Mayer, 1972) view children and the world, prompted Macdonald to enlarge upon or supplement the former view with a more encompassing perspective of the self and the world. Macdonald utilizes the works of Berger (1969), Polanyi (1967), Marcuse (1969), James (1958), Richards (1962), and others in the formulation of his ideology. The ideology is a proposal for another ground of knowledge (1974, p. 103), one that is accessible to what Macdonald calls the hidden inner sources where the creative human potential lies. From the work of Berger (1969), Macdonald sees that there are indications of transcendence and other phenomena in the world that are not accounted for by the conventional model and the Progressive Developmental Ideology (Kohlberg & Mayer, 1972). Macdonald believes that these phenomena, such as discoveries, meaning-making, and valuing, which have been readily apparent throughout history and society, originate from the creative human potential and should not be "ignored" (Macdonald, 1974, p. 93). He offers his ideology in an educational context.

Other contributors of the alternative perspective and reflective of the transcendental-like process are Robert Kegan and Evelyn Underhill. Robert Kegan, a developmental psychologist, enlarges upon Piaget's work with his formulation of a paradigm for meaning-making in his

publication "There the Dance Is: Religious Dimensions of a Developmental Framework" (1980). Underhill (1955) breaks from the physical or sense world in her study of mysticism in education which she calls "vitalism." In the following section, Macdonald's "Transcendental Developmental Ideology" (1974) is studied primarily, and insights from Kegan and Underhill are used to supplement his work.

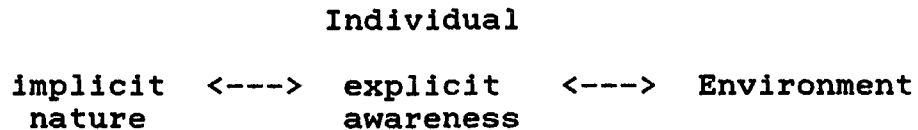
Transcendental Developmental Ideology

Development from a transcendental standpoint involves a "dual dialectic," a term which means that in addition to the dialectic between the individual and the environment a dialectic exists between the individual and the "tacit dimension" of the self (Macdonald, 1974; Polanyi, 1967). The process is a sudden one (Kegan, 1980) and occurs in a dynamic, nonlinear, and cataclysmic fashion. The change that occurs is identified as transcendence, and this change can be described as a transformation. The aim of this process is centering (Macdonald, 1974; Richards, 1962) or what is considered a call towards a meaningful and authentic existence. Thus, the process of development, through this ideology, is explained through a description of (a) the "dual dialectic," (b) the changes as transcendence and transformation, and (c) the aim of this development, which is "centering."

Dual Dialectic. As Figure 6 illustrates, the dual dialectic process involves a dialectic between the individual

and the environment as well as a dialectic within the individual. Both interactions thereby form the dialectic.

Figure 6. A dual dialectic



In Figure 6, the dialectic between the individual and the environment is signified by the double-sided arrow on the right. The dialectic between the implicit nature and the explicit awareness of the individual is signified by the double-sided arrow on the left.

Macdonald states that an individual's values and knowledge are personally developed out of this dual dialectic process and are not "given" through the environment or genetics as in the progressive model. He explains that the source of learning in the Progressive Developmental Ideology (1972) originates from the genes which are "given" and from the environment which is "giving" (1974, p. 97). As a result of the interaction between the individual and the environment and the resolution of this conflict in this model, learning is something "other" than the experience; it is not personal. It is conceptions of the experience, but not the experience. Macdonald adds that since learning is a result of past

experiences and predetermined genetic makeup, it is not considered new.

Within the dual dialectic, however, Macdonald states that learning originates from the self. Learning is grounded out of the individual's own existence (1974, p. 97), thereby making it "personal." It is the experience and the context in which these experiences occur that is significant, not conceptions of the experience. Macdonald adds that since learning is personally developed, it is considered "new."

Macdonald bases his work on the dual dialectic process from Polanyi's (1967) The Tacit Dimensions. Macdonald explains that the dialectic between the individual and the environment (outer) does not occur without the dialectic between the explicit awareness and the implicit nature of the individual occurring also (inner). It involves a dialectic between both the inner and the outer. The explicit awareness is composed of the individual's knowledge, beliefs, ideas. The implicit nature of the individual is composed of pre and unconscious data (Macdonald, 1974, pp. 94-96).

An example of the duality of this process is seen when individuals involve/embrace themselves with the environment instead of responding in relationship to the consequences, as in a utilitarian act. This involvement occurs when the individual looks toward the implicit nature. The realization is then brought to explicit awareness, and the individual therefore acts in regard to consciousness, or ethics in this

case. Macdonald states that the pre-conscious is the hidden or unknown and cannot be ignored, "for it is out of this very source of the unknown that whatever we have achieved has emerged" (1984, p. 93).

Since this personal development is grounded out of one's own experience, adds Macdonald, our study or view of experience should also be reflective of the way the world naturally exists (1974, p. 91). For example, he states that the world is multi-faceted, integrative, and a-causal rather than linear as it appears in the conceptions of the progressive model (1974, pp. 90, 103). Macdonald explains that to view this world as it naturally exists another type of thinking process is necessary. He identifies this thinking process as aesthetic rationality. Macdonald's aesthetic rationality is a modification of Marcuse's work (1969) and views the world through imagination, imagery, and perception.

The significance of studying development within the context of experience and explaining it in terms of its multi-faceted nature is supported by Kegan (1980). Kegan refers to the context of development as a "motion." He states that individuals are "not their stages of development; persons are a motion, a creative motion, the motion of life itself" (p. 407). He adds:

This restless motion is the source and integrated into a larger conception.

This motion is the grounding phenomenon of individual development and its relationship cannot be separated into arbitrary partialities of sex, class, culture (p. 415).

Evelyn Underhill (1955) shows how the use of rational thinking does not reflect the context of experience. She concludes:

The intellect is a specialized aspect of the self ...but specialized for very difference purposes than those of metaphysical speculation. Life has evolved it in the interests of life; has made it capable of dealing with "solids," with concrete things. With these it is at home. Outside of them it becomes dazed, uncertain of itself; for it is no longer doing its natural work, which is to help life, not to know it. In the interest of experience, and in order to grasp perceptions, the intellect breaks up experience, which is in reality a continuous stream, and incessant process of change and response with no separate parts, into purely conventional "moments," "periods," or psychic "states." It picks out from the flow of reality those bits which are significant for human life; which "interest" it, catch its attention. From these it makes up a mechanical world in which it dwells, and which seem quite real until it is subjected to criticism. It does, says Bergson, the work of a cinematograph; takes snapshots of something which is always moving, and by means of these successive static representations - none of which are real, because Life, the object of photographs, never was at rest - it recreates a picture of life of motion. This rather jerky representation of divine harmony, from which innumerable moments are left out, is useful for practical purposes; but it is not reality, because It is not alive (p. 30).

Thus, the context in which the individual operates is critical during the dual dialectic process, and this context is personally defined. The changes that occur during this dual dialectic process can be described as transcendence and transformation.

Development as Transcendence and Transformation. When the multi-faceted, a-causal world in the dual dialectic unites for a moment of insight or "aha," Macdonald (1974) identifies this "insightful" knowing as "Transcendence" (p. 113). A description of transcendence as it occurs through the dual dialectic process could be best described as an existential tension between the inner and the outer. Characteristics of nonlinearity and creativity also describe the process. The tension between the inner and the outer can be pictured on bipolar ends of a continuum. The continuum is created by this tension. The context in which the inner and the outer operate in this multi-faceted and a-causal world is alive (Macdonald, 1974), turbulent, and they are in unresolvable conflict with each other (Fraser, 1975, 1978, 1981). The context pushes against and then bounces off this tension, resulting in a sudden shift to a new context. In other words, the tension gives rise to a new context and newly integrated state. Change as a result of this tension and its unresolvable conflict is transcendence.

Transcendence can be characterized in terms of its nonlinearity. The movement toward a newly integrated state

can be thought of as a movement beyond one's limitations and boundaries. The movement itself is nonlinear. As the syllables of the word transcendence imply, transcendence means movement or a shift in both horizontal and vertical directions which is nonlinear. The syllable "trans" meaning across and the syllable "ascend" meaning up convey the idea of movement across and upward.

Transcendence can also be described in terms of its creativity. The movement beyond one's limitations or boundaries and into a new context is formulated from newly created vision and talents. It is a rebirth or renewal. It results in new tools or discoveries, skills or a way of being that were not there before. The claim for newness is justified by Robert Kegan (1980) since an individual cannot transcend with the same or "old tools." The nonlinear characteristic of transcendence, however, means that movement toward this new context is not unidirectional. It involves a rendition of the past as well as an escape from the past, regression as well as progression. The new context includes but reaches beyond the earlier context; this new context "is" but "is not" the earlier context.

In this way, the new entities and discoveries which Macdonald speaks of are accounted for. There is also a sense of personal history because these new entities and discoveries are grounded out of preexisting phenomena, as Macdonald proposes. The past or pre-existing phenomena do

not determine or shape the new context because of the existence of the hidden human potential (Macdonald, 1974) and the capacities of free will and intentionality (Fraser, 1975, 1978, 1981).

Transcendence as described through its existential tension and characteristics of nonlinearity and creativity also involves transformation of the individual. The individual who has transcended is no longer the same. The individual is personally involved in the experience and has undergone meaning-making in the experience. This meaning-making is what transforms the individual.

The process of development as transcendence and transformation and its suddenness can be summarized as the "ecstasy created from the act of breaking through the fixed forms of our own being" (Tillich, 1952, p. 79) and "the stuff which revelation is made of" (Kegan, 1980, p. 422).

Centering. The unity or integration that occurs during the "aha" or insightful knowing is called centering. Macdonald utilizes the work of Caroline Richards (1962) in his discussion of centering. Centering is considered a call "for the completion of the person or the creation of meaning that utilizes all the potential given to each person" (Macdonald, 1974, p. 105). The ideas that are embedded within the context of the multi-faceted, a-causal world of the individual integrate and unite for a moment of insight.

This integrating process involves the simultaneous gathering of both the inner and the outer so as to become a meaningful whole. The individual, then, can be inside as the individual is outside, as indicated by the hermeneutic spiral. The hermeneutic spiral represents a weaving of the inner as well as the outer. The completeness of the experience can be imaged by the spiral's web. The moment in which the inner and the outer unite a powerful centering force results; it is experiencing life "at its most intense point" (Underhill, 1955, p. 36).

For the centering process to occur within students, the teacher needs to be involved in a centering process, states Macdonald. Macdonald calls this involvement a "mutual centering process" (1974, p. 112). That is, teachers must become personally involved with their learning and the learning of students. Through this involvement, teachers can transcend a former state of being and become transformed themselves. Macdonald suggests that the teachers treat the subject matter for its own sake and engage the learner in activities which facilitate the process of centering such as pattern making, playing, meditative thinking, imaging, understanding the aesthetic principle, and understanding the body and its biology. The teacher needs to be aesthetic, intuitive, and spontaneous in this facilitation (Macdonald, 1974, pp. 109-112).

Physical Education

The transcendental developmental process that Macdonald (1974) describes in his ideology also appears in descriptions of the human movement experience. Just as Macdonald identifies "insightful" knowing as an indicator of transcendence, the literature which describes the human movement experience identifies "peak experience" and "flow" as indicators of transcendence. The literature which presently reports transcendence in the human movement experience is in the philosophy of sport literature rather than the physical education literature. It is likely, however, that these movement experiences which reflect transcendence can occur in physical education classes as well as sport settings (Ravizza, 1977). These experiences can therefore be applicable to physical education.

The human movement experiences, as they are reported in the philosophy of sport literature, appear to emulate the Transcendental Developmental Ideology of education (Macdonald 1974). Descriptions of the personal knowledge that is grounded from the human movement experiences seem to reflect a dual dialectic process. The "flow" or "peak experience" that is described appears to involve a sudden, leaping, cataclysmic, and nonlinear process as in transcendence and transformation. The integration or oneness that is felt during transcendence images centering. One final indication that the human movement experience could emulate this

ideology is that the developmental process is a-causal and spontaneous. Though unpredictable, there are recommendations physical educators can utilize to encourage this process.

Selected works which examine the human movement phenomena from a transcendental standpoint are utilized. The works of Kleinman (1979, 1970), Canic (1986), Watson (1986), Allen & Fahey (1977), Allen & Thomas (1977), Thomas (1983), Ravizza (1977), Studer (1977), Fethers (1978), Gallway (1974), Herrigel (1971), and Stone (1981) offer examples of this transcendental process. The process is explained through a description of (a) the "dual" dialectic, (b) transcendence and transformation, and (c) the aim which is centering.

Dual Dialectic

The literature addresses two components of Macdonald's dual dialectic process: that development is personal and is grounded from one's own experience. Though the literature does not specifically identify the term "dual dialectic," the descriptions of movement as personal and experiential reflect the dual dialectic process. The term personal in the movement literature seems to indicate an awareness of both the inner and the outer which is consistent with Macdonald's model. The inner appears to be more than one's genetics and past experiences and is indicative of values, discoveries, and meaning-making. Individuals appear to perform in order

to gain this awareness rather than replicate the outer, or an externally based standard. The term experiential in the movement literature seems to emphasize movement in its context and not as conceptions or ideas of the experience.

The personal aspect of movement is addressed in much of the literature (Kollen, 1983, 1981; Ravizza, 1977; Studer, 1977). The participant is regarded as attaining personal truths and insights (Kollen, 1981; Ravizza, 1977) from the movement experience. Studer (1977), for example, states "Moving provides me with a somewhat passionate awareness of my personal contingency" (p. 160). Ravizza (1977) elaborates on the personal insight gained from the peak experience. He states:

The peak experience is one occasion during which the athlete experiences himself to the fullest and gains their personal knowledge that comes with this. Such an experience allows the athlete to understand his capabilities as never before. Not only can an individual benefit from this view of himself as a moving being, but also may be able to gain personal insight of his potential" (p. 71).

The personal awareness is referenced within the context of the movement experience. As Studer (1977) states, "My temporal perception seems to rise from my experience" (p. 158). The experiential component appears to be critical as the literature synergistically addresses the experiential with the personal. Sheets (1966), Gates (1968) and Kleinman (1979, 1970) all address the need for both the experiential

and the personal. Sheets (1966) indicates that it is the "immediate experience" which is the foundation of our knowledge, not prior knowledge or reflection (p. 4). Gates (1968) integrates the personal, the knowledge, and the movement experience in her work. She states:

The personal element is a predominant factor that cannot be separated from our knowledge. What we know best, in a most real sense, about movement is inseparable from what we have seen, heard, and felt in our movement experiences (p. 160).

In order to clarify what is meant by the separation of movement from knowledge and the integration of movement with knowledge, Gates gives an example of "objective teaching" and integrative teaching, respectively. In objective teaching, she states that a common suggestion to a student in facilitating good posture would be to "hold his head up" and "pull his abdomen in" (p. 161). In this instance, good posture results from the individual receiving external information about good posture (Gates, 1968). An example of an integrative approach to teaching would be for the teacher to assist the learner in blending information from both the outer and the inner. The learner would attempt to relate verbal and visual concepts (outer) about the movement as well as the feel (inner) of the body while moving. The movement is a result of taking external information and looking toward the self in order to gain a personal knowledge of the feel of the particular movement. Through the objectified manner of

teaching, the student becomes aware of his body. Through the integrative approach, the student becomes aware of himself. Kleinman (1979) shares Gates' (1968) thesis of integrating movement with knowledge to form a personal awareness. He states, "Thus movement becomes significant not by knowledge about the body but through an awareness of the self" (pp. 178-9). Kleinman (1970) elaborates on this point with his description of "lived movement." In order for the movement to be regarded as both personal and experiential, it must be "lived." Kleinman (1970) states:

There is an essential distinction between lived movement and the execution of motion. For the former, the living organism is regarded as an active, meaning-giving, purposeful being, while for the latter, the individual remains an objectified responder waiting to be manipulated (p. 65).

The descriptions of the personal and experiential aspects of the movement experience appear to be reflective of a dual dialectic process. The reports indicate that the performer gains a greater awareness of the self as a result of the experience. These changes that occur could be identified as transcendence and transformation.

Development as Transcendence and Transformation

The human movement literature which reflects transcendence and transformation is described as peak experience (Maslow, 1962; Ravizza, 1977) and flow (Csikszentmihalyi, 1975). The peak experience or flow cannot be controlled or determined (Ravizza, 1977), and there is no

guarantee that the experience will occur (Thomas, 1983). The inability to control or predict the experience implies a-causality. When the peak experience or flow is described, the text reveals characteristics of nonlinearity and creativity, similarly to the way they appear in the Transcendental Development Ideology (1974).

The characteristic of nonlinearity is implied in the way that no particular order or sequence is described. The descriptions of the experiences reveal that they occur suddenly and all at once; everything merges together in one moment of perfection and excellence. A description of the experience is:

A subjective event that is unique, nonvoluntary, and transient. At this heightened moment of awareness, the athlete experiences a oneness or a union with the activity. With this union is a temporary transcendence of the normal self into an integrated relationship with the experience. The athlete intuits that everything is perfect; the effortless feeling of being in total control of the situation permeates the experience. The usual fears and anxieties that may accompany the activity are forgotten and all that matters is the moment and just "doing it" (Ravizza, 1977, p. 69).

The characteristic of creativity is implied in the description of newly integrated states; the experience consists of but is also unlike previous experiences. Individuals who have peak experiences report some of their greatest "moments of life"; they report instances of "fantastic joy, bliss, ecstasy, sheer delight" (Ravizza,

1977, p. 62). The participants are touched in a way that they have never been before and have been transformed by the experience. There are also reports of rebirth or renewal. The term peak experience originated with Maslow (1962) and is associated with all sport experiences that involve "altered states" or "transcending" experiences (Thomas, 1983). Maslow (1971, 1962) states that the peak experience can occur in "athletic experiences" and where there is a "love for the body, an awareness of the body." Thomas adds:

Although occurring in a spatial-temporal setting, these peak experiences are characterized by a disorientation in space and time during which the sport participant becomes oblivious to surroundings and the passage of time. There is an intensity, ... wholeness and completeness... There is a sense of oneness, a freedom from past and future... a feeling of being at the peak of his powers (1983, p. 119).

In describing "flow," Csikszentmihalyi utilizes similar characteristics. He states:

...the holistic sensation that people feel when they act with total involvement - as "flow"...it is a unified flowing from one moment to the next... there is little distinction between self and environment, between stimulus and response, or between past, present, and future (1975, p. 36).

The integration or unity that occurs during transcendence and transformation is described as centering. There are recommendations one can utilize to encourage this process.

Centering

The unity or integration that occurs as a result of

transcendence and transformation is reported in the literature as the individual's being one with the movement experience indicates a total involvement of mind, body, and emotions (Allen & Thomas, 1977, p. 142), a total engrossment (Ravizza, 1977, p. 67), and a fusing with subject and object (Thomas, 1983, p. 101). In general, the testimonials reveal that persons feel:

...at one with everything. There is no distinction between myself, the bicycle, track, speed, or anything. It is effortless. I am everything at this time and everything is me (Ravizza, 1978, p. 98).

Stone (1981) states that the "striving to achieve inner unity, wholeness, and peace" replaces the Western goals of superiority, status, fame, material acquisitions, and ambition.

There are specific recommendations one can use to encourage this process. Though there is no guarantee that the process will occur, the teacher or participant can "set the stage" (Ravizza, 1977, p. 65) for the experience. Ravizza (1977) supports this involvement because centering is "too important to leave to chance" (p. 70). All participants can experience centering; the experience is not reserved for skilled athletes under special conditions. Maslow (1971) indicates that this experience is for the "ordinary" and is natural rather than supernatural.

In order to become centered, the individual needs to

"pass over" considerations of the crowds, the coaches, the criticism, and the environment (Thomas, 1983, p. 120), technique, (Canic, 1986; Ravizza, 1977; Thomas, 1983; Watson, 1986), and outcome (Gallwey, 1974; Herrigel, 1971; Watson, 1986). There is a need for "letting things happen" (Thomas, 1983; Stone, 1981), spontaneity (Fetters, 1978), and for suspending judgments (Stone, 1981). There is also a suggestion to encourage the freedom to make errors (Canic, 1986). Canic (1986) warns that centering is:

...not a product of conscious desires. To place the mind anywhere in particular is to remove it from the natural flow of the universal stream...to consciously place the mind anywhere is to create a conceptual distinction which perpetuates the notion of a distinct self (p. 80).

Attention to external factors could result in the participant's losing focus and becoming separated from the experience itself. Attention to technique could also inhibit the individual from becoming integrated with the experience. Gallwey (1974) cautions the participant about thinking too much about the shots and about trying too hard to control the movements. He instead recommends letting go and letting it happen. Gallwey (1974) favors "letting go of our attachments to the idea of controlling our own development" (p. 139). Ravizza (1977) also warns about exhibiting too much effort. He states:

If the athlete had to be continuously exerting himself, he would not be able to fuse totally with the experience, because

there would always be that segment of his self that would be separated from the whole by continuously providing the motivation (p. 68).

Because of the danger of concentrating too much on technique, Ravizza (1977) recommends that the participant have already achieved the basic skill of an activity. With the basic skills intact, the participant is less likely to attend to the mechanics of the activity and can involve the self with the experience. Watson (1986), Herrigal (1971), and Gallwey (1974) mention that too much concern for the outcome can also inhibit centering. For example, Gallwey (1974) states that in the inner game of tennis, the participant "stops caring about the outcome and plays all out" (p. 138). Herrigal (1971) talks about an archer who "detaches self from all care and concern, even hitting the target" (p. 133). Both Herrigal (1971) and Gallwey (1974), however, favor concentration so that the participant achieves an "everyday mind" (Herrigal) or a mind that is "calm" (Gallwey). They both employ breathing to achieve this state.

Summary

Human movement experiences, as they are reported in the philosophy of sport literature, appear to emulate Macdonald's (1974) Transcendental Development Ideology. The peak experience (Maslow, 1962; Ravizza, 1977) and flow (Csikszentmihalyi, 1975) are indicators of transcendence within the literature. Figure 7 illustrates development from

an alternative perspective in education and also shows how it could be viewed in physical education. The view of development from a conventional perspective in both education and physical education is provided for contrast in the same figure.

The human movement experiences which appear to emulate the Transcendental Developmental Ideology involve a dual dialectic, transcendence and transformation, and centering. The dual dialectic is reflected in descriptions of the personal knowledge that is grounded from the human movement experience. Transcendence and transformation are indicated in descriptions of the peak experience and flow. Centering is described by the integration or oneness that is felt during the experience. The human movement experiences that occur in physical education classes could also involve a transcendental process (Ravizza, 1977). Macdonald's (1974) Transcendental Developmental Ideology could serve as a framework for the design of these movement experiences in physical education classes.

Figure 7. The curricular application of time and change from an alternative perspective

<u>CONVENTIONAL</u>		<u>ALTERNATIVE</u>
Utilization of Time and Change Concepts in Education through the Study of the Phenomenon of Development		
<u>Education</u>		<u>Education</u>
"Progressive Developmental Ideology"		"Transcendental Developmental Ideology"
Development is a gradual, step-by- step, linear, and hierarchical process	DEFINITION	Development is a sudden, leaping, cataclysmic process
PROCESS		
Dialectic	(1) INTERACTION	Dual Dialectic
Stages (resolvable conflict)	(2) DEVELOPMENT	Transcendence and Transformation (Unresolvable conflict)
Optimal Development	(3) AIM	Centering
<u>Physical Education</u> Consistent with the "Progressive Developmental Ideology"		<u>Physical Education</u> Could be consistent with the "Transcendental Developmental Ideology"
Development is a gradual, step-by- step, linear, and hierarchical process	DEFINITION	Development is a sudden, leaping, cataclysmic process
PROCESS		
Dialectic	(1) INTERACTION	Dual Dialectic
Stages (resolvable conflict)	(2) DEVELOPMENT	Transcendence and Transformation (unresolvable conflict)
Optimal Development	(3) AIM	Centering

CHAPTER V
DEVELOPMENT AS TRANSCENDENCE: A PHENOMENOLOGICAL
PERSPECTIVE OF HOW INDIVIDUALS AND THEIR
MOVEMENT CHANGE OVER TIME

The purpose of the final chapter is to propose a view of how individuals and their movement change over time through a perspective that views change over time or development as transcendence. This perspective views humans and their movement as capable of extending beyond their boundaries and therefore operating to their fullest potential. The perspective is based on the work of Fraser (1975, 1978, 1981), Macdonald (1974), and selected professionals who examine the human movement experience from a transcendental standpoint (Allen & Fahey, 1977; Allen & Thomas, 1977; Canic, 1986; Fetzters, 1983; Gallwey, 1974; Herrigel, 1971; Kleinman, 1986, 1979, 1970; Ravizza, 1977; Stone, 1981; Studer, 1977; Thomas, 1983; Watson, 1986). The proposal for such a perspective is prescribed following a discussion of the limitations of the predominant or conventional view. It is because of these limitations that there is a need for a perspective that enlarges upon or is more encompassing than the predominant view.

Limitations of the Conventional Perspective

Essential Nature of Time and Change

The conventional perspective offers a limited view of time and change and is therefore not reflective of their essential nature. Historically, the essential nature of time and change includes several characteristics (Benjamin, 1981) while the conventional perspective includes only some of these characteristics (Benjamin, 1981; Fraser, 1975, 1981). The essential nature of time and change, for example, shows the existence of time as both absolute and relational, its order as both succession and coexistence, and change as both constant and creative (Benjamin, 1981; Fraser, 1975, 1981). The conventional perspective, however, utilizes time as only absolute, its order as only succession, and change as only constancy. The absolute, successive and constant characteristics of the conventional perspective are depicted in Figure 8. The view of reality through a sampling of the available characteristics, then, offers a restricted means in which humans can construct their reality.

Some familiar and modern ways in which time and change are utilized in this manner are also indicated in Figure 8. The rational thinking process of the scientific method and the curricular applications in physical education are two such examples. The scientific method utilizes the absolute/formal characteristic of time by viewing human behavior in concrete and physical terms. Time is viewed in a

successive manner in the way that experiences are reduced and separated into variables of behavior. The scientific method utilizes change as constancy through the use of the physical laws of nature. The principle of the law of conservation, for example, implies that individuals develop into higher and more sophisticated levels or stages, but they do not change into something new. Individuals are therefore bound or determined according to this principle. The curricular application of time and change in physical education is also illustrated in Figure 8. The curricular application of

Figure 8. The conventional perspective of development in physical education

ESSENTIAL NATURE OF TIME & CHANGE	TWENTIETH CENTURY METHODS OF INVESTIGATION	CURRICULAR APPLICATION IN PHYSICAL EDUCATION
absolute/formal	Rational Thinking process (scientific method and formal logic)	externally defined/ objective concrete, physical
successive	reductionism	analytic
constant	determinism	bound

physical education evolves out of the scientific method and essential nature of time and change which ground it. Human movement is then viewed as concrete and physical behavior.

The movement behavior is often viewed objectively and is also measured against an external standard such as norms or criteria. The experience itself is analyzed and divided into parts such as the preparation, point of contact, and follow-through phases of a motor skill. The appearance of these motor skills is believed to occur in a logical and sequential format. The sequential development of motor skills implies that the individual is bound by the development of motor skills since certain skills must be learned prior to the acquisition of later, more complex skills.

Not only does the conventional perspective portray the usage of time and change in a limited fashion; there are some concerns with the implications of utilizing time and change in this manner. Fraser points out that humans do not operate to their full capacity within this perspective, and the level in which they are viewed is deterministic.

In his theory of Time as Conflict, Fraser (1981, 1978, 1975) shows that humans operate on all temporal levels and have the ability to function with all the characteristics of time and change. When only a sampling of the characteristics is utilized, humans, then, are not operating to their fullest capacity. His theory further implies that the particular sampling of characteristics such as the physical that are utilized through the conventional perspective operate on the lower temporal levels. Nature and animals operate on these lower levels, and these levels are considered by Fraser to be

deterministic. The lower levels are considered deterministic because nature and animals cannot select the order and content of their time (Fraser, 1981). Animals, for example, cannot separate their needs from their goals; their behavior is dictated by their needs and goals. To view humans similarly to nature and animals is unrealistic and does not describe the human temporal situation (Kummel, 1981). Humans can operate on the higher temporal levels, and by utilizing their free will and intentionality, they have the capability of operating in a liberal manner and to their fullest potential.

Methods of Investigation

Several philosophers (Fraser, 1975, 1978, 1981; Sparks, 1986; Wilbur, 1983) indicate a concern for the limited capabilities of the conventional methodologies to handle time and change in a more encompassing way as it is represented historically and is reflective of the ability of humans. When attempts are made through the rational thinking process to view time and change in a more encompassing way, a paradox results (Wilbur, 1983). A paradox indicates that contradictory aspects of a particular phenomenon cannot both be true. The aspects are therefore viewed separately and on an either/or basis. For example, time can be viewed as "either" absolute "or" as relational, but time cannot be viewed as both absolute and relational. In other words, individuals can abide by culture's time or by internal time,

but it would not make sense rationally for individuals to abide by society's time as they also abide by their own time. The rational thinking process can then utilize only one aspect of a particular phenomenon such as time.

Since the conventional methodologies cannot handle time and change in a more encompassing way, another concern of philosophers is that the methodologies sometime attempt to describe all of reality through only absolute, successive, and constant means. When these instances occur, the conventional methodologies enter a realm beyond their capabilities, and what is subsequently described is not fully applicable (Wilbur, 1983). The scientific method, for example, views reality primarily in physical terms (absolute time) (Sparks, 1986). When the scientific method utilizes time in a physical manner, it is therefore not reflective of the abstract (relational time) aspects of time. The descriptions of human behavior in observable and measurable terms is not an accurate means of describing the affective aspects of human behavior.

Another example of the conventional methodologies being utilized beyond their capabilities occurs when scientific analysis divides the whole of experience (time as coexistence) into corresponding parts (time as succession) (Sparks, 1986; Underhill, 1955). This analysis represents the aspects of experience which occur together as happening apart from one another. The simultaneous occurrence is

reflective of a nonlinear nature but is instead separated and ordered to reflect a linear format. The experiences that are described through the conventional methodologies as being only physical and successive are therefore not actual representations of the experience; they are ideas or concepts of the experience.

Professionals who examine the human movement experience also express concerns with the way the rational thinking process portrays human movement. Writers such as Kleinman (1970), Thomas (1983), Allen & Thomas (1977), Moustakas (1966), Stone (1981), Broekhoff (1973), and Harper & Kretchmar (1962), agree that the limited way in which the rational thinking process views reality through a physical, objective, analytic, and linear means, also yields a limited perspective of the human movement experience. They essentially state that the rational thinking process adequately portrays the "what" of a movement experience and also the "how" of the movement experience, but not the "why" (Thomas, 1983). The descriptions of movement as physical/concrete, objective, and as analyzed in parts, are beneficial for the improvement of technique and of strategies. What is missing in these descriptions, however, is the affective, sensuous, and intuitive descriptions of the movement experience (Thomas, 1983). Kleinman (1970), for example, states that the rational thinking process "reduces subject to object" and "experience to a series of categories

viewed independently of each other" (p. 60). Kleinman (1970) adds that this analysis is not an account of the actual or "lived" experience, and yet it is considered quite real. The actual experience which cannot be described through analytic means, however, is considered "unreal." He states:

The lived world then becomes the unreal, mythical and imaginary one, and the un-lived world of scientific hypothesis and abstraction, is charted out before us as the real state of affairs. Thus, we become ensnared in the enormously ironic and absurd anomaly that the lived world, the experiential world, is in truth a myth and an hallucination, while there exists an un-lived and un-experienced, hidden world behind and beyond the senses, which constitute the reality of things (1970, p. 60).

The rational thinking process, then, does not gain a complete view of the movement experience (Allen & Thomas, 1977; Broekhoff, 1973; Kretchmar & Harper, 1962; Moustakas, 1966). The dynamics and complexities of the movement experience cannot be "fully known by analysis but by integration" (Allen & Thomas, 1977. p. 186). The wholeness or unity that exists within the movement experience does not lend itself to scientific analysis (Broekhoff, 1973, p. 63; Moustakas, 1966) and, in fact, "defies all attempts" toward an understanding through rational means (Kretchmar & Harper, 1962, p. 58).

Curricular Application in Physical Education

The conventional methods of investigation and their limitations serve as a grounding for the curricular

application of the time and change characteristics within the human movement experience. The application of these characteristics is described through the Progressive Developmental Ideology (Kohlberg & Mayer, 1972) and through works in motor development (Branta, Hanbenstricker & Seefeldt, 1984; Corbin, 1983; Espenshade & Eckert, 1980; Haywood, 1986; Keogh, 1985, 1977; Roberton, 1984, 1978a, 1978b; Roberton and Halverson, 1984; Seefeldt, 1984; Thomas, 1984; and Weiss, 1985). The primary concern with this application is that its dialectic or interactive process does not represent the capacity for meaning-making and also does not account for newness (Macdonald, 1974). Metheny (1968), Thomas (1983) and Feters (1978) have also expressed a concern for the lack of meaning-making within the movement experience when the movement is viewed in a functional manner.

Through the dialectic process an individual's inner consciousness or "tacit dimension" (Polanyi, 1967) is not accounted for, and because of the absence of this capability, the individual's responses are utilitarian or functional at best. Nothing "new" could result from this dialectic because the individual responds to the environment based on abilities that the individual inherited and gained from previous experiences (Macdonald, 1974). The lack of newness implies that as the individual attains higher and more complex skills through sequences or stages of development, the individual

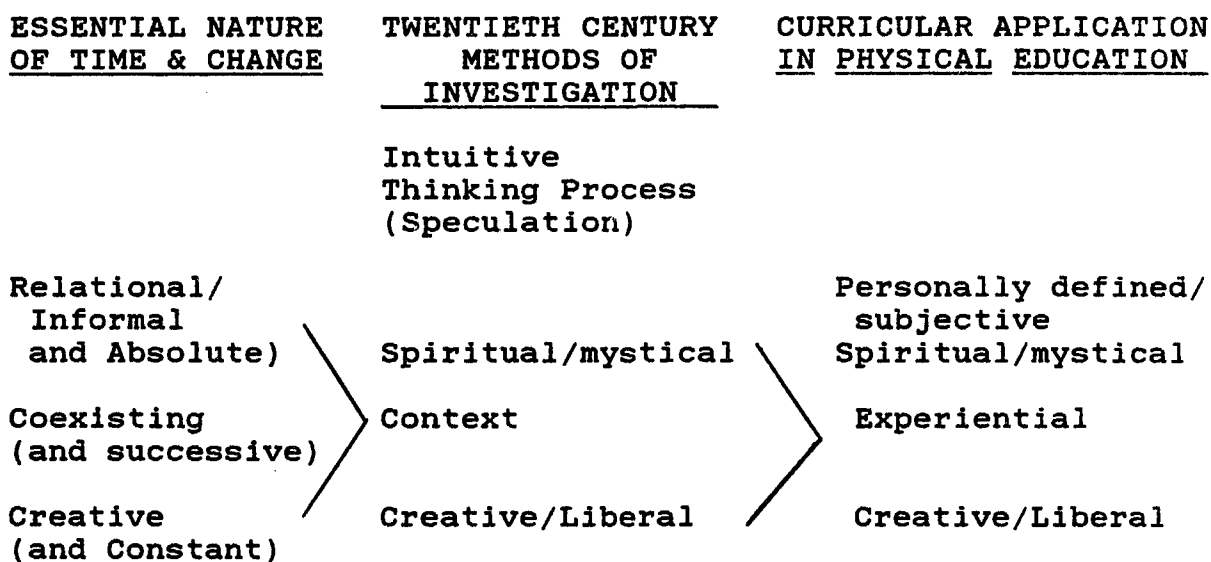
can be considered to be developing more of the same types of skills. The implications of viewing human movement as functional and as more of the same types of experiences are significant since physical educators would support meaningful and new movement experiences. Professionals who study the human movement experience state that movement that does not involving the subjective nature of the individual is without meaning (Fetters, 1962; Metheny, 1968; Thomas, 1983). The subjective nature that these physical educators describe is similar to the valuing and discoveries that Macdonald (1974) speaks of in the tacit dimension of the dual dialectic. These writers essentially state that movement is and of itself a functional activity. It is the values that the individual brings to the experience that make it meaningful. If a performer strikes a softball and runs around the maximum number of bases, this activity by itself has no meaning. If the performers become more involved by signifying the worth to themselves of a "double" or a triple" or the feeling of completeness they may gain from gliding across first base, the activity has meaning. In the former example, the performer is responding in solely a physical manner and in the latter example couples the physical with the spiritual. Without the values and meanings generated by the subjective nature of the individual during the experience, the activity can be considered "absurd" (Metheny, 1968) and "amoral" (Thomas, 1983, p. 92).

The predominant view of how individuals change over time accounts for only a sampling of the time and change characteristics. The way that these characteristics are utilized through a rational thinking process and also within a Progressive Developmental Curricular Ideology reveals a limited perspective of the human movement experience. Movement, through this lens, appears externally defined/objective, concrete/physical, analytical, bound, and absent of personal meaning. Movement that is externally defined is not the movement that takes place during the physical education lesson; it is a concept or an image of the experience and not the essence of the experience. By looking away from the actual experience and formulating standards from "without," the essence of meaningful movement is not examined. The standard that exists "without" the individual needs to be transferred to the learner. By allowing the individual to become involved in the movement, the essence of a personalized and meaningful movement experience can be acknowledged and promoted.

There is a need, then, to view the human movement experience in a more encompassing manner, one that includes the personal and meaningful aspects of the movement experience. When movement is viewed in a more encompassing fashion, transcendence can occur, and individuals and their movement can develop to their fullest potential. An application of this view in physical education is reflective

of the essential nature of time and change (Benjamin, 1981) and also reflective of the abilities of humans (Fraser, 1975, 1978, 1981). As Figure 9 indicates, the essential nature of time and change views time as both reflective and absolute, its order as both coexisting and successive, and change as both creative and constant. The intuitive thinking process can handle time and change in an all-encompassing manner. Methods of investigation such as speculation view individuals as more than physical entities and as Figure 9 illustrates, as spiritual or mystical entities. The individuals are also

Figure 9. An alternative perspective of development in physical education



viewed in the context of their experiences. Changes are viewed in a creative/liberal manner similarly to the

principles espoused by evolutionary philosophers in regard to indications of transcendence. A curricular application of time and change in physical education views the human movement experience as personally defined/subjective, spiritual/mystical, experiential, and creative/liberal. This application enlarges rather than diminishes the conventional application of physical education as being externally defined/objective, concrete/physical, analytic, and bound which is illustrated in Figure 8. Both views are significant for a complete understanding of the human movement phenomena. As Thomas (1983) indicates, these views lead individuals to ask certain questions, but these questions are not necessarily dichotomous. She asks:

...is man predictable or essentially unpredictable? Is he free or determined? Is he a being given over to logic or irrationality? Does man live in an objective world to serve as just another object transmitting information or does he live in a subjective world as the generator of something new surrounded by a private world of feelings, emotions, and questions? Answers to these kinds of questions then dictate certain beliefs about behavior and about what should be taught and learned... Either individuals will trust their bodies or they will not. They will put their trust either in analysis or awareness, in logic or experience. Or, they will come to understand that these dichotomies may, in reality, be both complimentary and valid (p. 38).

A Proposal For an Alternative Perspective

A Proposal for a view of how individuals and their movement change over time through an alternative perspective is a request for a perspective which views development as Transcendence. This perspective views movement in an all-encompassing manner so that transcendence can occur and individuals can reach their fullest potential. The proposal is based on works that reveal the essential nature of human movement. The proposal then represents this essential nature by a continuum of human movement. A framework for the design of learning experiences in physical education is given with the assistance of a definition and process of an existing ideology.

The Essential Nature of Human Movement.

At its most essential level, movement or motion is complex and dynamic. The work of physicists, scientists, and philosophers helps portray this nature. Proponents of the new physics such as Heisenberg (1958) state that on the atomic level, the elements of time and space are subjective and are seemingly chaotic. One element is too active or too alive to be positioned in relationship to another element as it is in Einstein's relativity theory. One element, however, is not independent of the other as it is in Newtonian physics. The elements within the new physics are interrelated, but because of the activity and aliveness, the elements are difficult to capture. When one of these active

elements is grasped, for example, the other element is lost. When space is grasped, velocity is lost, and when velocity is grasped, space is lost (Heisenberg, Cited in Koestler, 1972). When the learner is moving, then, the interrelationships among the elements of time, space, and velocity of the movement are difficult to capture. The elements of the movement are difficult to capture even when the movement is portrayed in a photograph or in slow motion. One reason for this difficulty is explained by the proponents of the new physics. The proponents would say that although an object is still as in a photograph, its elements are continuously moving (Heisenberg, 1958; Heisenberg Cited in Koestler, 1972; Zukav, 1979). Thus, attempts to capture the movement through qualitative or quantitative descriptions are examples of what apparently occurred, but not how the movement actually occurred. The elements of the movement experience are too active and too alive, complex and dynamic to arrest.

The complexity and dynamics of movement or motion are also illuminated in science with the idea of motion having disorder but also having lawfulness. The complexities and dynamics of motion are so great that one cannot discern one element from another so that in actuality motion defies order (Schlesinger, 1986). This notion implies that when an individual moves, the movement cannot be depicted with a linear ordering of what element preceded another. Motion, however, does proceed with a lawfulness since without this

lawfulness, the movement would spurt out of control (Schlesinger, 1986). Human movement, then, is free due to its dynamics and complexities but also bound or grounded because of its lawfulness.

The complexities and dynamics of movement have both intrigued and confused the human thinking process for centuries. The human's ability to rationally comprehend movement rationally appears to have been traced as far back as 500 B.C. to Zeno of Elea. In the "Paradox of the Flying Arrow," for example, there is a question as to whether or not the arrow did indeed fly (Fraser, 1975, p. 4). A rational thinking process yields that the arrow does not fly since the arrow cannot occupy a space longer than itself. An intuitive thinking process yields that the arrow does fly since, experientially, humans "know" that the arrow does indeed fly (Fraser, 1975). The rational thinking process apparently offers an analysis of movement as if it were motionless while an intuitive thinking process offers an awareness of movement while it is in motion, but cannot explain it adequately. A similar paradox is depicted in the twentieth century by Nietzsche (Translated by Kaufmann, 1967). Nietzsche introduces the concepts of Apollonianism and Dionysianism in his works. These concepts are representative of the rational and intuitive thinking processes that are used today.

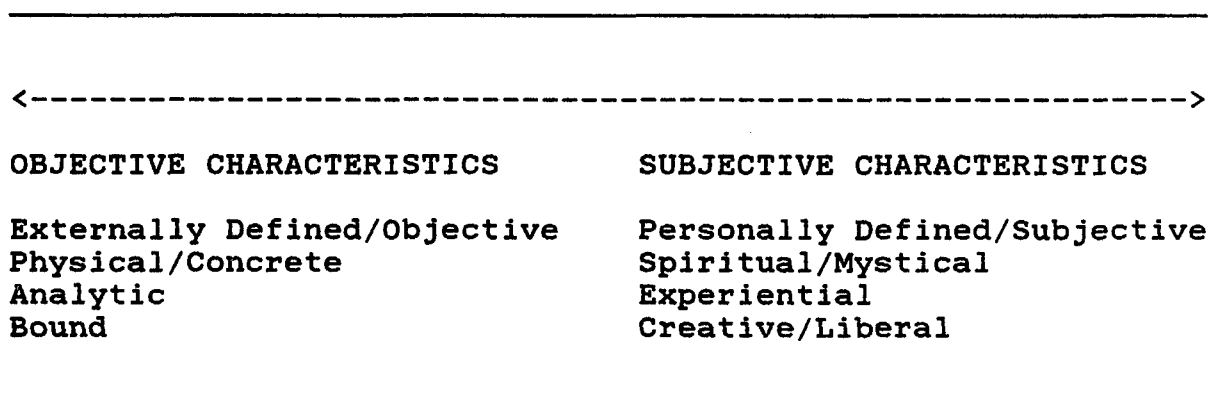
Along with the complexities and dynamics of movement at their most essential level, and the challenge to humans to

comprehend this nature, there is also the empowered ability of humans to utilize movement and bring life to it. Humans operate on the highest level and can utilize free will and intentionally (Schultz, 1967; Fraser, 1975, 1978, 1981) to act in the most liberal manner. Humans can therefore transcend and enter a more complete authentic existence (Fraser, 1975, 1981; Macdonald, 1974). When the power of the human potential is integrated with the dynamics and complexities of movement itself, what emerges is a volatile and infinite array of human movement experiences.

A Continuum of Human Movement

The essential nature of human movement, which is identified as complex, dynamic, and liberal, can be represented by a continuum. This continuum is illustrated in Figure 10. At one end of the continuum are characteristics of an objective nature. These characteristics are primarily

Figure 10. Continuum of human movement characteristics



utilized by the conventional perspective. At the other end

of the continuum are characteristics of a subjective nature. These characteristics are primarily utilized by the alternative perspective in order to encourage transcendence to occur. These characteristics appear as polarities on the continuum with tension (Fraser, 1975, 1978, 1981) formed between them. They are in conflict with one another; their struggle cannot be resolved. As a result, there is constant movement and shifting between these polarities. Because of this relationship, the objective and subjective characteristics are not considered separate and distinct from one another. At any time, a learner can experience differing degrees of each characteristic. For example, the learner who is attempting to complete a motor task does not necessarily operate on either the physical or the spiritual realm. The learner "moves" between the two realms and experiences different degrees of these characteristics. In order to gain a centering or a completeness, which occurs during transcendence, the learner utilizes the physical characteristics as a vehicle to gain the spiritual. When the experience unites into a meaningful whole, the physical and spiritual contribute toward another dimension.

Some phases of the movement experience that are performed in physical education classes are more reflective of the characteristics on one end of the continuum than on the other. For example, phases that involve planning and preparation (Thomas, 1983) are amenable to the objective

can happen and is believed to be where the meaning of the movement experience takes place (Gerber, 1979; Plesner, 1970; Thomas, 1983). During the commitment phase, the learner is totally involved in the movement experience, so much so that the individual and the experience become one. The individual is said to be centered with the experience (Canic, 1986; Gallwey, 1974; Herrigel, 1971; Ravizza, 1977; Richards, 1963; Thomas, 1983). The way in which the learner experiences commitment is by having already planned, prepared, and entered the event. The learner moves from the realm of the movement being an everyday experience toward a realm where the movement is something special. The learner concentrates vividly on the experience but does not draw attention to particulars such as the environment or the technique. The learner is spontaneous during the movement and allows the experience to happen (Canic, 1986; Ravizza, 1977; Stone, 1981; Thomas, 1983). If transcendence does occur, the individual has experienced a transformation of self. The learner is no longer the same; the learner changes or develops as a result of the experience.

It is during the resolution phase that the learners realize that transcendence occurs and that they are more complete as individuals. Because the experience occurs suddenly, the learners can gain the insight only after the experience has occurred. The resolution phase is similar to an evaluation of the experience. The resolution phase,

however, does not utilize objective criteria in assessing whether the goal was achieved. Rather, both the objective and subjective characteristics of the movement experience are used to gain insight as to whether or not completeness occurred.

The objective and subjective characteristics of the movement experience which are represented on this continuum are necessary for an all-encompassing movement experience. The tension between the polarities of the objective and subjective characteristics is needed so that transcendence can occur. The Eastern philosophers, for example, recognize the unification of polarities through this continuum. They state that "within unity there is polarity, yet interlocking harmony: (Thomas, 1983, p. 83).

This all encompassing perspective of the human movement experience is not evident in the physical education literature. What is prevalent in the physical education literature is an emphasis on the objective characteristics of the human movement experience which are located on the left side of the continuums as shown in Figures 10 and 11. The objective characteristics represent a viewpoint of movement developing in sequences and are reflected in the motor development literature (Branta, Haubenstricker, & Seefeldt, 1984; Corbin, 1983; Espenshade & Eckert, 1980; Haywood, 1986; Keogh, 1985, 1977; Robertson, 1984, 1978a, 1978b; Robertson and Halverson 1984; Thomas, 1984; Weiss, 1985). These objective

characteristics are useful in the planning and preparation phases of the movement experience (Thomas, 1983) in physical education classes, but they do not offer a complete viewing of the experience. The addition of subjective characteristics and a viewpoint of movement developing as transcendence offers an enlarged perspective, a perspective which allows individuals to reach their fullest potential. Movement experiences which closely resemble this perspective are reported in the philosophy of sport literature (Allen & Fahey, 1977; Allen & Thomas, 1977; Canic, 1986; Fetters, 1978; Gallway, 1974; Herrigel, 1971; Kleinman, 1979, 1970; Ravizza, 1977; Stone, 1981; Studer, 1977; Thomas, 1983; Watson, 1986). It is likely that these experiences can occur in physical education classes. Ravizza (1977) states: "This experience may happen in any sport activity and at any level of competition, even in a physical education class" (p. 70). The need for encouraging these experiences in physical education classes is significant since studies report that these experiences are a means of gaining a more integrative and meaningful existence. The studies also report that these experiences usually occur outside the physical education setting. Keogh (1963) finds that students have a more positive attitude toward physical activity than they do toward physical education classes. Kollen's (1983, 1981) study shows that individuals do report their being one with the movement experience but identify that event as occurring

outside of their regular physical education classes. Kollen indicates that this type of movement experience is not emphasized in physical education classes. She states:

Being-into-movement is almost always outside the boundaries of physical education. Although students were able to respond to.. both experiential and intuitive understanding of movement, little of this is reported in their physical education experiences (p. 146).

Kollen's (1983, 1981) study has implications for the teaching of movement experiences in physical education classes as well as teacher education. She adds:

Physical education has a unique contribution to make to the advancement of humans as moving beings... In spite of this, most teacher candidates are not exposed to concepts of integration of human movement. They are not expected to examine the meaning of movement for the mover (1981, p. 11).

Ideological Framework for Physical Education

The encouragement of all-encompassing movement experience so that learners can transcend and attain their fullest potential in physical education classes, can occur with the utilization of a framework for the design of these learning experiences. This framework is based on the complex, dynamic, and liberal nature of human movement discussed earlier. It also incorporates the all-encompassing aspect of human movement experiences which range from the objective to the subjective characteristics (see Figure 11). This framework utilizes the definition and process of an existing ideology in education, Macdonald's (1974)

"Transcendental Development Ideology," and is reflective of movement experiences in the sport setting. The transcendental developmental process is defined in education and in the sport setting as being sudden, leaping, cataclysmic, and nonlinear (Macdonald, 1974). The process is described as occurring through a dual dialectic, the changes as transcendence and transformation, and the goal of the process as centering (Allen & Fahey, 1977; Allen & Thomas, 1977; Canic, 1986; Gallwey, 1974; Herrigel, 1971; Macdonald, 1974; Ravizza, 1977; Stone, 1981).

Some characteristics which are needed to be acknowledged and utilized in physical education so that transcendence can occur are the characteristics of personally defined/subjective, spiritual/mystical, experiential, and creative movement which are illustrated in Figure 10. The subjective characteristics of the human movement experience are elaborated on since these characteristics are the ones that are not prevalent in physical education programs.

Personally Defined/Subjective. The meaning individuals attain as a result of the movement experience is formulated or defined by themselves. This "definition" is subjective and unique. The subjective nature of the movement experience refers to the learner's utilizing both the self and the environment to formulate meaning (Macdonald, 1974; Polanyi, 1967). Within the movement experience, the learners attend to the environment such as the nature of a given task. The

learners also attend to the self in the nature of their values or personal history. When given the task, the learners may look internally toward the capabilities or skills they may possess in order to complete the task. The learner looks further inward toward the tacit dimension of the self (Polanyi, 1967) where values and a possible likeness for the task lie. By interacting with the self and also with the environment, the learner constructs another human movement phenomenon. This phenomenon is the "subject's" phenomenon. The objective and externally based standards such as the efficiency, effectiveness, score, and speed of the movement performance are not necessarily the sole criteria as to whether or not the learner was successful or that the experience was particularly meaningful. The success and meaning-making of the experience are constructed by the interaction between the individual and the tacit dimension of the self as well as the interaction between the self and the environment.

Because the human movement experience is the "subject's" phenomenon, the experience is unique. The experience is unlike anyone else's experience and is unlike any of the individual's previous experiences (Metheny, 1968, 1972). When the learner catches a pass for example, the catch is not the same as another learner's even though the mechanical analysis might be almost identical. The learner's catch is not the same as earlier catches even though the learner may

appear to have executed the catch in the same way.

As a result of experiencing movement in a subjective and unique manner, the learner also gains an enhanced understanding or realization of the self (Fraleigh, 1969; Gerber, 1979; Ravizza, 1977; Thomas, 1983). The learner is touched by the experience and grows personally as a result of this experience. During transcendence, the learner is transformed by the experience and is no longer the same individual; the learner has changed or developed.

Spiritual and Mystical. The movement experience that is personally defined by the environment and the learner's meaning-making capabilities goes beyond a concrete or physical nature toward a more abstract nature. The euphoria, rejuvenation, or enlightenment which is felt during transcendence reflects spiritual or mystical characteristics. Being a tangible entity, the body is often equated with being a physical entity. The body, however, is also capable of an awareness of the movement experience that involves values, feelings, knowings. The movement experience, then, is abstract in terms of an ability to see the phenomena, but quite real in terms of ability to experience the phenomena. The body as it moves is more than a physical concrete entity, and even when it enters a spiritual or mystical realm, it becomes a living, vibrant entity.

An elaboration on the spiritual and mystical characteristics of the movement experience is more commonly

featured in sport literature that reflects the Eastern philosophies (Gallway, 1974; Herrigel, 1971; Leonard, 1975; Stone, 1981). Writings such as Zen and the Art of Archery (1971) talk about the Zen approach toward spiritual enlightenment. In the Zen approach, one goal is to hit the target in archery. The ultimate goal in this approach is to gain the spiritual state of enlightenment via the movement experience. Enlightenment occurs through transcendence. The Eastern philosophers, then, emphasize experiential aspects such as the movement experience as a means of gaining the spiritual state (Suzuki, 1955). The union that occurs when the mind, body, and spirit integrate during transcendence is identified as a mystical union. Buber's I-Thou relationship is sometimes utilized as an example of a mystical union in sport (DeSensi, 1979; Gerber, 1979). Individuals report arriving at a higher order when the individual (I) and the experience (Thou) unite as if they were in communion with one another.

The difficulty in describing or observing the spiritual and mystical nature of the movement experience does not necessarily have to inhibit the emphasis of these characteristics in physical education. The learner can become an active participant by formulating values, feelings, and meanings with the experience. Through this approach, the learner can become involved in more than the physical nature

of the experience. The movement experience is not easily described through the prevalent quantifiable and measurable characteristics because the movement experience is not solely a concrete and observable phenomena.

Experiential. The personally defined and spiritual characteristics of the movement experience are experientially based. The experiential characteristic illuminates the learner's actual involvement in the movement experience. The learner is actively engaged in the movement or "doing" the movement rather than observing, planning, or reflecting upon the experience. The experiential characteristics, the, emphasize the context in which the experience takes place more than the thoughts or concepts that are formulated outside of the experience. While the learner is jumping for maximum height in order to intercept a pass or is taking weight on hands and forming an asymmetrical balance, for example, the learner is attempting to gain a felt understanding of the movement while the movement is occurring. The learner is "living" the movement (Harper & Kretchmar, 1962; Kleinman, 1970).

The context of the learner's movement experience is composed of phenomena that are interrelated. The phenomena of movement, thought, and feelings cannot be discerned from one another. Because they cannot be discerned, it is difficult to designate an order as to which occurred prior to the other. The phenomena coexist; there is a unity or a

gestalt to the experience (Hawkins, 1964). There is so much occurring at once that the learner does not have time to "think" about the experience while performing (Metheny, 1968; Thomas, 1983). The learner, in a sense, forgets about "the body and its body parts" (Beets, 1964, p. 76) and allows the experience to happen. The type of knowing that does occur while the learner is moving is an "intuitive" knowing (Ravizza, 1977). There are instances when the experiential characteristic of the movement experience moves out of or transcends the realm of being an "everyday" experience and becomes something very special. During these instances of transcendence, the intensity of the movement experience increases to a point where the phenomena suddenly unite into a meaningful whole.

The experiential involvement of the learner in the movement experience is significant because it is out of these moments that the personalized meanings are derived (Gerber, 1979; Thomas, 1983) and it is the basis of the worth of the experience. The "living" of the movement experience generates significance because the learners come to "know" the movement only by experiencing it. The learners do not know what it means to take weight on hands without ever having taken weight on their hands. And, too, the meanings that the learner has formulated from the movement cannot be felt by another individual; the other individual has not experienced the learner's movement. The movement becomes the

learner's "lived reality" (Harper & Kretchmar, 1962).

Creative. The unique structuring that the learner brings to the experience and takes away from the experience means that the learner is involved in a self-creating process (Fetters, 1978; Fraleigh, 1973; Meir, 1980; Slusher, 1967). The learner has the potential through intentionality and free will to act in a creative and liberal manner. By utilizing this potential and gaining a liberal posture, the learner can experience movement in an infinite variety of ways. The learner can utilize this potential when presented with choices within the rules and when allowed to act freely on those choices. For example, through intentionality the learners can select a goal and can attempt to utilize the most effective techniques when they begin participating. Through free will the learner employs some risk in order to face the challenges and also acts spontaneously in order to allow the experience to happen. The tension between the intentionality and the free will creates the new experience (Fraser, 1975; 1981).

For the learner the new experience seems "just to happen" or to happen by accident. The learner can control to some extent what they want to bring to the experience, but the learner cannot control the outcome. Because of this unpredictability, the new experience takes on the element of surprise in having just "happened." The learners may experience a novel movement form or a variation of another

movement form. The learner can also experience a different self from this phenomenon. When the learners are involved in the creative process, the learner may be "ripe" (Canic, 1986) for transcendence to occur.

During transcendence, the learners arrive in a newly integrated state. This state is considered "new" because there is seemingly a leap that occurs. The learners go beyond their previous capabilities by pushing off its grounding and lawfulness and shifting to a new realm of capabilities. The learners are not bettering the self by simply adding to their capabilities. The learners, for example, are not necessarily "new" if they utilize variations of a technique or if the learners gain a polished and sophisticated level of a technique. The newness that the process of transcendence fosters is similar to a revolutionary use of the previous structure.

Facilitating Transcendence in Physical Education. The means for promoting the subjective and objective characteristics of the movement experience so that transcendence can occur is based on the principle of a-causality (Macdonald, 1974). The principle refers to the notion that the movement experience cannot be controlled or predicted. This implies that neither a learner nor a teacher can introduce a particular set of stimuli in order to produce a certain set of results. Descriptions of some of the subjective characteristics of the movement experience state

that the movement just "happens" and that there is an element of "surprise." There are, however, some suggestions a individual can utilize so that they can "set the stage" (Ravizza, 1977, p. 63) for transcendence to occur.

In order to "set the stage" for transcendence to occur during a movement experience, the learner first attains an intensity and then releases that intensity. In other words, the learner formulates a tension and then releases that tension. Some ways in which the learner can attain the intensity is by focusing and concentrating on the whole of the movement experience while it is being performed. The learner would not especially attend to external factors (Thomas, 1983) such as observers, equipment, and playing surface. The learner also would not become unduly concerned about the efficiency and effectiveness of technique or the goals of the performance (Gallwey, 1974; Herrigel, 1971; Watson, 1986). Attention to any one of these factors would result in the learner's attaining a narrow rather than a central focus. The learner would also try to feel the movement in order to gain a total (inner and outer) awareness of the experience. One way by which the learner can release this intensity during the movement experience is by relaxing and letting the intensity go. (Gallwey, 1974; Stone, 1981; Thomas, 1983). The learner would suspend judgement (Stone, 1981) about expected outcomes and instead become more spontaneous with the experience (Fetters, 1978). The

spontaneity would allow the learner freedom to make errors (Canic, 1986). An example of how the learner can gain a central focus within the movement experience, relax and then release the tension follows.

When a learner attempts to ski down a hill, the learner may select and attend to a goal and the techniques and tactics needed to attain that goal, but may not become unduly concerned about these factors. The learner, for example, may select a goal of completing a run without falling. The learner may also decide to practice the weighting and unweighting of the skis in order to effectively and safely execute the turns. While attempting the run and executing the turns, however, the learner does not need to emphasize these factors. The learner instead needs to attend by feeling and sensing the phenomena of the skis, terrain of the hill, snow, people, and self as one. The focus and concentration the learner exhibits are a means of integrating the phenomena. The learner then relaxes and allows the phenomena to happen. By relaxing, the learner exhibits a resiliency so that this phenomena can occur. If the learner relaxes too much, the learner would be allowing the phenomena to control the movement. If, on the other hand, the learner does not relax, the learner would be controlling or manipulating the phenomena. In order for the learner and the phenomena to become one, they need to move in relationship and in existential tension to one another; creating tension

and releasing tension

Conclusion

This view of how individuals and their movement change over time and its ideological framework for viewing development as transcendence enlarges upon the more prevalent view of development as occurring in stages or sequences. Through this ideological framework, movement is portrayed in an all-encompassing manner so that learners can reach their fullest potential. The ideological framework is based on the complex and dynamic nature of human movement and is reflective of the ability of humans and the capacities of free will and intentionality. This perspective and its ideological framework lend insight into the design of the learning experiences in physical education classes.

If learners are solely introduced to externally based standards which do not foster meaning in and of themselves, the learners are give a limited portrayal of the human movement experience. The learners would essentially be replicating movement over time in order to meet or exceed this external standard. Following the prescribed steps to attain this goal, one can perform the movement in a somewhat perfunctory, static, and robotic manner. Machines are designed to replicate or reproduce patterns in response to external standards. Humans, on the other hand, are capable of doing more than perfecting techniques through the

replication of these movement patterns. Humans have the abilities to create these movement patterns over time. If the learners are given the opportunities to engage in the performance by becoming personally involved and by generating meaning from the experience, they are given an enlarged perspective of the movement experience. The personal and meaningful involvement of the learners allow the learners to create and to make the movement more alive and life-like.

The replication of the movement patterns according to an externally based standard not only is static and not reflective of the ability of humans, it views how individuals and their movement change over time in an unfavorable or deterministic light. Since humans and their movement are viewed from a progressive standpoint as primarily concrete and physical entities, humans and their movement cannot change over time because when concrete and physical entities are damaged, these entities cannot regenerate. The creation of movement patterns by becoming personally involved and generating meaning, however, is not only alive, life-like and reflective of the ability of humans, it views how individuals and their movement change over time in a favorable or liberal light. Since humans and their movement are viewed from a transcendental standpoint as spiritual and mystical entities, humans and their movement can change over time because when spiritual and mystical entities are damaged, these entities have the resiliency to regenerate. In conclusion, if

learners are to be encouraged to develop in a liberal manner, physical educators need to go beyond the conventional view of the human movement experience and its teaching-learning practices. This transcendental ideological framework is one suggestion. A revisitation of the "Paradox of the Flying Arrow" lends insight to this proposal. As Fraser states:

If the arrow is to fly so as to hit its mark, it must be permitted to behave in a way which is essentially unpredictable from its stationary condition; it must extend beyond itself; it must move (1975, p. 4).

BIBLIOGRAPHY

- Allen, D.J. & Fahey, B.W. (Eds.), (1977). Being human in sport. Philadelphia, Pa: Lea & Febiger.
- Allen, D.J. & Thomas, C.E. (1977). The sport experience and the experiencing of self. In D.J. Allen & B.W. Fahey (Eds.), Being human in sport (pp. 135-146). Philadelphia, PA: Lea & Febiger.
- Barrett, W. (1978). The illusion of technique: A search for meaning in a technological civilization. Garden City, N.Y.: Anchor Press.
- Beets, N. (1964). The experience of the body in sport. In E. Jokland and E. Simon (Eds.), International research in sport and physical education. (pp. 74-82). Springfield, Ill: Charles C. Thomas.
- Benjamin C. (1981). Ideas of time in the history of philosophy. In J.T. Fraser (Ed.), The voices of time: a cooperative survey of man's view of time as expressed by the sciences and by the humanities (2nd ed.). Amhurst, Mass: The University of Massachusetts Press.
- Berger, P. (1969). A rumor of angels. Garden City, N.Y.: Doubleday.
- Bayley, N. (1936). The California infant scale of motor development. Berkley, CA: University of California Press.
- Branta, C., Haubenstricker, J., and Seefeldt, V. (1984). Age changes in motor skills during childhood and adolescence. In R. Tergung (ed.), Exercise and sport sciences reviews, 12, 467-520.
- Braxton, J.F. (1984). Movement experience in modern dance: A phenomenological inquiry. Unpublished Doctoral Dissertation. The University of North Carolina, Greensboro.
- Broekhoff J. (1973). Sport and ethics in the context of culture. In G. Osterhoudt (Ed.), The philosophy of sport: a collection of original essays (pp. 219-228). Philadelphia, PA: Charles C. Thomas.
- Canic, M.J. (1986). An Eastern approach to motor skill acquisition. In S. Kleinman (Ed.), Mind and body: East meets west (pp. 75-82). Champaign, IL: Human Kinetics.
- Capec, M. (1967). Change. In Edwards, P. (Ed.), Encyclopedia of Philosophy, Vol. 7 (pp. 75-79). New York: Macmillan.
- Corbin, C. (1973). A textbook of motor development. Dubuque: Wm. C. Brown.

- Csikszentmihalyi, M. (1975). Beyond boredom and anxiety. San Francisco: Jossey-Bass.
- Deach, D.F. (1951). Genetic development of motor skills in children 2 through 6 years of age. Unpublished Doctoral Dissertation. University of Michigan, Ann Arbor.
- Dewey, J. (1963). Experience and education. New York: Collier. (Originally written in 1938).
- Expenschade, A.S., & Eckert, H.M. (1980). Motor development. Columbus, Ohio: Charles E. Merrill.
- Fetters, J. (1978). Sport, myth, and the courage of self creation. Quest, 30, 36-45.
- Flavell, J. & Wohlwill, J. (1969). Formal & functional aspects of cognitive development. In Elkind, D. & Flavell, J. (Eds.), Studies in cognitive development. New York: Oxford University Press.
- Flinchum, B. (1975). Motor development in early childhood: A guide for movement education with ages 2 to 6. St. Louis: The C.V. Mosby Company.
- Fraleigh, W.P. (1969). A prologue to the study of theory building in physical education. Quest, 12, 26-33.
- Fraser, J.T. (1975). Of time, passion, and knowledge: Reflections on the strategy of existence. New York: George Braziller.
- Fraser, J.T. (1978). Time as conflict: A scientific and humanistic study. New York: Basel and Stuttgart.
- Fraser, J.T. (Ed.). (1981). The voices of time: A cooperative survey of many's views of time as expressed by the sciences and by the humanities (2nd ed.). Amhurst, Mass: The University of Massachusetts Press.
- Fraser, J.T. (1982). The Genesis and evolution of time: A critique of interpretation in physics. Amhurst, Mass: The University of Massachusetts Press.
- Gale, R.M. (Ed.), (1968). The philosophy of time: A collection of essays. Great Britain: Macmillan & Co.
- Gallahue, D. (1982). Understanding motor development in children. New York: John Wiley & Sons.

- Gallwey, T. (1974). The inner game of tennis. New York: Random House.
- Gates, A.A. (1968). A new look at movement: A dancer's view. Minneapolis, Minn: Burgess.
- Gerber, E.W. & Morgan, W. (1979). Sport and the body: a philosophical symposium (2nd ed.). Philadelphia, PA: Lea & Febiger.
- Gorman, B. & Wessman, A. (Eds.). (1977). The personal experience of time. New York & London: Plenum Press.
- Halverson, L. E. (1966). Development of motor patterns in children. Quest, 6, 44-53.
- Halverson, L.E. & Williams, K. (1985). Developmental sequences for hopping over distance: A pre-longitudinal screening. Research Quarterly for Exercise and Sport, 56 (1), pp. 37-44.
- Haubenstricker, J.L., Branta, C.F., & Seefeldt, V.D. (1983). Preliminary validation of developmental sequences of throwing and catching. Paper presented at the North American Society for the Psychology of Sport and Physical Activity International Conference, East Lansing, MI.
- Hawkins, A. (1964). Creating through dance. Englewood Cliffs, NJ: Prentice Hall.
- Haywood, K.M. (1986). Lifespan motor development. Champaign, Ill: Human Kinetics.
- Heidegger, M. (1977). On time & being. New York: Random.
- Heidegger, M. (1962). Being & time. New York: Harper Row.
- Heisenberg, W. (1958). Physics and philosophy: The revolution of modern science. New York: Harper & Row.
- Heisenberg, W. (1972). Cited in A. Koestler, The roots of coincidence, (p. 158). New York: Random House.
- Herkowitz, J. (1978). Developmental task analysis: The design of movement experiences and evaluation of motor development status. In M. Ridenhour (Ed.), Motor Development: Issues and applications (pp. 139-164). Princeton, N.J.: Princeton Book Company.
- Herrigel, E. (1971). Zen and the art of archery. New York: Random House.

- Hoffman, H.A., Young, J., & Klesius, S.E. (1981). Meaningful movement for children: a developmental theme approach to physical education. Boston: Allyn & Bacon.
- Inhelder, B. (1971). Criteria of the stages of mental development. In Farmer, J. & Inhelder, B. (Eds.), Discussions on child development. New York: International University Press.
- Kamii, C. & DeVries, R. (1977). Piaget for early education. In M.C. Day & R.K. Parker (Eds.), The preschool in action, 2nd ed. (pp. 363-420). Boston, Massachusetts: Allyn and Bacon.
- Kegan, R. (1980). There the dance is: Religious dimensions of a developmental framework. In Toward moral and religious maturity: The first international conference on moral and religious development, (pp. 405-440). Morrison, N.J.: Silver Burdett.
- Keogh, J. (1963) Extreme attitudes toward physical education. Research Quarterly, 34, 27-33.
- Keogh, J. (1975). Consistency and constancy in preschool motor development. In H.J. Muller, P. Decker, & F. Schilling (Eds.), Motor behavior of preschool children. Schornderff, W. Germany: Hofman.
- Keogh, J. (1977). The study of movement skill development. Quest, 28, 76-88.
- Keogh, J. (1981). A movement development framework and a perceptual cognitive perspective. In G.A. Brooks (Ed.), Perspectives on the academic discipline of physical education. Champaign, Ill: Human Kinetics.
- Keogh, J. & Sugden, D. (1985). Movement skill development. New York: Macmillan.
- Kleinman, S. (1970). Physical education and lived movement. NCPEAH proceedings 74th Annual Meeting, December 27-30, 1970. Portland, Oregon.
- Kleinman, S. (1979). The significance of human movement: A phenomenological approach. In E.W. Gerber & W.J. Morgan (Eds.), Sport and the body: A philosophical symposium, 2nd ed. (pp. 177-180). Philadelphia. PA: Lea & Febiger.
- Kleinman, S. (Ed.) (1986). Mind and body: East meets west. Champaign, Ill: Human Kinetics.

- Koestler, A. (1972). The roots of coincidence. New York: Random House.
- Kohlberg, L. (1970). Reply to Bereiter's statement on Kohlberg's cognitive-developmental view. Interchange, 1, 40-48.
- Kohlberg, L. & Mayer, R. (1972). Development as the aim of education, Harvard Educational Review, 42(4), 449-496.
- Kollen, P.S. (1981). The experience of movement in physical education: A phenomenology. Unpublished Doctoral Dissertation. The University of Michigan.
- Kollen, P.S. (1983). Fragmentation and integration in human movement. In T. J. Templin & J.K. Olson (Eds.), Teaching in physical education: Big Ten body of knowledge symposium series, Volume 14. (pp. 86-93) Champaign, Illinois: Human Kinetics.
- Kretchmar, R. S. & Harper, W. A. (1962). Must we have a rational answer to the question 'Why does man play'? JOHPER, 40, 57-58.
- Kummel, F. (1981). Time as succession or duration. In J.T. Fraser (Ed.), The voices of time: A cooperative survey of man's views of time as expressed by the sciences and by the humanities (2nd ed.). (pp. 31-55). Amhurst, Mass: The University of Massachusetts Press.
- Leonard, G. (1975). The ultimate athlete. New York: Viking Press.
- Logsdon, B. J., Barrett, K. R., Ammons, M., Broer, M.R., Halverson, L.E., McGee, R., Robertson, M.A., (1985). Physical education for children: A focus on the teaching process (2nd ed.). Philadelphia, Pa: Lea & Febiger.
- Luijpen, W.A. & Koren, H.J. (1969). A first introduction to existential phenomenology, 2nd ed. Pittsburgh: Dequesne University Press.
- Leibniz, (1968). The philosophical works of Leibnitz. tr. George Martin Duncan, 2nd ed. New Haven: Tuttle, Morehouse and Taylor.
- Linden, P. (1986). The art of aikido: Philosophical education in movement. In S. Kleinman (Ed.) Mind and body: East meets west (pp. 107-112). Champaign, Il: Human Kinetics.
- Macdonald, J.B. (1974). The transcendental developmental ideology of education. In W. Pinar (Ed.), Heightened consciousness, cultural revolution, and curriculum theory (pp. 85-116). Berkeley, CA: McCutchan.

- Marshall, J. C. (1986). A quest for personal meaning and wholeness through the movement experience: an alternative perspective. Unpublished Doctoral Dissertation. The University of North Carolina, Greensboro.
- Maslow, A. (1971). The farther reaches of human nature. New York: Viking Press.
- Maslow, A. (1962). Toward a psychology of being. Princeton: Van Nostrand.
- Meir, K.V. (1980). An affair of flutes: an appreciation of play. Journal of the Philosophy of Sport, 7, 24-45.
- Metheny, E. (1968). Movement and meaning. New York: McGraw Hill.
- Metheny, E. (1965). Connotations of movement in sport and dance. Dubuque, Iowa: Wm. C. Brown.
- Moustakas, C. (1966). Creativity and conformity. Princeton, Mass: Van Nostrand.
- Mundle, C.W. K. (1967). Consequences of time. In Edwards, P. (Ed.). Encyclopedia of Philosophy, Vol. 7 (pp. 134-139). New York: Macmillan.
- Nietzsche, F. (1967). The birth of tragedy. trans by W. Kaufmann. New York: Random House Vintage Books.
- Pearce, J.C. (1980). Magical child. New York: Bantam.
- Phenix, P. (1975). Transcendence and the curriculum. In W. Pinar (Ed.), Curriculum theorizing: The reconceptualists. (pp. 323-340) Berkeley, CA: McCutchan.
- Piaget, J. (1960). The general problem of the psychological development of the child. In J.M. Tanner & B. Inhelder (Eds.). Discussion on child development, Vol. 4. New York: International Universities Press.
- Piaget, J. (1971). Biology and knowledge. Chicago: University of Chicago Press. (Originally published in 1967).
- Pinar, W. (1975). Currere: Toward reconceptualization. In W. Pinar (Ed.), Curriculum theorizing: The reconceptualists. (396-414) Berkeley, Ca: McCutchan.

- Pinar, W. (1981). Transcendental Curriculum. Teachers College Record.
- Pinard, A. & Laurendeau, M. (1969). "Stage" in Piaget's cognitive-developmental theory: Exegesis of a concept. In D. Elkind & J. Flavell, (Eds.), Studies in cognitive development. New York: Oxford University Press.
- Plesner, H. (1970). Laughing and crying. trans by J.S. Churchill. Evanston, Ill: Northwestern University Press.
- Polanyi, M. (1967). The tacit dimensions. Garden City, New York: Doubleday.
- Ravizza, K. (1977). Potential of the sport experience. In D.J. Allen & B.W. Fahey (Eds.), Being human in sport (pp.61-72). Philadelphia, PA: Lea & Febiger.
- Richards, M.C. (1962). Centering. Middletown, CT: Wesleyan University Press.
- Ridenhour, M. (Ed.), (1978). Motor development: Issues and applications. Princeton: Princeton Book Company.
- Riggs, M. (1980). Jump to joy: Helping children grow through active play. Englewood Cliffs, N.J.: Prentice-Hall, Inc.
- Robertson, M.A. (1978a). Stages in motor development. In M. Ridenhour (Ed.), Motor development: Issues and applications (pp. 63-82). Princeton: Princeton Book Company.
- Robertson, M.A. (1978b). Stability of stage categorizations across trials: Implications for the "stage theory" of overarm throw development. Journal of Human Movement Studies, 4, 167-175.
- Robertson, M.A., & Langendorfer, S. (1980). Testing motor development sequences across 9-14 years. In C. Nadeau (Ed.), Psychology of motor behavior and sport. Champaign: Human Kinetics.
- Robertson, M.A., Williams, U., & Langendorfer, S. (1980). Prolongitudinal screening of motor development sequences. Research Quarterly for Exercise and Sport, 51:724.
- Robertson, M.A. & Halverson, L. (1984). Developing children - their changing movement. Philadelphia, PA: Lea & Febiger.
- Robertson, M.A. (1984). Changing motor patterns during childhood. In J. Thomas (Ed.), Motor development during childhood and adolescence (pp. 48-90). Minneapolis, Minn: Burgess.

- Salkind, N.J. (1985). Theories of human development. Summerset, N.J.: Wiley.
- Schlesinger A. (July 27, 1986). The challenge of change. The New York Times Magazine (pp. 20-21).
- Schutz, A. (1967). The phenomenology of the social world. (G. Wlash & F. Lehnert, Trans.). Evanston, Il: Northwestern University Press.
- Sheets, M. (1966). Phenomenology of dance. Salem, NH: Ayers.
- Seefeldt, V., & J. Haubenstricker (1982). Patterns, phases, or stages: An analytical model for the study of developmental movement. In J.A. S. Kelson and J.F. Clark (Eds.), The development of movement control and coordination. (pp. 309-318). New York: Wiley.
- Seefeldt, V., Reuschlein, S., & Voegl, P. (1972). Sequencing motor skills within the physical education curriculum. Paper presented at the American Association for Health, Physical Education, and Recreation National Convention, Houston, Texas.
- Shirley, M.M. (1931). The first two years: A study of 25 babies. (Vol. 1.) Minneapolis: University of Minnesota Press.
- Sinclair, C. (1973). Movement of the young child: Ages 2 to 6. Columbus, Ohio: Charles E. Merrill Publishing Company.
- Slusher, H.S. (1967). Man, sport, and existence: a critical analysis. Philadelphia, PA: Lea & Febiger.
- Smart, J.J. (1967). Time. In Edwards, P. (Ed.), Encyclopedia of Philosophy, (Vol. 7) (pp. 126-134). New York: Macmillan.
- Solomon, R.C. (Ed.) (1980). Phenomenology and existentialism. Washington, D.C.: University Press of America.
- Sparks, R. (1986). Mystical and material embodiment: A comparative analysis. In S. Kleinman (Ed.), Mind and body: East meets west (pp. 137-148). Champaign, Il: Human Kinetics.
- Stone, R.E. (1981). Of Zen and the experience of moving. Quest, 33(1), 96-107.
- Studer, G. (1977). Moment-to-moment experiences of self. In D.J. Allen & B.W. Fahey, Being human in sport (pp. 157-162). Philadelphia, Pa: Lea & Fegiber.

- Suzuki, D.T. (1955). Studies in Zen. New York: Delta.
- Thomas, C.E. (1983). Sport in a philosophic context. Philadelphia, Pa: Lea & Febiger.
- Thomas, J. (Ed.). (1984). Motor development during childhood and adolescence. Minneapolis, Minnesota: Burgess Publishing Company.
- Tillich, Paul (1952). The courage to be. New Haven: Yale University Press.
- Uexkull, Jakob von (1957). Uwelt and Innewelt der Fiere. Striefzuge. A stroll through the worlds of Animals and man. C.H. Schiller, (Ed. & Trans.), Instinctive behavior. New York: International Universities Press.
- Underhill, E. (1955). Mysticism: A study in the nature and development of man's spitual consciousness. New York: Meridian Books.
- Vander Zarrden, J.W. (1985). Human development (3rd Ed.). New York: Alfred Knopf.
- Watson, S.B. (1986). Is there more to practice than the pursuit of perfection? In S. Kleinman (Ed.), Mind and body: East meets west (pp. 131-136). Champaign, Il: Human Kinetics.
- Weiss, M. (1985). Considering developmental needs. Journal of Physical Education and Recreation, 56(1), 93.
- Wilbur, K. (1983). Eye to eye: The quest for the new paradigm. Garden City, N.Y.: Anchor.
- Wild, M. (1938). The behavioral pattern of throwing and some observations concerning its course of development in children. Research Quarterly, 9(3), 20-24.
- Williams, H.C. (1983). Perceptual and motor development. New Jersey: Prentice Hall.
- Zukav, Gary (1979). The dancing Wu Li masters: An overview of the new physics. New York: William Morrow.